

GEOLOGICAL SURVEY OF CANADA

SECTION OF

MINERAL STATISTICS AND MINES

ANNUAL REPORT

FOR

1899.

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OTTAWA

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To the DIRECTOR
Geological Survey of Canada.

SIR,—Herewith permit me to hand you the detailed statistical report of the mineral industries of Canada for 1899. The preliminary summary statement for that year, which was completed on February 27, 1899, is of course replaced by the revised statement herein contained.

The work of the Section has consisted as in the past not only in the preparation of the annual report but in the collection of information and in making investigations of a great variety of matters pertaining to the economic mineral resources and mineral industries of the country, as well as in answering numerous inquirers on these matters. Besides this, a large amount of special work devolved upon the staff in connection with the preparation of the descriptive technical catalogue of the Dominion mineral exhibit at the Paris Exhibition.

Whilst the general technological work has fallen more particularly to the lot of Mr. Théo. Denis and myself, on Mr. J. McLeish has fallen the greater part of the work of preparation of the annual report, and thanks are due to these gentlemen as well as to Mrs. W. Sparks for their able performance of all the duties devolving upon them.

Thanks are also due to those, although too numerous to mention individually, who by answering our circulars or letters, provided much valuable material. Our acknowledgments are also due to the provincial mining bureaus of Nova Scotia, Quebec, Ontario and British Columbia, as well as to the Dominion Customs and Inland Revenue departments for aid received.

I am, sir,
Your obedient servant,

ELFRIC DREW INGALL.

SECTION OF MINERAL STATISTICS AND MINES,
November 29, 1900.

NOTE.—*Unless otherwise stated, the bearings in this report are all referred to the true meridian.*

EXPLANATORY NOTES.

YEAR AND TON USED.

The year used throughout this report is the calendar year; except for the figures of imports, which refer to the fiscal year ending June 30th. The ton is that of 2,000 pounds, unless otherwise stated.

EXPORTS AND IMPORTS.

The figures given throughout the report referring to exports and imports are compiled from data obtained from the books of the Customs Department, and will occasionally show discrepancies, which however, there are no means of correcting.

The exports and imports under the heading of each province do not necessarily represent the production and consumption of the province, e.g., material produced in Ontario is often shipped from Montreal and entered there for export, so falling under the heading, Quebec.

N.E.S. = Not elsewhere specified.

VALUES ADOPTED.

The values of the metallic minerals produced, as per returns to this department, are calculated on the basis of their metallic contents at the average market price of the metal for the current year. Spot values have been adopted for the figures of production of the non-metallic minerals.

GENERAL NOTES.

As in the past, care is taken to avoid interference with private interests in the manner of publishing results, and all returns of production of individual mines are treated as confidential, unless otherwise arranged with those interested. The confidence of the mining community thus gained, has resulted in an increasingly general response to our circulars, although to complete our data personal application is still necessary in a small number of instances, and a yet more prompt response on the part of all applied to, will help still further towards an earlier publication of the material.

In view of criticisms of these statistics which have been made recently, and from time to time in the past, it may be well to take this opportunity to explain the working methods adopted, in order to prevent the misunderstandings which underlie such criticisms and suggestions, and to correct the impression thereby conveyed to the public that the reports are unreliable.

The figures given throughout the reports are based, as far as possible, upon returns obtained direct from the various operators, or from official data, and the totals have for some years been checked by comparison with railway shipments, exports, and all other available sources of information. It can be therefore fairly claimed, that they are as accurate as it is possible to make such figures.

After investigation of the subject we have, however, found that in the nature of things, export and railway figures can only be taken as approximately correct in most instances. In the case of the export figures, entries are made as a rule by those having no technical knowledge of mineral substances, and in the case of the railways, but few of the shipments are actually weighed, so that car-load lots, for instance, may differ considerably from the theoretical load of the car.

The lists of operators given throughout the report are not put forward as complete in every case, only those reporting their production being included. Producers finding their names omitted are invited to communicate with the office that they may be included in the next issue.

CORRECTIONS — ALTERATIONS.

Corrections and alterations have been made throughout this report wherever they seemed to be called for, according to more complete and reliable data available since previous issues.

The tabulated statement given in the folded sheet at the beginning of the report, represents a compilation of all the similar statements found in previous reports, re-modelled and further revised wherever possible.

INTRODUCTION.

The rapid growth of Canada's mineral industry which has been so marked during the past few years still continues, as will be seen by reference to the folder herewith appended. It will be seen that the increase of 1899 over 1898 amounts to nearly \$11,000,000 or upwards of 28 per cent.

CANADA'S
MINERAL
INDUSTRY.

The growth of the industry as compared with that of our neighbours, the United States, is illustrated by the following figures. The per capita rates are of course based upon estimates of population for each year since the last census.

YEAR.	CANADA.		UNITED STATES.	
	Increase per cent in Grand Total.	Production per capita.	Increase per cent in Grand Total.	Production per capita.
	p.c.	\$	p.c.	\$
1899	28·13	9·33	39·86	12·84
1898	34·89	7·32	10·61	9·38
1897	26·90	5·52	1·33	8·66
1896	8·79	4·40	·21	8·73
1895 .....	.....	4·09	.....	8·90
1890	} 64·00 {	3·50	} 38·97 {	9·89
1886		2·23		7·76

The relative importance of the different industries as contributors to the whole is as shown in the following table.

PROPORTIONATE VALUE OF DIFFERENT MINERAL PRODUCTS, 1899.

Products.	Contributing over 10 p.c.	Contributing between 10 and 1 p.c.	Contributing under 1 p.c.	Total.
1. Gold	42·88			
2. Coal and coke	21·45			
3. Copper		5·36		
4. Bricks (estimated)		4·43		
5. Nickel		4·17		
6. Silver		4·10		
7. Building stone (estimated)		3·03		
8. Petroleum		2·42		
9. Lead		1·97		
10. Lime (estimated)		1·61		
11. Cement		1·28		
12. Asbestos			*·98	
13. Natural Gas			·78	
14. Gypsum			·52	
15. Salt			·51	
16. Iron ore			·48	
17. Sundry under 1 p.c.			4·03	
Total	64·33	28·37	7·30	100·00

CANADA'S
MINERAL
INDUSTRY.

On comparison with similar figures for 1898 some important changes are observable. Gold has increased its lead from about 36 per cent to about 43 per cent, thus being by far the largest item and with coal accounting for over 64 per cent of the whole. Silver has fallen away from third to sixth place, and lead from eighth to ninth, and other interesting changes will also be noted. A further analysis of the figures for 1899 gives the following interesting data regarding the relative importance of the different classes of mineral products. Thus, as stated, gold accounts for 42·88 per cent of which, a little over four-fifths came from placer workings, and almost all together those of the Yukon and Atlin districts. The other metals account for about 16 per cent, or a total metallic production of about 59 per cent. The combustible class is to be credited with 24·65 per cent, structural materials with 12·44 per cent, and all other non-metallic products with the remainder, about 4 per cent.

The location of the chief centres of mining activity in Canada will be apparent by reference to the tabulation below.

PRODUCTION BY PROVINCES, 1899.

Province.	Value of production.	Per cent.
	\$	
Nova Scotia.....	6,996,041	14·1
New Brunswick.....	420,227	·9
Quebec.....	2,585,635	5·2
Ontario.....	9,819,557	19·8
Manitoba and North-west Territories.....	17,108,707	34·5
British Columbia.....	12,653,860	25·5
Total.....	49,584,027	100·0

It will be seen that 60 per cent of the mineral production of the country is due to the western section, Manitoba and the North-west Territories leading. This is of course due to the gold output of the Yukon, the other territories contributing less than \$1,000,000, mostly coal, with the small gold production of the Saskatchewan River. British Columbia comes next as a very considerable factor, and Ontario, Nova Scotia, Quebec and New Brunswick follow in the order given.

Taking the separate industries of the Dominion, the proportional growth of each is illustrated by the subjoined figures:

GEOLOGICAL SURVEY OF CANADA.

SECTION OF MINERAL STATISTICS AND MINES.

Mineral Production of Canada, Calendar Years 1886 to 1899.

PRODUCTS.	1886.		1887.		1888.		1889.		1890.		1891.		1892.		1893.		1894.		1895.		1896.		1897.		1898.		1899.		PRODUCTS.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
METALLIC.		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		
Antimony ore..... Tons.	665	31,490	584	10,860	345	3,696	55	1,100	26½	625	10	60	10	60	10	60	10	60	10	60	10	60	10	60	10	60	10	60	Antimony ore..... Tons.	
Copper (c)..... Lbs.	3,505,000	385,550	3,260,424	366,798	5,562,864	927,107	6,809,752	936,341	6,013,671	7,153	8,928,921	1,149,598	7,087,275	818,580	8,109,856	871,809	7,708,789	736,960	7,771,639	836,228	9,393,012	1,021,960	13,300,80	1,501,660	17,747,136	2,134,680	15,078,475	2,655,319	Copper (c)..... Lbs.	
Gold (d)..... Oz.	66,061	1,365,436	57,465	1,187,804	53,150	1,098,610	62,658	1,295,159	55,625	9,776	45,022	930,614	43,909	907,601	47,247	976,603	54,605	1,128,688	100,806	2,083,674	133,274	2,754,774	191,557	6,027,016	130,290	666,445	13,775,420	1,028,620	21,261,524	
Iron ore (a)..... Tons.	69,708	126,982	76,330	146,197	78,587	152,068	84,181	151,640	76,511	5,380	68,979	142,005	103,248	263,866	125,602	299,368	109,991	238,070	102,797	238,070	191,557	419,006	50,70	110,257	58,343	126,982	74,617	152,788	Iron ore (a)..... Tons.	
Lead (e)..... Lbs.	204,800	9,216	204,800	9,216	674,500	29,813	165,100	6,488	105,000	4,704	88,665	3,857	808,420	35,064	2,135,023	79,636	5,703,222	187,636	16,461,794	531,716	24,199,977	721,159	39,018,21	1,396,853	31,915,319	1,206,399	21,802,436	977,250	Lead (e)..... Lbs.	
Mercury.....																													Mercury.....	
Nickel (f).....																													Nickel (f).....	
Platinum..... Oz.		1,400		5,600	1,500	6,000	(g) 830,477	498,286	1,435,742	3,232	4,626,627	2,775,976	2,413,717	1,369,956	3,982,982	2,071,151	4,907,430	1,870,958	3,888,525	1,360,984	3,397,113	1,188,990	3,997,64	1,399,176	5,517,690	1,820,638	5,744,000	2,067,840	Platinum..... Oz.	
Silver.....		210,141		355,083		410,998		383,318		3,500		3,500		3,500		3,500		3,500		3,500		3,500		3,500		3,500		3,500	Silver.....	
Zinc.....		209,090		347,271		437,232		358,785		400,687		409,549		310,651		422,158		534,049		1,030,239		3,205,343		5,558,44		4,452,333		2,032,658	Zinc.....	
Total value, Metallic.....		2,118,608		2,073,746		2,628,292		3,251,299		4,488		5,421,659		3,698,697		4,630,495		4,685,852		6,078,114		8,030,633		13,780,314		21,741,865		29,282,823	Total value, Metallic.....	
NON-METALLIC.		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		(a)		
Actinolite..... Tons.																													Actinolite..... Tons.	
Arsenic (white).....	126	5,460	30	1,200	+30	+1,200			25	1,500	20	1,000					7	420											Arsenic (white).....	
Asbestos.....	3,458	206,251	4,619	226,976	4,404	255,007	6,113	426,554	9,860	0,240	9,279	999,878	6,082	390,462	6,331	310,156	7,630	420,825	8,756	368,175	12,250	429,856	30,44	445,368	23,785	491,197	25,536	483,849	Asbestos.....	
Chromite.....	60	945	38	570													1,000	20,000	3,177	41,300	27,004	2,010	2,63	32,474	2,021	24,252	21,842	21,842	Chromite.....	
Coal.....	2,118,653	3,739,840	2,429,330	4,388,206	2,602,552	4,674,140	2,658,303	4,894,287	3,084,632	6,247	3,577,749	7,019,425	3,287,745	6,368,757	3,783,499	7,359,080	3,847,070	7,429,468	3,478,344	6,739,153	3,745,716	7,226,462	3,786,10	7,303,577	4,172,582	8,222,878	4,925,051	10,283,497	Coal.....	
Coke (g).....	35,396	101,940	40,428	135,951	45,373	134,181	54,539	155,043	56,540	6,298	57,084	175,592	56,135	160,249	61,078	161,790	58,044	148,551	53,356	143,407	49,619	110,257	60,68	176,457	87,600	286,000	100,820	350,022	Coke (g).....	
Felspar.....																													Felspar.....	
Fire-clay.....																													Fire-clay.....	
Graphite.....	500	4,000	300	2,400	150	1,200	242	1,936	175	5,200	260	1,560	167	3,763	3	223	3	223	220	6,150	139	9,455	43	16,240	13,698	1,310	24,179	24,179	Graphite.....	
Grindstones.....	4,020	36,545	5,292	64,008	5,764	51,129	3,404	30,863	4,884	2,340	4,479	42,587	5,283	4,600	38,379	3,757	32,717	3,475	31,932	3,713	33,310	4,935	44,775	4,935	44,775	4,935	Grindstones.....			
Gypsum.....	162,000	178,742	154,008	157,277	175,887	179,393	213,273	205,108	226,509	4,033	203,605	206,251	241,127	192,568	196,150	223,631	202,031	202,608	207,032	178,061	239,69	244,531	219,256	232,515	244,566	257,329	257,329	257,329	Gypsum.....	
Limestone for flux.....																													Limestone for flux.....	
Lithographic stone.....																													Lithographic stone.....	
Manganese ore.....	1,789	41,499	1,245	43,658	1,801	47,944	1,455	32,737	1,328	2,550	255	115	115	10,250	213	14,578	74	4,180	125	8,464	123½	3,975	1	1,166	50	1,600	1,581	20,004	Manganese ore.....	
Mica..... Lbs.	20,361	29,008	22,083	29,816	29,025	40,207	36,529	28,718	770,959	8,074	6,610	71,594	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	104,745	Mica..... Lbs.
Mineral pigments—																													Mineral pigments—	
Baryta..... Tons.	3,864	19,270	400	2,400	1,100	3,850			1,842	7,543		315	1,260			1,081	2,830			145		57		3,060	1,125	5,533	720	4,402	Baryta..... Tons.	
Ochres.....	350	2,350	485	3,733	397	7,900	794	15,280	275	5,125	900	17,750	390	5,800	1,070	17,710	611	8,690	1,339	16,400	2,362	16,045	3,90	23,560	17,450	3,919	20,000	20,000	Ochres.....	
Mineral waters..... Galls.																													Mineral waters..... Galls.	
Molybdenite..... Lbs.	150	156																											Molybdenite..... Lbs.	
Moulding sand..... Tons.																													Moulding sand..... Tons.	
Natural gas.....																													Natural gas.....	
Petroleum (h)..... Brls.	584,061	525,655	713,728	556,708	695,203	713,695	704,690	653,600	795,030	2,734	755,298	1,010,211	779,753	984,438	798,406	829,104	835,322	726,138	1,086,738	726,822	1,155,647	709,85	1,011,546	758,391	1,061,747	808,570	1,202,020	1,387,271	Petroleum (h)..... Brls.	
Phosphate (i)..... Tons.	20,495	304,338	23,690	319,815	22,485	242,285	30,988	316,662	31,753	1,045	23,588	241,603	11,932	157,424	8,198	70,942	6,861	41,166	1,822	9,565	570	3,420	90	3,984	733	3,665	3,000	18,000	Phosphate (i)..... Tons.	
Precious stones.....																													Precious stones.....	
Pyrites..... Tons.	42,906	193,077	38,043	171,194	63,479	285,656	72,225	307,292	49,227	3,067	67,731	203,193	59,770	179,310	58,542	175,626	40,527	121,581	34,198	102,594	33,715	101,155	38,91	116,730	32,218	128,872	27,687	110,748	Pyrites..... Tons.	
Quartz.....	200	200																											Quartz.....	
Salt.....	62,359	227,195	60,173	166,394	59,070	185,460	32,832	129,547	43,754	8,857	45,021	161,179	45,486	162,041	62,324	195,926	57,199	170,687	52,376	160,455	43,960	169,693	51,34	225,730	57,142	248,639	59,339	254,390	Salt.....	
Soapstone.....	50	400	100	800	140	1,170																							Soapstone.....	
Structural materials and clay products—																													Structural materials and clay products—	
Bricks..... M.	139,345	873,600	181,581	986,689	165,818	1,036,746	200,561	1,273,884	211,727	6,982	176,533	1,061,536	202,147	1,251,934	290,000	1,800,000		1,800,000	308,836	1,670,000	1,600,000	1,600,000		1,600,000		1,900,000	2,195,000	2,195,000	Bricks..... M.	
Building stone..... C. yds.	165,777	642,509	262,592	552,267	411,570	641,712	341,337	913,691	382,563	4,783	187,685																			

TABLE OF INCREASES AND DECREASES IN THE PRODUCTION OF THE VARIOUS MINERALS IN 1899, AS COMPARED WITH 1898.

CANADA'S
MINERAL
INDUSTRY.

PRODUCTS.	QUANTITY.		VALUE.	
	Increase.	Dec. ease.	Increase.	Decrease.
	p. c.	p. c.	p. c.	p. c.
<i>Metallic—</i>				
Copper.....		15·04	24·37	.....
Gold.....	54·34	.....	54·34	.....
Iron ore.....	27·89	.....	57·43	.....
Lead.....	.....	31·50	.....	19·00
Nickel.....	4·10	.....	13·56	.....
Silver.....	.....	23·37	.....	21·64
<i>Non-metallic—</i>				
Asbestos and asbestic.....	7·36	.....	.....	1·09
Coal.....	18·03	.....	25·06	.....
Coke.....	15·09	.....	22·38	.....
Gypsum.....	11·54	.....	10·67	.....
Natural gas.....	.....	.....	20·22	.....
Petroleum.....	6·62	.....	13·21	.....
Salt.....	3·84	.....	2·31	.....
Cement.....	58·57	.....	59·29	.....

From the above it will be seen, that part of the increase in the grand total of the values of the mineral products of the country must be attributed to the world wide increase in prices favourably affecting Canada also, and which not only enhanced the effect of the considerable growth in the output in most of the industries, but even more than counterbalanced the falling off exhibited in some cases. The most marked increases in values are shown in copper, iron ore, nickel, coal, coke and petroleum, whilst serious depreciation of values occurred in lead and silver, although prices ruled higher.

The following tables give the exports and imports of mineral substances as gathered from the books of the Customs Department. The former, being for the calendar year, are in a degree comparable with the figures of production. It must however be borne in mind, as elsewhere pointed out in the report, that in many items the basis of valuation is very much lower than that adopted by this Section, especially in the case of metals and their ores.

CANADA'S
MINERAL
INDUSTRY.

EXPORTS.

MINERALS AND MINERAL PRODUCTS OF CANADA DURING CALANDER YEAR 1899.

Exports.

Products.	Value.	Products.	Value.
Antimony ore.	\$ 190	Manufactures of metals other than iron or steel. .	59,377
Asbestos, first class.	70,807	Mica	153,002
" second class	183,338	Mineral pigments.	5,408
" third class.	219,003	Mineral waters.	3,009
Bricks.	1,351	Nickel.	939,915
Cement.	2,733	Oil refined.	859
Chromite.	19,876	Ores unspecified.	85,645
Clay, manufactures of.	220	Phosphate.	3,575
Coal.	3,864,443	Platinum.	120
Coke.	18,726	Plumbago, crude.	19,326
Copper.	1,199,908	" manufactures of	3,164
Felspar.	5,126	Pyrites.	34,084
Gold.	6,437,029	Salt.	2,773
Grindstones.	21,579	Sand and gravel.	101,640
" rough.	1,709	Silver.	1,623,905
Gypsum, crude.	208,090	Stone unwrought.	101,931
" ground.	8,123	" wrought.	5,092
Iron and steel.	975,377	Other articles.	17,158
Iron ore.	9,538		
Lead.	466,950		
Lime.	73,565	Total.	\$16,950,074
Manganese ore.	2,410		

EXPORTS

DESTINATION OF PRODUCTS OF THE MINE, DURING THE FISCAL YEAR 1898-1899.

Destination.	Value.	Destination.	Value.
United States.	\$12,683,332	Spanish West Indies.	\$ 9,978
Newfoundland.	180,938	Hong Kong.	9,590
Hawaii.	179,186	China.	7,052
Great Britain.	154,151	Russia.	5,572
Belgium.	40,755	Mexico.	2,989
Australia.	27,744	Holland.	600
St. Pierre.	20,062	Other countries.	59
British West Indies.	18,639		
Germany.	15,074	Total.	\$13,368,150
British Guiana.	12,429		

IMPORTS.
MINERALS AND MINERAL PRODUCTS, FOR FISCAL YEAR 1898-1899.

CANADA'S
MINERAL
INDUSTRY.

Products.	Value.	Products.	Value.
Alum and aluminous cake.	\$ 41,387	Lead and mfrs. of	414,762
Aluminium.	5,126	Lime.	11,124
Antimony	16,861	Litharge.	32,518
Arsenic	24,203	Lithographic stone.	6,223
Asbestos and mfrs. of	32,607	Manganese, oxide of	5,539
Asphaltum.	95,800	Marble and mfrs. of.	101,879
Bismuth	422	Mercury.	51,695
Blast furnace slag.	7,553	Metallic alloys—	
Borax	65,664	Brass and mfrs. of.	747,557
Bricks, tiles and sewer pipe, etc.	128,242	Bronze, german silver, pewter, &c.	77,391
Bricks, fire.	126,995	Mineral and bituminous substances, N.E.S.	23,103
Buhrstones.	1,759	Mineral and metallic pig- ments, paints and colours	785,741
Building stone and granite	108,188	Mineral waters	54,891
Cement.	480,414	Nickel.	9,449
Chalk	10,461	Nitrate of soda, &c.	346,063
Clays	88,517	Ores of metals, N.E.S.	153,952
Coal.	10,227,172	Paraffine wax.	4,025
" tar and pitch	54,447	" candles.	5,856
Coke	362,826	Petroleum and products of.	763,303
Copper and mfrs. of.	798,326	Phosphate (fertilizer).	5,669
Copperas.	6,732	Phosphorus.	478
Cryolite	2,120	Platinum	9,671
Earthenware.	916,727	Precious stones.	452,316
Emery	43,797	Pumice.	5,973
Felspar, quartz, flint, &c.	10,634	Salt.	300,357
Fertilizers.	78,396	Saltpetre.	65,186
Fuller's earth.	3,148	Sand and gravel.	42,209
Graphite, crude.	4,979	Slate.	33,100
" mfrs. of.	43,474	Spelter	29,687
Grindstones	27,476	Sulphate of copper.	61,749
Gypsum, crude.	692	Sulphur.	265,799
" plaster of Paris, &c.	3,458	Tins and manufactures of.	1,372,813
Iron and steel—		Whiting.	34,310
Pigs, scrap, blooms, &c.	899,094	Zinc and manufactures of.	122,138
Rolled—bars, plates, &c., including chrome steel.	4,773,935		
Ferro-silicon, ferro-man- ganese, &c.	22,539		
Manufactures of, machi- nery, hardware, &c.	13,762,358		
		Total.	\$ 39,673,055

Imports.

ABRASIVE MATERIALS.

ABRASIVE
MATERIALS.

The abrasives produced in Canada continue to be confined to grindstones, wood pulp stones, scythe stones, etc., of Nova Scotia and New Brunswick. Some preparations are being made to open up commercially the deposits of corundum in Ontario, to which attention has lately been directed, but these have not yet reached a state of development to admit of a record of production.

The output of grindstones, etc, in 1899, amounted to 4,511 tons, valued at \$43,265, a slight decrease from the figures of 1898, though quite up to the average of recent years.

ABRASIVE
MATERIALS.

The statistics of production since 1886 are given in Table 1, below

Grindstones.

TABLE 1.
ABRASIVE MATERIALS.
ANNUAL PRODUCTION OF GRINDSTONES.

CALENDAR YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		TOTAL.		AVERAGE VALUE PER TON.
	Tons.	Value.	Tons.	Value.	Tons.	Value.	
1886.....	1,765	24,050	2,255	22,495	4,020	46,545	\$11.58
1887.....	1,710	25,020	3,582	38,988	5,292	64,008	12.10
1888.....	1,971	20,400	3,793	30,729	5,764	51,129	8.87
1889.....	712	7,128	2,692	23,735	3,404	30,863	9.07
1890.....	850	8,536	4,034	33,804	4,884	42,340	8.67
1891.....	1,980	19,800	2,499	22,787	4,479	42,587	9.51
1892.....	2,462	27,610	2,821	23,577	5,283	51,187	9.69
1893.....	2,112	21,000	2,488	17,379	4,600	38,379	8.34
1894.....	2,128	16,000	1,629	16,717	3,757	32,717	8.71
1895.....	1,400	14,000	2,075	17,932	3,475	31,932	9.19
1896.....	1,450	14,500	2,263	18,810	3,713	33,310	8.97
1897.....	1,407	17,500	3,165	24,840	4,572	42,340	9.26
1898.....	1,422	12,350	3,513	32,425	4,935	44,775	9.07
1899.....	1,378	10,300	3,133	32,965	4,511	43,265	9.59

A large proportion of the production is exported, chiefly to the United States. Statistics of exports and imports are given in Tables 2, 3 and 4.

TABLE 2.
ABRASIVE MATERIALS.
EXPORTS OF GRINDSTONES.

CALENDAR YEAR.	Value.
1884.....	\$28,186
1885.....	22,606
1886.....	24,185
1887.....	28,769
1888.....	28,176
1889.....	29,982
1890.....	18,564
1891.....	28,433
1892.....	23,567
1893.....	21,672
1894.....	12,579
1895.....	16,723
1896.....	19,139
1897.....	18,807
1898*.....	25,588
1899*.....	23,288

* Including stone for the manufacture of grindstones.

TABLE 3.
 ABRASIVE MATERIALS.
 EXPORTS OF GRINDSTONES BY PROVINCES.

ABRASIVE
 MATERIALS.
 Grindstones.

Province.	CALENDAR YEAR.				
	1895.	1896.	1897.	1898.	1899.
Ontario					\$ 5
Quebec			\$ 112		
Nova Scotia	\$ 8,723	\$ 12,145	12,094	\$ 9,240	9,030
New Brunswick	8,000	6,994	6,601	16,348	14,253
Totals.....	\$ 16,723	\$ 19,139	\$ 18,807	\$ 25,588	23,288

TABLE 4.
 ABRASIVE MATERIALS.
 IMPORTS OF GRINDSTONES.

Fiscal Year.	Duty.	Tons.	Value.
1880.....		1,044	\$11,714
1881.....		1,359	16,895
1882.....		2,098	30,654
1883.....		2,108	31,456
1884.....		2,074	30,471
1885.....		1,148	16,065
1886.....		964	12,803
1887.....		1,309	14,815
1888.....		1,721	18,263
1889.....		2,116	25,564
1890.....		1,567	20,569
1891.....		1,381	16,991
1892.....		1,484	19,761
1893.....		1,682	20,987
1894.....		1,918	24,426
1895.....		1,770	22,834
1896.....		1,862	26,561
1897.....		1,521	25,547
1898.....			22,217
1899 {	Grindstones not mounted and not less than 36 inches in diameter.	15 p. c.	22,273
	Grindstones N. E. S.	25 p. c.	5,203
			27,476

Returns were received from but two operators in Nova Scotia, viz.

The Atlantic Stone Co., Lower Cove, Cumberland Co.

J. W. Sutherland, Quarry Island, Woodburne, Pictou Co.

From 45 to 50 men were employed for about half the year.

ABRASIVE
MATERIALS.

Grindstones.

From New Brunswick some seven returns were received viz :—

From R. C. Ward, Rockport, Westmoreland Co.
 H. C. Read, Sackville, " "
 A. D. Richard, Dorchester, " "
 W. B. Deacon, Shediac, " "
 C. E. Fish, Newcastle, Northumberland Co.
 J. B. Read, Stonehaven, Gloucester Co.
 Lombard & Co, Clifton, " "

At the Rockport quarries the stones were roughly scabbled and shipped to Woodpoint a distance of about 10 miles, where they were finished in the lathe and sent to the United States.

Mr. H. C. Read worked the Woodpoint quarry near Sackville and the Coburg quarry near Bay Verte. Besides the finished grindstones he turned out a considerable quantity of rough building stone.

The Hon. A. D. Richard operated quarries at College Bridge Rockland and Fort Folly, all in the Parish of Dorchester, Westmoreland county.

The product was, besides building stone, grindstones for axes and pulp stones for grinding wood pulp.

W. B. Deacon took out and finished a number of stones from six to six and a half feet diameter and from nine to twelve inches thick, as samples, from a quarry at Buctouche, Kent county.

At the French Fort Quarry near New Castle on the Miramichi River Mr. C. E. Fish reports the demand for wood pulp stones increasing every year. A force of about 30 men was employed, the product being all shipped in a finished condition.

On the Bay of Chaleurs, Messrs Lombard & Co. worked their quarry as usual at Clifton, and Mr. J. B. Read had a considerable force employed at Stonehaven. This quarry lies under tide water of the bay, which is excluded by a clay dyke. A large part of the product is shipped to the United States to be used in the manufacture of edge tools and cutlery, while the remainder of the product consisting mostly of small stones is used in Canada for sharpening tools.

TABLE 5.
 ABRASIVE MATERIALS.
 IMPORTS OF BUHRSTONES.

ABRASIVE
 MATERIALS.
 Buhrstones.

Fiscal Year.	Value.
1880.....	\$12,049
1881.....	6,337
1882.....	15,143
1883.....	13,242
1884.....	5,365
1885.....	4,517
1886.....	4,062
1887.....	3,545
1888.....	4,753
1889.....	5,465
1890.....	2,506
1891.....	2,089
1892.....	1,464
1893.....	3,552
1894.....	3,029
1895.....	2,172
1896.....	2,049
1897.....	1,827
1898.....	1,813
*1899.....	1,759

* Buhrstones in blocks, rough or un-manufactured, not bound up or prepared for binding into mill-stones. Duty free.

TABLE 6.
 ABRASIVE MATERIALS.
 IMPORTS OF EMERY.

Emery.

Fiscal Year.	Emery. a.	Mtrs. of Emery. b.
1885.....	\$ 5,066	\$ 4,920
1886.....	11,877	5,832
1887.....	12,023	4,598
1888.....	15,674	4,001
1889.....	13,565	3,948
1890.....	16,922	5,313
1891.....	16,179	6,665
1892.....	17,782	6,492
1893.....	17,762	5,606
1894.....	14,433	2,223
1895.....	14,569	7,775
1896.....	16,287	11,913
1897.....	16,318	11,231
1898.....	17,661	15,478
1899.....	21,454	22,343

a Emery, in bulk, crushed or ground. Duty free.

b Emery wheels and manufactures of emery. Duty 25 p.c.

**ABRASIVE
MATERIALS.**

Pumice stone.

TABLE 7.

**ABRASIVE MATERIALS.
IMPORTS OF PUMICE STONE.**

Fiscal Year.	Value.
1885.....	\$ 9,384
1886.....	2,777
1887.....	3,594
1888.....	2,890
1889.....	3,232
1890.....	3,003
1891.....	3,696
1892.....	3,282
1893.....	3,798
1894.....	4,160
1895.....	3,609
1896.....	3,721
1897.....	2,903
1898.....	3,829
*1899.....	5,973

* Pumice and pumice stone, ground or unground. Duty free.

ASBESTUS.

ASBESTUS.

Production.

Though complete returns were not received from asbestos producers we have been enabled to estimate from railway shipments, and other sources the missing figures, and the total production for 1899 is shown in Table 1 below. The product has been derived as usual from the mines in the 'Eastern Townships' of Quebec at Thetford, Black Lake and Danville, and from the Denholme mine north of Ottawa.

A small increase of 1,666 tons is shown in the production of asbestos, with a decrease in the value of \$6,496, the average value per ton having been in 1898 \$29.46 and in 1899 \$26.34. This decrease in value however, should not be ascribed to any general fall in the price of asbestos but should rather be attributed to the continued increase, evidenced during the past few years, in the production of the lower grade qualities of fibre, the lower value of which, pulls down the total average value.

TABLE 1.
ASBESTUS.
PRODUCTION.—1896 TO 1899.

ASBESTUS.
Production.

	Tons.	Value.	Average Value per ton.
1896—Asbestos	10,892	\$ 423,066	\$ 38.84
Asbestic	1,358	6,790	5.00
	12,250	\$ 429,856	\$ 35.09
1897—Asbestos	13,202	\$ 399,528	\$ 30.26
Asbestic	17,240	45,840	2.66
	30,442	\$ 445,368	\$ 14.63
1898—Asbestos	16,124	\$ 475,131	\$ 29.46
Asbestic	7,661	16,066	2.10
	23,785	\$ 491,197	\$ 20.65
1899—Asbestos	17,790	\$ 468,635	\$ 26.34
Asbestic	7,746	17,214	2.22
	25,536	\$ 485,849	19.03

The values of the different grades have averaged about \$100 for firsts, \$50 for seconds and from \$10 to \$15 for thirds.

The production of asbestic in 1899 amounted to 7,746 tons valued at \$17,214 or an average value per ton of \$2.22. These figures show but little change from those of the previous year.

In Table 1 the production of asbestos and asbestic, with the average value per ton of each, are shown for the years 1896 to 1899 inclusive, the production of asbestos previous to 1896 being shown in Table 2.

GEOLOGICAL SURVEY OF CANADA.

ASBESTUS.
product etc.

TABLE 2.
ASBESTUS.
PRODUCTION, &c.

Calendar Year.	PRODUCTION.			Exports, Average value per ton.
	Tons (2,000 lbs.)	Value.	Average value per ton.	
		\$	\$ cts.	\$ cts.
1880.....	380	24,700	65.00	} Exports taken as production.
1881.....	540	35,100	65.00	
1882.....	810	52,650	65.00	
1883.....	955	63,750	71.98	
1884.....	1,141	75,097	65.80	
1885.....	2,440	142,441	58.37	
1886.....	3,458	206,251	59.64	
1887.....	4,619	226,976	49.14	
1888.....	4,404	255,007	57.90	
1889.....	6,113	426,554	69.77	
1890.....	9,860	1,260,240	127.81	
1891.....	9,279	999,878	107.75	
1892.....	6,082	390,462	64.19	
1893.....	6,331	310,156	49.02	
1894.....	7,630	420,825	55.15	
1895.....	8,756	368,175	42.05	

The statistics of exports and imports are given in Tables 3 and 4.

TABLE 3.
ASBESTUS.
EXPORTS.

Exports.

Calendar Year.	Tons.	Value.	Average value per ton.
1892.....	5,380	\$373,103	69.35
1893.....	5,917	338,707	57.24
1894.....	7,987	477,837	59.82
1895.....	7,442	421,690	56.66
1896.....	11,842	567,967	47.96
1897.....	15,570	473,274	30.40
1898.....	15,346	494,012	32.19
1899 { 1st class.....	906	\$ 70,807	78.15
2nd ".....	3,935	183,338	46.60
3rd ".....	13,042	219,003	16.79
Total, 1898...	17,883	\$473,148	26.46

TABLE 4.
ASBESTUS.
IMPORTS.

ASBESTUS.
Imports.

Fiscal Year.	Value.
1885.....	\$ 674
1886.....	6,831
1887.....	7,836
1888.....	8,793
1889.....	9,943
1890.....	13,250
1891.....	13,298
1892.....	14,090
1893.....	19,181
1894.....	20,021
1895.....	26,094
1896.....	23,900
1897.....	19,032
1898.....	26,389
*1899.....	32,607

*Asbestos, in any form other than crude, and all manufactures of. Duty 25 p.c.

CHROMITE.

CHROMITE.

The production of chromite in 1899 amounted to 2,010 tons, 11 tons less than for the previous year. The total value was \$21,842, an average per ton of \$10.86. The product is divisible into two grades, there being shipped 1,456 tons of the low grade ore valued at an average of \$8.95 per ton, and 554 tons of high grade ore and concentrates valued at \$15.90 per ton.

TABLE 1.
CHROMITE.
ANNUAL PRODUCTION.

Production

Calendar Year.	Tons, (2,000 lbs.)	Average Price per ton.	Value.
		\$ c.	\$
1886.....	* 60	15.75	945
1887.....	38	15.00	570
1888 to 1893.....	no output		
1894.....	1,000	20.00	20,000
1895.....	3,177	13.00	41,300
1896.....	2,342	11.53	27,004
1897.....	2,637	12.31	32,474
1898.....	*2,021	12.00	24,252
1899.....	2,010	10.86	21,842

* Railway shipments.

CHROMITE.

The chromite is obtained entirely from the deposits situated in the Eastern Townships of Quebec, and is sold chiefly in Pittsburg and Philadelphia. The total product to the end of 1899 has amounted to 13,285 tons, valued at \$168,387. The figures of exports, as collected by the Customs Department, are shown below in Table 2 :—

TABLE 2.
CHROMITE.
EXPORTS.

Export

Calendar Year.	Tons.	Value.
1895	2,908	\$ 42,236
1896	2,466	31,411
1897	2,106	26,254
1898	1,683	20,783
1899	1,509	19,876

COAL.

COAL.

Coal was formerly the most important of Canada's mineral production in point of value, and only yielded first place to gold in 1898 owing to the abnormal production of the precious metal, chiefly from the Yukon placers.

The production of coal, however, continues to grow with a steadiness which augurs well for the future of the industry, the value in 1899 amounted to over 20 per cent of the total mineral production, and the increase over the previous year both in point of quantity and percentage having been the greatest recorded.

The total production in 1899 amounted to 4,925,051 tons of 2,000 lbs. (4,397,367 tons of 2,240 lbs.) valued at \$10,283,497, as compared with 4,172,582 tons of 2,000 lbs. valued at \$8,222,878 in 1898.

The increase in 1899 over 1898 was 752,469 tons, or 18 per cent in quantity, and \$2,060,619, or 25 per cent in value, the greater increase in the value being attributable to the enhanced price of coal in Nova Scotia.

The production by provinces in 1898 and 1899 was as follows :— COAL.

TABLE I.
COAL.
PRODUCTION BY PROVINCES, 1898 AND 1899.

Production.

Province.	1898.		1899.	
	Tons.	Value.	Tons.	Value.
Nova Scotia.....	2,563,180	4,004,970	3,148,822	5,622,898
British Columbia.....	1 263,154	3,383,448	1,431,101	3,833,307
North-west Territories.....	340,088	825,220	334,600	811,500
New Brunswick.....	6 160	9,240	10,528	15,792
Total.....	4,172,582	\$ 8,222,88	4,925,051	\$10,283,497

As usual the greater part of the output comes from Nova Scotia, which contributed nearly 64 per cent of the total, British Columbia coming second with about 29 per cent. The remaining 7 per cent being produced in the North-west Territories and New Brunswick, The percentage of production to be credited to the several provinces at various periods since 1874 is as follows :—

Province.	1874.	1880.	1890.	1897.	1898.	1899.
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Nova Scotia.....	91	79	71	66	61.4	63.9
British Columbia.....	8	20	25	27	30.3	29.0
N. W. Territories and New Brunswick..	.....	.....	4	7	8.3	7.1

It will be seen from the above figures that British Columbia has been steadily increasing its proportion of the total production, although in 1899 Nova Scotia shows the largest increase, viz. 22 per cent in quantity, as compared with 13 per cent for British Columbia.

COAL.

A comparison of the production of 1898 and 1899 by provinces is shown in Table 2.

TABLE 2.

COAL.

Production.

PRODUCTION. COMPARISON OF 1898 AND 1899.

Province.	INCREASE OR DECREASE.			
	Tons.	Per cent.	Value. \$	Per cent.
Nova Scotia.....	<i>i</i> 585,642	<i>i</i> 22·85	<i>i</i> 1,617,928	<i>i</i> 40·40
British Columbia..	<i>i</i> 167,947	<i>i</i> 13·29	<i>i</i> 449,859	<i>i</i> 13·29
North-west Territories.....	<i>d</i> 5,488	<i>d</i> 1·61	<i>d</i> 13,720	<i>d</i> 1·66
New Brunswick.....	<i>i</i> 4,368	<i>i</i> 70·91	<i>i</i> 6,552	<i>i</i> 70·91
Dominion... ..	<i>i</i> 752,469	<i>i</i> 18·03	<i>i</i> 2,060,619	<i>i</i> 25·06

i Increase. *d* Decrease.

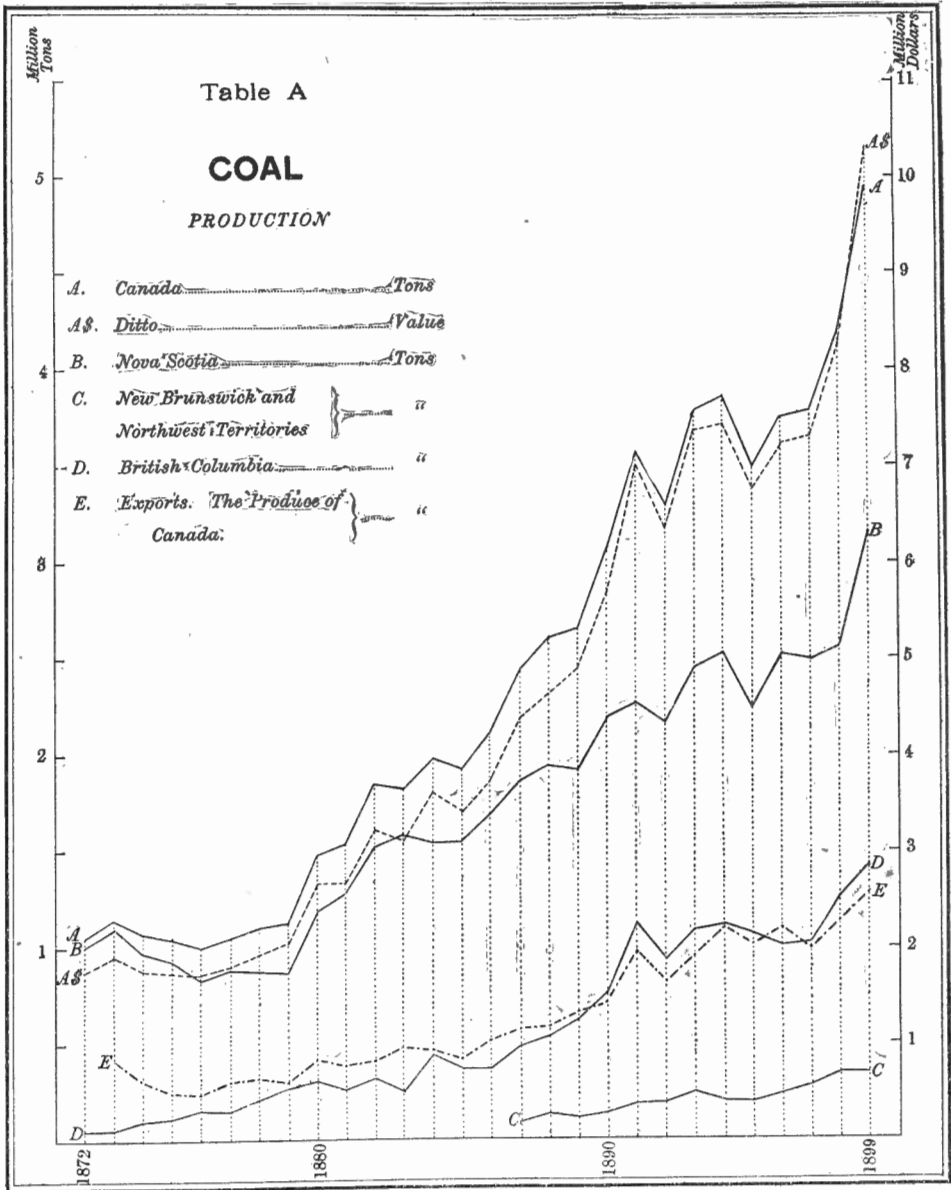
The statistics of production since 1886 showing the increases each year and the yearly average value per ton are given in Table 3, while graphic Table A illustrates at a glance the variations in the production both of the Dominion as a whole and of the several provinces.

TABLE 3.

COAL.

ANNUAL PRODUCTION SHOWING THE INCREASE OR DECREASE EACH YEAR.

Calendar Year.	Tons.	Value.	Average Value per Ton.	Increase (<i>i</i>) or Decrease (<i>d</i>), in Tonnage.	Incr. (<i>i</i>) or Decr. (<i>d</i>) per cent.
1886.....	2,116,653	\$3,739,840	\$1.77	.....	.....
1887.....	2,429,330	4,388,206	1.81	<i>i</i> 312,677	<i>i</i> 14·8
1888.....	2,602,552	4,674,140	1.80	<i>i</i> 173,222	<i>i</i> 7·1
1889.....	2,658,303	4,894,287	1.84	<i>i</i> 55,751	<i>i</i> 2·1
1890.....	3,084,682	5,676,247	1.84	<i>i</i> 426,379	<i>i</i> 16·0
1891.....	3,577,749	7,019,425	1.96	<i>i</i> 493,067	<i>i</i> 16·0
1892.....	3,287,745	6,363,757	1.94	<i>d</i> 290,004	<i>d</i> 8·1
1893.....	3,783,499	7,359,080	1.95	<i>i</i> 495,754	<i>i</i> 15·1
1894.....	3,847,070	7,429,468	1.93	<i>i</i> 63,571	<i>i</i> 1·7
1895.....	3,478,344	6,739,153	1.94	<i>d</i> 368,726	<i>d</i> 9·6
1896.....	3,745,716	7,226,462	1.93	<i>i</i> 267,372	<i>i</i> 7·7
1897.....	3,786,107	7,303,597	1.93	<i>i</i> 40,391	<i>i</i> 1·1
1898.....	4,172,582	8,222,878	1.97	<i>i</i> 386,475	<i>i</i> 10·2
1899.....	4,925,051	10,283,497	2.09	<i>i</i> 752,469.	<i>i</i> 18·0



COAL.
Exports

A large proportion of the production of Nova Scotia and British Columbia, more especially the latter province, finds a market in adjacent portions of the United States, while for the supply of Ontario and portions of Quebec it is found more advantageous to import coal, both bituminous and anthracite, from the comparatively near fields of Pennsylvania.

The exports in 1899 amounted to about 26 per cent of the year's production. The following tables exhibit the statistics of exports and imports, the figures being obtained, as in past years, from the books and reports of the Customs Department.

TABLE 4.

COAL.

EXPORTS.

CALENDAR YEAR.	PRODUCE OF CANADA.	NOT PRODUCE.	CALENDAR YEAR.	PRODUCE OF CANADA.	NOT PRODUCE.
	Tons.	Tons.		Tons.	Tons.
1873.....	420,683	5,403	1887.....	580,965	89,098
1874.....	310,988	12,859	1888.....	588,627	84,316
1875.....	250,348	14,026	1889.....	665,315	89,294
1876.....	248,638	4,995	1890.....	724,486	82,534
1877.....	301,317	4,829	1891.....	971,259	77,827
1878.....	327,959	5,468	1892.....	823,733	93,988
1879.....	306,648	8,468	1893.....	960,312	102,827
1880.....	432,188	14,217	1894.....	1,103,694	89,786
1881.....	395,382	14,245	1895.....	1,011,235	96,836
1882.....	412,682	37,576	1896.....	1,106,661	116,774
1883.....	486,811	44,388	1897.....	986,130	101,848
1884.....	474,405	62,665	1898.....	1,150,029	99,189
1885.....	427,937	71,003	1899.....	1,293,169	101,004
1886.....	520,703	78,443			

TABLE 5.
COAL.
EXPORTS BY PROVINCES.—THE PRODUCE OF CANADA.

COAL.
Exports.

Province.	CALENDAR YEAR.					
	1897.		1898.		1899.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Ontario					305	\$ 549
Quebec	610	\$ 1,830	109	\$ 218		
Nova Scotia	307,128	642,754	309,158	629,363	459,260	827,941
New Brunswick	8,208	25,816	593	1,433	2,341	6,683
P. E. Island			52	140		
N. W. Ter	39,843	72,188	26,274	39,418	49,454	81,901
Brit. Columbia	630,341	2,221,737	813,843	2,948,428	781,809	2,947,369
Total	986,130	\$2,964,325	1,150,029	\$3,619,000	1,293,169	\$3,864,443

TABLE 6.
COAL.
EXPORTS BY PROVINCES.—NOT THE PRODUCE OF CANADA.

Province.	CALENDAR YEAR					
	1897.		1898.		1899.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Ontario	98,062	\$ 178,044	98,424	\$ 175,436	100,370	\$ 162,309
Quebec	1,143	2,101	12	76	46	197
Nova Scotia	150	669	176	822	297	1,359
New Brunswick	2,493	6,891	267	627	291	777
Manitoba			310	1,148		
Total	101,848	\$ 187,705	99,189	\$ 178,109	101,004	\$ 164,642

COAL.

TABLE 7.

COAL.

Exports.

EXPORTS.—NOVA SCOTIA AND BRITISH COLUMBIA.

Calendar Year.	Nova Scotia.		*British Columbia.	
	Tons.	Value.	Tons.	Value.
1874	252,124	\$647,539	51,001	\$ 278,180
1875	179,626	404,351	65,842	356,018
1876	126,520	263,543	116,910	627,754
1877	173,389	352,453	118,252	590,263
1878	154,114	293,795	165,734	698,870
1879	113,742	203,407	186,094	608,845
1880	199,552	344,148	219,878	775,008
1881	193,081	311,721	187,791	622,965
1882	216,954	390,121	179,552	628,437
1883	192,795	336,088	271,214	946,271
1884	222,709	430,330	245,478	901,440
1885	176,287	349,650	250,191	1,000,764
1886	240,459	441,693	274,466	960,649
1887	207,941	390,738	356,657	1,262,552
1888	165,863	330,115	405,071	1,605,650
1889	186,608	396,830	470,683	1,918,263
1890	202,387	426,070	508,882	1,977,191
1891	194,867	417,816	767,734	2,958,695
1892	181,547	407,980	599,716	2,317,734
1893	203,198	470,695	708,228	2,693,747
1894	310,277	633,398	770,439	2,855,216
1895	241,091	534,479	728,283	2,692,562
1896	380,149	787,270	679,799	2,507,752
1897	307,128	642,754	630,341	2,221,737
1898	309,158	629,363	813,843	2,948,428
1899	459,260	827,941	781,809	2,947,369

*See foot-note, table 18.

TABLE 8.

COAL.

Imports.

IMPORTS OF BITUMINOUS COAL.

Fiscal Year.	Tons.	Value.
1880	457,049	\$1,220,761
1881	587,024	1,741,568
1882	636,374	1,992,081
1883	911,629	2,996,198
1884	1,118,615	3,613,470
1885	1,011,875	3,197,539
1886	930,949	2,591,554
1887	1,149,792	3,126,225
1888	1,231,234	3,451,661
1889	1,248,540	3,255,171
1890	1,409,282	3,528,959
1891	1,598,855	4,060,896
1892	1,615,220	4,099,221
1893	1,603,154	3,967,764
1894	1,359,509	3,315,094
1895	1,444,928	3,321,387
1896	1,538,489	3,299,025
1897	1,543,476	3,254,217
1898	1,684,024	3,179,595
*1899	2,171,358	3,691,946

*Duty, 53c. per ton.

TABLE 9.
COAL.
IMPORTS OF ANTHRACITE COAL.

COAL.

Imports.

Fiscal Year.	Tons.	Value.
1880	516,729	\$1,509,960
1881	572,092	2,325,937
1882	638,273	2,666,356
1883	754,891	3,344,936
1884	868,000	3,831,283
1885	910,324	3,909,844
1886	995,425	4,028,050
1887	1,100,165	4,423,062
1888	†2,138,627	5,291,875
1889	1,291,705	5,199,481
1890	1,201,335	4,595,727
1891	1,399,067	5,224,452
1892	1,479,106	5,640,346
1893	1,500,550	6,355,285
1894	1,530,522	6,354,040
1895	1,404,342	5,350,627
1896	1,574,355	5,667,096
1897	1,457,295	5,695,168
1898	1,460,701	5,874,685
*1899	1,745,460	6,490,509

*Anthracite coal and anthracite coal dust. Free.

†In Table 9, Imports of Anthracite Coal, a very considerable increase will be noticed in 1888 over 1887, an increase of over ninety-four per cent, the falling off again in 1889 being quite as remarkable. The average values per ton for the three years 1887, 1888 and 1889, were \$4.02, \$2.47 and \$4.03 respectively. Although a duty of fifty cents per ton on anthracite coal was removed May 13, 1887, it is hardly thought this would account for the changes indicated, and unless some error may possibly have crept into the Trade and Navigation Report, no explanation is available.

TABLE 10.
COAL.
IMPORTS OF COAL DUST.

Fiscal Year.	Tons.	Value.
1880	3,565	\$ 8,877
1881	337	666
1882	471	900
1883	8,154	10,082
1884	12,782	14,600
1885	20,185	20,412
1886	36,230	36,996
1887	31,401	33,178
1888	28,808	34,730
1889	39,980	47,139
1890	53,104	29,818
1891	60,127	36,130
1892	82,091	39,840
1893	109,585	44,474
1894	117,573	49,510
1895	181,318	52,221
1896	210,386	53,742
1897	225,562	59,609
1898	229,445	45,556
*1899	276,547	44,717

*Duty, 20 p. c., not over 13c. per ton.

COAL.

Consumption.

Since we know the production, exports and imports of coal, we are enabled to arrive at a fair approximation of the consumption of coal in Canada, for though the figures of imports are given for the fiscal year, they may be taken to represent closely enough the importation during the calendar year.

The consumption for 1899 would be calculated as follows:—

	Tons.	Tons.
Production, Table 3.....	4,925,051	
Exports of coal the produce of Canada, Table 5.....	1,293,169	
	<hr/>	
Home consumption of Canadian coal.....		3,631,882
Imports of bituminous, anthracite and coal dust, Tables 8, 9 and 10.....	4,193,365	
Exports of coal not the produce of Canada, Table 6.....	101,004	
	<hr/>	
Home consumption of imported coal.....		4,092,361
		<hr/>
Total consumption of coal in Canada, home and imported, 1899.....		7,724,243

In Table 11 will be found the results of similar calculations for each year since 1886. There is here shown the consumption of Canadian and imported coal, and the percentage of each as well as the total consumption per capita. The quantity of coal consumed in 1899 was greater than that used during the previous year by 1,426,709 tons, the increase being about 23 per cent.

Of the total amount consumed 53 per cent was imported and 47 per cent mined in Canada. The consumption per capita was 1.454 tons as compared with 1.200 tons in 1898, an increase of 21 per cent.

The relation between the total production in Canada as given in Table 3, and the total consumption, is interesting in that it exhibits the extent to which the country supplies its own requirements of this mineral. Thus in 1899 the production amounted to 63.7 per cent of the consumption while in 1898 the proportion was 66.1 per cent, and in 1897, 63.9 per cent. In 1890 it was 62.4 per cent, and in 1886, 60.8 per cent. The general tendency has therefore been towards an equalization of production and consumption.

TABLE 11.
COAL.
CONSUMPTION OF COAL IN CANADA.

COAL.

Consumption.

Calendar Year.	Canadian.	Imported.	Total.	Percentage Canadian.	Percentage Imported.	Consumption per capita.
	Tons.	Tons.	Tons.			Tons.
1886.....	1,595,950	1,884,161	3,480,111	45·9	54·1	·758
1887.....	1,848,365	2,192,260	4,040,625	45·7	54·3	·871
1888.....	2,013,925	3,314,353	5,328,278	37·8	62·2	1·137
1889.....	1,992,988	2,490,931	4,483,919	44·4	55·6	·946
1890.....	2,360,196	2,581,187	4,941,383	47·8	52·2	1·031
1891.....	2,606,490	2,980,222	5,586,712	46·7	53·3	1·153
1892.....	2,464,012	3,082,429	5,546,441	44·4	55·6	1·133
1893.....	2,823,187	3,110,462	5,933,649	47·6	52·4	1·198
1894.....	2,743,376	2,917,818	5,661,194	48·5	51·5	1·130
1895.....	2,467,109	2,933,752	5,400,861	45·7	54·3	1·066
1896.....	2,639,055	3,206,456	5,845,511	45·1	54·9	1·140
1897.....	2,799,977	3,124,485	5,924,462	47·3	52·7	1·143
1898.....	3,022,553	3,274,981	6,297,534	48·0	52·0	1·200
1899.....	3,631,882	4,092,361	7,724,243	47·0	53·0	1·454

NOVA SCOTIA.

Nova Scotia.

This is the largest coal producing province in the Dominion. In Table 12 are shown the statistics of output, sales, colliery consumption, etc., both in tons of 2,240 lbs. and in tons of 2,000 lbs.

The demand for coal in 1899 was quite brisk, and caused an increase in the price, making a general average for the year of \$2 per ton. There was also a marked increase in production, amounting to nearly 23 per cent.

COAL.
Nova Scotia.

TABLE 12.
COAL.
NOVA SCOTIA:—OUTPUT, SALES, COLLIERY CONSUMPTION AND PRODUCTION.

Calendar Year.	Output, Tons, 2,240 lbs.	Sales, Tons, 2,240 lbs.	Colliery Consump- tion, Tons, 2,240 lbs.	Production* Tons, 2,240 lbs.	Output, Tons, 2,000 lbs.	Sales, Tons, 2,000 lbs.	Colliery Consump- tion, Tons, 2,000 lbs.	Production* Tons, 2,000 lbs.	Price per Ton 2,240 lbs.	Value of production.
1872.	880,950	785,914	110,341	896,255	986,664	890,224	123,582	1,003,806	\$1.75	\$1,568,446
1873.	1,051,467	881,106	108,388	989,504	1,177,643	986,839	121,406	1,108,245	1.75	1,731,632
1874.	872,720	749,127	119,582	868,709	977,446	839,022	133,932	972,954	1.75	1,520,240
1875.	781,165	706,795	124,110	830,905	874,905	791,610	139,003	930,618	1.75	1,454,084
1876.	709,646	634,207	113,788	747,995	794,804	710,312	127,443	837,755	1.75	1,308,991
1877.	757,496	687,065	98,841	785,906	848,396	769,513	110,702	880,215	1.75	1,375,389
1878.	770,603	693,511	88,627	732,138	863,075	776,732	99,262	875,994	1.75	1,368,741
1879.	788,271	688,624	84,787	773,411	862,863	771,259	94,961	866,220	1.75	1,363,469
1880.	1,032,710	954,659	96,831	1,051,490	1,156,635	1,069,218	108,451	1,177,669	1.75	1,840,108
1881.	1,124,270	1,035,014	107,888	1,142,902	1,259,183	1,159,216	120,834	1,280,950	1.75	2,000,079
1882.	1,365,811	1,250,179	111,381	1,361,560	1,529,708	1,400,200	124,747	1,524,947	1.75	2,382,730
1883.	1,422,553	1,297,523	111,949	1,409,472	1,593,259	1,453,226	125,383	1,578,609	1.75	2,466,576
1884.	1,389,295	1,261,650	116,769	1,378,419	1,566,011	1,413,048	130,781	1,543,829	1.75	2,412,283
1885.	1,352,205	1,254,510	127,624	1,382,134	1,514,470	1,405,051	142,939	1,547,990	1.75	2,418,735
1886.	1,502,611	1,373,666	142,421	1,516,087	1,682,924	1,538,506	159,512	1,698,018	1.75	2,633,152
1887.	1,670,830	1,519,684	139,777	1,659,461	1,871,330	1,702,046	156,550	1,858,596	1.75	2,904,057
1888.	1,776,128	1,576,692	157,443	1,734,135	1,989,263	1,765,895	176,386	1,942,231	1.75	3,034,735
1889.	1,766,279	1,663,107	168,131	1,713,238	1,967,032	1,741,720	177,107	1,918,827	1.75	2,998,167
1890.	1,984,001	1,786,111	161,240	1,947,351	2,222,081	2,000,444	180,589	2,181,033	1.75	3,407,864
1891.	2,044,784	1,849,945	174,983	2,024,928	2,290,158	2,071,938	195,981	2,267,919	1.75	3,543,624
1892.	1,942,780	1,752,934	175,092	1,928,026	2,175,913	1,963,286	196,103	2,159,389	1.75	3,374,046
1893.	2,223,042	1,977,543	205,425	2,182,968	2,489,307	2,314,848	230,076	2,444,924	1.75	3,820,194
1894.	2,250,631	2,060,820	196,206	2,237,126	2,520,707	2,308,231	219,751	2,527,982	1.75	3,949,970
1895.	1,999,756	1,793,098	193,639	1,986,737	2,239,727	2,008,270	216,875	2,225,145	1.75	3,476,790
1896.	2,292,675	2,046,828	192,975	2,239,803	2,567,796	2,392,447	216,132	2,508,579	1.75	3,919,665
1897.	2,340,031	2,044,672	181,716	2,236,388	2,620,335	2,290,032	203,522	2,493,554	1.75	3,896,179
1898.	2,262,656	2,121,126	167,428	2,288,554	2,534,175	2,375,661	187,519	2,563,180	1.75	4,004,970
1899.	2,865,443	2,633,989	177,460	2,811,449	3,209,236	2,950,067	198,755	3,143,822	2.00	5,622,898

* This Production is obtained by adding Sales and Colliery Consumption. For sales previous to 1872, see report of the Department of Mines, Nova Scotia, 1883, page 68.

The coal trade quarterly and by counties is exhibited in Table 13, COAL, and the output by collieries in Table 14.

Nova Scotia.

TABLE 13.
COAL.
NOVA SCOTIA :—COAL TRADE BY COUNTIES

CALENDAR YEAR.	CUMBERLAND.		PICTOU.		CAPE BRETON.		OTHER COUNTIES.	
	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.
	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.
1st quarter.....	127,874	116,079	116,156	95,684	402,600	119,853	1,092	372
2nd "	126,151	115,654	131,179	115,107	577,683	540,780	3,575	2,220
3rd "	99,867	95,423	136,741	130,320	604,952	784,753	5,592	5,301
4th "	136,771	128,362	160,788	145,751	578,145	554,332	130	76
Total, 1899	490,663	456,518	544,864	486,862	2,163,380	1,999,718	10,389	7,969
" 1898	479,067	430,980	457,092	415,170	1,577,794	1,512,173	20,220	17,337

COAL.

TABLE 14.

N va Scotia.

COAL.

NOVA SCOTIA :—OUTPUT BY COLLIERIES DURING THE CALENDAR YEAR, 1899.

Colliery.	Tons, 2,000 lbs.	Colliery.	Tons, 2,000 lbs.
<i>Cumberland County.</i>		<i>Victoria County.</i>	
Joggins	74,550	New Campbellton	8,724
Scotia	567		
Springhill	415,546		
<i>Pictou County.</i>		<i>Cape Breton County.</i>	
Acadia	301,540	Dominion	1,864,101
Intercolonial	243,324	Sydney Mines	294,885
<i>Inverness County.</i>		North Sydney	4,394
Broad-Cove	1,532	Total	3,209,296
Mabou	3		
Pt. Hood	130		

The distribution of coal sold during the years 1898 and 1899 is shown in Table 15. A comparison of the two years will show, besides a general increase in the sales of coal, a greater proportion of sales in the United States. While in 1898 a little less than 3 per cent of the sales were made in the United States, in the following year nearly 11 per cent went to that country.

TABLE 15.

COAL.

NOVA SCOTIA :—DISTRIBUTION OF COAL SOLD.

Markets.	Calendar Years.			
	1898.		1899.	
	Tons, 2,000 lbs.	Per cent.	Tons, 2,000 lbs.	Per cent.
Nova Scotia, transported by land	384,976	16·2	390,494	13·2
" " sea	355,354	15·0	450,675	15·3
Total, Nova Scotia	740,330	31·2	841,169	28·5
New Brunswick	314,327	13·2	370,485	12·5
Prince Edward Island	71,177	3·0	76,622	2·6
Quebec	1,045,388	44·0	1,214,410	41·2
Newfoundland	92,473	3·9	120,163	4·1
West Indies			6,769	·2
United States	110,948	4·7	320,449	10·9
Other countries	1,018			
Total	2,375,661	100·0	2,950,067	100·0

NEW BRUNSWICK.

COAL.

The statistics of coal production in New Brunswick are shown in Table 16, below. The quantities are small, and the production is for local uses only.

TABLE 16.
COAL.
NEW BRUNSWICK :—PRODUCTION.

Calendar Year.	Tons.	Value.	Value per ton.
1887.....	10,040	\$ 23,607	\$2.35
1888.....	5,730	11,050	1.93
1889.....	5,673	11,733	2.07
1890.....	7,110	13,850	1.95
1891.....	5,422	11,030	2.03
1892.....	6,768	9,375	1.39
1893.....	6,200	9,837	1.59
1894.....	6,469	10,264	1.59
1895.....	9,500	14,250	1.50
1896.....	7,500	11,250	1.50
1897.....	6,000	9,000	1.50
1898.....	6,160	9,240	1.50
1899.....	10,528	15,792	1.50

NORTH-WEST TERRITORIES.

North-west
Territories.

The production of coal in the North-west Territories is shown in Table 17. There is but little change to record from the previous year. The chief centres of the industry, continue at the Galt mines at Lethbridge and the mines at Anthracite and Canmore, smaller amounts being mined in the vicinity of Edmonton and along the Souris river.

TABLE 17.
COAL.
NORTH-WEST TERRITORIES :—PRODUCTION.

Calendar Year.	Tons.	Value.	Value per ton.
1887.....	74,152	\$ 157,577	\$ 2.13
1888.....	115,124	183,354	1.59
1889.....	97,364	179,640	1.85
1890.....	128,953	198,498	1.54
1891.....	174,131	437,243	2.51
1892.....	184,370	469,930	2.55
1893.....	238,395	598,745	2.51
1894.....	199,991	488,980	2.45
1895.....	185,654	414,064	2.23
1896.....	225,868	606,891	2.69
1897.....	267,163	667,908	2.50
1898.....	340,088	825,220	2.43
1899.....	334,600	811,500	2.43

BRITISH COLUMBIA.

British
Columbia.

The statistics of production of coal in British Columbia are shown in Table 18, while the variations are also exhibited graphically in

COAL.

British
Columbia.

Table A. An increase of 13 per cent is shown over the production of 1898. A little over 100,000 tons was taken out at the Crow's Nest Colliery, the balance coming from the Island of Vancouver. About one half the production of the province is exported, or more exactly 54.6 per cent in 1899.

TABLE 18.
COAL.
BRITISH COLUMBIA:—PRODUCTION.

Calendar Year.	Output Tons, 2,240 lbs.	Home Consumption, Tons, 2,240 lbs.	Sold for Export, Tons, 2,240 lbs. †	PRODUCTION.*		Price per ton, 2,240 lbs.	Value.
				Tons, 2,240 lbs.	Tons, 2,000 lbs.		
1836-52..	10,000				11,200	4.00	40,000
1852-59..	25,398				28,446	4.00	101,592
1859 †† ..	1,989				2,228	4.00	7,956
1860.....	14,247				15,957	4.00	56,988
1861.....	13,774				15,427	4.00	55,096
1862.....	18,118				20,292	4.00	72,472
1863.....	21,345				23,906	4.00	85,350
1864.....	28,632				32,068	4.00	114,528
1865.....	32,819				36,757	4.00	131,276
1866.....	25,115				28,129	4.00	100,460
1867.....	31,239				34,988	4.00	124,956
1868.....	44,005				49,286	4.00	176,020
1869.....	35,802				40,098	4.00	143,208
1870.....	29,843				33,424	4.00	119,372
1871-2-3.	148,459				166,274	4.00	593,836
1874.....	81,547	25,023	56,038	81,061	90,788	3.00	243,183
1875.....	110,145	31,252	66,392	97,644	109,361	3.00	292,932
1876.....	139,192	17,856	†122,329	140,185	157,007	3.00	420,555
1877.....	154,052	24,311	115,381	139,692	156,455	3.00	419,076
1878.....	170,846	26,166	164,682	190,848	213,750	3.00	572,544
1879.....	241,301	40,294	192,096	232,390	260,277	3.00	697,170
1880.....	267,595	46,513	225,849	272,362	305,045	3.00	817,086
1881.....	228,357	40,191	189,323	229,514	257,056	3.00	688,542
1882.....	282,139	56,161	232,411	288,572	323,201	3.00	865,716
1883.....	213,299	64,786	149,567	214,353	240,075	3.00	643,059
1884.....	394,070	87,388	306,478	393,866	441,130	3.00	1,181,598
1885.....	365,596	95,227	237,797	333,024	372,987	3.00	999,072
1886.....	326,636	85,987	249,205	335,192	375,415	3.00	1,005,576
1887.....	413,360	99,216	334,839	434,055	486,142	3.00	1,302,165
1888.....	489,301	115,953	365,714	481,667	539,467	3.00	1,445,001
1889.....	579,830	124,574	443,675	568,249	636,439	3.00	1,704,747
1890.....	678,140	177,075	503,270	685,345	767,586	3.00	2,056,035
1891.....	1,029,097	202,697	806,479	1,009,176	1,130,277	3.00	3,027,528
1892.....	826,335	196,223	640,579	836,802	937,218	3.00	2,510,406
1893.....	978,294	207,851	768,917	976,768	1,093,980	3.00	2,930,304
1894.....	1,012,953	165,776	827,642	993,418	1,112,628	3.00	3,080,254
1895.....	939,654	188,349	756,334	944,633	1,058,045	3.00	2,834,049
1896.....	894,882	261,984	634,238	896,222	1,003,769	3.00	2,688,666
1897.....	892,296	290,310	619,860	910,170	1,019,390	3.00	2,730,510
1898.....	1,136,015	374,953	752,863	1,127,816	1,263,154	3.00	3,383,448
1899.....	1,306,324	526,058	751,711	1,277,769	1,431,101	3.00	3,833,307

* This production is obtained by adding "Home Consumption" and "Sold for Export." † 52,935 of this amount was reported as sales without the division into "Home Consumption" and "Sold for Export." ‡ The figures in the "Sold for Export" column do not agree as they should with those given in Table 7, the only explanation being that the data in the two cases are from different sources, and it has not been possible to find out the cause of the difference. ¶ Two months only.

The following table giving the source of California's coal supply in COAL. 1899 will illustrate the position which British Columbia coal occupies in this market. British Columbia.

Table showing source of California's coal supply for 1899 :—

	Tons of 2,000 lbs.
British Columbia.....	697,909
Australia.	156,053
English and Welsh	104,454
Eastern Cumberland and Anthracite	43,625
Seattle, Washington.....	304,297
Tacoma, "	398,447
Mount Diable, Coos Bay and Tesla	212,248
Japan and Rocky Mountains (by rail).....	31,797
Total.	1,948,830

For detailed descriptions of the coal fields of Canada together with tables of analyses of Canadian coal, the reader is referred to the report of this Section for 1898.

COKE.

Coke.

The production of coke in 1899 was 100,820 tons valued at \$350,022 or an average value per ton of \$3.47. Compared with the previous year, this is an increase of 13,220 tons in quantity and \$64,022 in value.

The annual production since 1886 is shown in Table 1 below :— Production.

TABLE 1.
COKE.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.	Value. per Ton.
1886.....	35,396	\$101,940	2·88
1887.....	40,428	135,951	3·36
1888.....	45,373	134,181	2·96
1889.....	54,539	155,043	2·84
1890.....	56,450	166,298	2·95
1891.....	57,084	175,592	3·08
1892.....	56,135	160,249	2·85
1893.....	61,078	161,790	2·65
1894.....	58,044	148,551	2·56
1895.....	53,356	143,047	2·68
1896.....	49,619	110,257	2·22
1897.....	60,686	176,457	2·91
1898.....	87,600	286,000	3·26
1899.....	100,820	350,022	3·47

The coke is manufactured in the provinces of Nova Scotia and British Columbia, and the production of these provinces for the past three years is shown in Table 2. Previous to 1896, there was but little coke made in British Columbia and the production was then practically all from the eastern province.

TABLE 2.
COKE.

PRODUCTION OF COKE BY PROVINCES.

Production.

Calendar Year.	Nova Scotia.		British Columbia.	
	Tons.	Value.	Tons.	Value.
		\$		\$
1897.	41,532	90,950	19,154	85,507
1898.	48,400	111,000	39,200	175,000
1899.	62,459	178,767	38,361	171,255

Although the eastern and western provinces are thus supplied by the local home product, Ontario and Quebec continue to import considerable quantities of coke from adjacent parts of the United States.

The imports of coke are shown in Tables 3 and 4.

TABLE 3.
COKE.

IMPORTS OF OVEN COKE.

Imports.

Fiscal Year.	Tons.	Value.
		\$
1880.	3,837	19,353
1881.	5,492	26,123
1882.	8,157	36,670
1883.	8,943	38,588
1884.	11,207	44,518
1885.	11,564	41,391
1886.	11,858	39,756
1887.	15,110	56,222
1888.	25,487	102,334
1889.	29,557	91,902
1890.	36,564	133,344
1891.	38,533	177,605
1892.	43,499	194,429
1893.	41,821	156,277
1894.	42,864	176,996
1895.	43,235	149,434
1896.	61,612	203,826
1897.	83,330	267,540
1898.	135,060	347,040
1899.	141,284	362,826

TABLE 4.
COKE.
IMPORTS OF OVEN COKE—FISCAL YEARS 1898 AND 1899.

COAL.
Coke.
Imports.

Province.	1898.		1899.	
	Tons.	Value.	Tons.	Value.
New Brunswick.....	9	\$ 26	37	\$ 185
Quebec.....	10,226	35,001	9,459	33,249
Ontario.....	122,246	298,904	131,124	326,935
Manitoba.....	284	1,389	251	1,116
British Columbia..	2,295	11,720	413	1,341
Totals.....	135,060	347,040	141,284	362,826

COPPER.

COPPER.

For the first time since 1894 the production of copper in Canada shows a decrease. The output in 1899 amounted to 15,078,475 lbs., being less than the output of the previous year by 2,668,661 lbs., a decrease of 15 per cent. In spite of this decrease, however, the total value of the copper produced in 1899 was greater than the value of the production of 1898, by over half a million dollars, owing to the great increase in the price of copper during the past year. The average price of refined copper in New York, in 1898, was 12.03 cents per pound, and in 1899 it was 17.61 cents, an increase of 5.58 cents per pound, or over 45 per cent.

COPPER.

TABLE I.

Production.

COPPER.

ANNUAL PRODUCTION.*

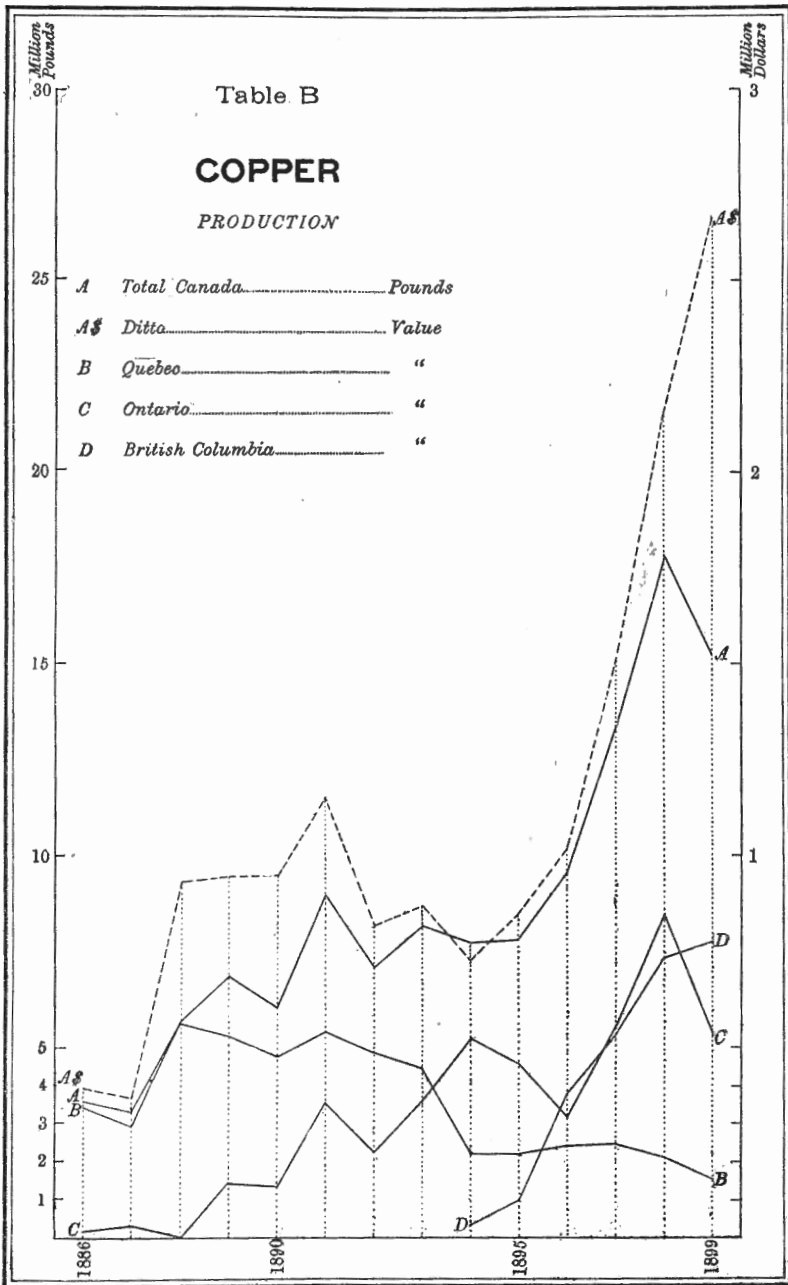
Calendar Year.	Lbs.	Increase or Decrease.		Value.	Increase or Decrease.		Average Price per Pound.
		Lbs.	%		\$	%	
1886.	3,505,000	.....	.....	\$ 385,550	.....	.....	Cts. 11·00
1887.	3,260,424	244,576	6·99	366,798	18,752	4·86	11·25
1888.	5,562,864	<u>2,302,440</u>	<u>70·60</u>	927,107	<u>560,309</u>	<u>152·70</u>	<u>16·66</u>
1889.	6,809,752	<u>1,246,885</u>	<u>22·40</u>	936,341	<u>9,234</u>	<u>0·99</u>	<u>13·75</u>
1890.	6,013,671	796,081	11·69	947,153	<u>10,812</u>	<u>1·15</u>	<u>15·75</u>
1891.	8,928,921	<u>2,915,250</u>	<u>48·40</u>	1,149,598	<u>202,445</u>	<u>21·37</u>	<u>12·87</u>
1892.	7,087,275	1,841,646	20·62	818,580	331,018	28·79	11·55
1893.	8,109,856	<u>1,022,381</u>	<u>14·40</u>	871,809	<u>53,229</u>	<u>6·50</u>	<u>10·75</u>
1894.	7,708,789	401,067	4·94	736,960	134,849	15·46	9·56
1895.	7,771,639	<u>62,850</u>	<u>·81</u>	836,228	<u>99,268</u>	<u>13·47</u>	<u>10·76</u>
1896.	9,393,012	<u>1,621,373</u>	<u>20·86</u>	1,021,960	<u>185,732</u>	<u>22·21</u>	<u>10·88</u>
1897.	13,300,802	<u>3,907,790</u>	<u>41·60</u>	1,501,660	<u>479,700</u>	<u>46·94</u>	<u>11·29</u>
1898.	17,747,136	<u>4,446,334</u>	<u>33·43</u>	2,134,980	<u>633,320</u>	<u>42·17</u>	<u>12·03</u>
1899.	15,078,475	2,668,661	15·04	2,655,319	<u>520,339</u>	<u>24·37</u>	<u>17·61</u>

* The production is altogether represented by the copper contained in ore, matte, &c., produced and shipped, valued at the average market price for the year for fine copper in New York.

NOTE.—In the above table increases are shown underlined, and decreases in the ordinary way.

The various provinces contributed to the production in 1899 as follows:—British Columbia, 51 per cent; Ontario, 38 per cent and Quebec, but 11 per cent. In 1898, the proportions were:—British Columbia, 41 per cent; Ontario, 47 per cent and Quebec, 12 per cent. British Columbia has thus assumed the premier position in copper production, due not so much to the increase in that province, which amounted to only 6 per cent, as to the large decrease in Ontario, over 32 per cent. The variation in the production of the provinces and of the Dominion as a whole, is graphically set forth in Table B.

COPPER.
Pro-
duction.



COPPER.
Exports.TABLE 2.
COPPER.
EXPORTS OF COPPER IN ORE, MATTER, ETC.

Calendar Year.	Nova Scotia.		Ontario.		Quebec.		British Columbia.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
1885		\$		\$		\$		\$		\$
1886				16,404		262,600				262,600
1887				3,416		232,855				232,855
1888						134,550				137,966
1889						257,260				257,260
1890						168,457				168,457
1891				2,219		396,278				398,497
1892				64,719		283,385				348,104
1893		100		79,141		198,391				277,632
1894				212,314		56,846				269,160
1895				25,029		12,005			4,792,201	4,792,201
1896				1,359,684		285,009			1,625,389	1,625,389
1897				49,000		412,305			1,097,576	1,097,576
1898				4,382,170		290,845			1,970,363	1,970,363
1899				3,800,000		553,569			5,122,207	5,122,207
				345,230		340,389			7,431,992	7,431,992
									11,023,536	11,023,536
									54,883	54,883
									97,276	97,276
									267,602	267,602
									813,661	813,661
									14,022,610	14,022,610
									11,572,381	11,572,381
									11,371,766	11,371,766
									286,965	286,965
									281,070	281,070
									850,336	850,336
									840,243	840,243
									1,199,908	1,199,908

The exports of copper from Canada are given yearly in the Trade and Navigation Reports, and Table 2 is here given as usual showing the exports for the calendar year for the last 15 years. COPPER.
Exports.

As practically all the copper production is exported either in the form of matte or otherwise, these figures should agree with Table 1. This, however, they are far from doing.*

The imports of copper in pigs, etc., unmanufactured, are given in Table 3, and of manufactures of copper in Table 4.

The total imports in 1899 were valued at \$798,320, as compared with \$867,443 in 1898. The increase in importation of copper in pigs, or ingots, and scrap copper is most marked, being in 1899 \$246,740, while for the previous year the value was only \$80,914 and for 1897, \$5,449. In contrast with this, however, the imports of manufactured copper were much less than in 1898 though still only exceeded in one other previous year. These tables do not include the copper entering into the manufacture of various classes of machinery, electrical and other, which is imported, and in that respect the tables are short in showing the actual quantities or values of copper entering the country.

TABLE 3.
COPPER.
IMPORTS OF PIGS, OLD, SCRAP, ETC.

Imports.

Fiscal Year.	Lbs.	Value.	Fiscal Year.	Lbs.	Value.
		\$			\$
1880.....	31,900	2,130	1890.....	112,200	11,521
1881.....	9,800	1,157	1891.....	107,800	10,452
1882.....	20,200	1,984	1892.....	343,600	14,894
1883.....	124,500	20,273	1893.....	168,300	16,331
1884.....	46,200	3,180	1894.....	101,200	7,397
1885.....	28,600	2,016	1895.....	72,062	6,770
1886.....	82,000	6,969	1896.....	86,905	9,226
1887.....	40,100	2,507	1897.....	49,000	5,449
1888.....	32,300	2,322	1898.....	1,050,000	80,000
1889.....	32,300	3,288			
1899 { Copper, old and scrap or in blocks .....Duty free			247,000		39,429
{ Copper in pigs or ingots "			1,408,000		207,311
Total, 1899.....			1,655,000		246,740

* The discrepancies between the two tables result from differences in both quantities and values. The values in Table 1 are similar to those adopted throughout the report for metallic products, viz.: the final market value of the metal, while in the table of exports (Table 2) the values are apparently the spot values placed upon the metal at the point of shipment, although they will be seen to vary very considerably; as for instance, in 1897, ranging from less than half a cent per pound in Ontario to nearly nine cents per pound in British Columbia. The figures of quantity, however, also show large discrepancies, and for this we can offer no explanation, except to make the suggestion that the returns to some of the customs officers are not as correct as they might be.

COPPER.
Imports.

TABLE 4.
COPPER.
IMPORTS OF MANUFACTURES.

Fiscal Year.		Value.				
		\$				
1880	.....	123,061			
1881	.....	159,163			
1882	.....	220,235			
1883	.....	247,141			
1884	.....	134,534			
1885	.....	181,469			
1886	.....	219,420			
1887	.....	325,365			
1888	.....	303,459			
1889	.....	402,216			
1890	.....	472,668			
1891	.....	563,522			
1892	.....	422,870			
1893	.....	458,715			
1894	.....	175,404			
1895	.....	251,615			
1896	.....	285,220			
1897	.....	264,587			
1898	.....	786,529			
		Duty.	Pounds.	\$		
1899.	Copper, in bolts, bars and rods, in coils, or otherwise in lengths not less than 6 feet, unmanufactured.....	Free.	2,031,500	\$278,553		
		"	1,813,400	148,594		
					"	136,796	29,292
		"	.....	11,310	
					Copper and manufactures of:—	Nails, tacks, rivets and burrs or washers..	30 p. c.	.....	4,259
		Wire, plain, tinned or plated	15 "	280,648		45,144
		Wire cloth, &c.	25 "		911
		All other manufactures of, N.O.P.	30 "		33,523
		Total				551,586

Nova Scotia. NOVA SCOTIA.

Although there is no production of copper to report from Nova Scotia, some considerable activity has been evidenced in the exploitation of the copper deposits of this province.

The following notes have been taken from the Report of the Department of Mines.

In Cape Breton county, during the summer, the Coxheath mines were unwatered, the machinery put in good order and the more important levels extended.

The Copper Crown Mining Company has been opening up some COPPER. properties in Cumberland and Colchester counties and has been erecting a furnace at Pictou, where it is proposed to treat the ore. This Company has done more or less work at each of the following places : the Palmer mine, situated about four miles east of Winchester station, I.C.R., and on the west branch of the Wallace river : the King mine, about a mile east of Oxford town ; the Riverside mine on the north bank of River Philip, about three miles east of Oxford ; and the New Annan mine on the east branch of French river. At each of these places boilers and engines have been installed, and in some cases buildings erected for the accomodation of the workmen.

QUEBEC.

Quebec.

The output of this province for the year amounted to 1,632,560 pounds, the production having declined somewhat in recent years. The pyrites deposits of the county of Sherbrooke are as usual the chief source of supply, and the ore is mined principally for the sulphur it contains.

The Ascot mine, in the township of Ascot, which had been leased by its Canadian owners to Americans, was worked to a small extent, chiefly of an exploratory nature, and a small shipment made which was said to average about 11 per cent copper. The property has been again taken possession of by its Canadian owners, who have also done some exploratory work at the old Acton mine, the results of which are reported as exceedingly satisfactory.

Shipments were made from the Harvey Hill mine, in Leeds township, Megantic county, by Dr. James Reed, which averaged about 19 per cent. copper. Dr. Reed also did some exploring on his property in South Ham, from which about 20 tons of ore averaging 17 per cent copper, were shipped.

ONTARIO.

Ontario.

The copper production of Ontario which is derived almost entirely from the copper-nickel deposits at Sudbury, amounted in 1899 to only 5,668,000 lbs. as compared with 8,373,560 lbs. in 1898—a decrease of 32 per cent. The quantity of ore treated in 1899 was greater than during the previous year, so that the decreased production of copper must be ascribed to a decrease in the copper contents of the ore mined.

Explorations were continued by the Parry Sound Copper Company at the McGowan mine, lot A, con. B, township of Foley, and the

COPPER.
Ontario.

Wilcox mine, lots 19, 20, 21 and 22, con. IV., township of Cowper, Parry Sound district. A small shipment of ore was made to Constable Hook, New Jersey.

The production of copper in Ontario as given by the Ontario Bureau of Mines is as follows in Table 5 with the exception of the final value which has been added to facilitate comparison with the other tables in the report.

TABLE 5.
COPPER.
ONTARIO:—PRODUCTION.

Year.	Pounds.	Spot Value.		Final Value.	
		Total.	Per lb.	Total.	Per lb.
		\$	cts.	\$	cts.
1892.....	3,872,000	232,135	6 00	447,216	11 55
1893.....	2,862,000	115,200	4 03	307,865	10 75
1894.....	5,496,000	195,750	3 56	525,418	9 56
1895.....	4,731,000	160,913	3 40	509,056	10 76
1896.....	3,736,000	130,660	3 50	406,477	10 88
1897.....	5,500,000	200,067	3 63	620,950	11 29
1898.....	8,373,560	268,080	3 20	1,007,339	12 03
1899.....	5,668,000	176,237	3 11	998,135	17 61

British
Columbia.

BRITISH COLUMBIA.

The statistics of production of copper in British Columbia for the past six years are shown in Table 6 below. The increase has been continuous from year to year, though only amounting to 6 per cent in 1899.

TABLE 6.
COPPER.
BRITISH COLUMBIA—PRODUCTION.

Calendar Year.	Copper contained in ores, matte, &c.	Increase.		Final Value.
		Lbs.	%	
1894.....	324,680			\$ 31,039
1895.....	952,840	628,160	193	102,526
1896.....	3,818,556	2,865,716	301	415,459
1897.....	5,325,180	1,506,624	39	601,213
1898.....	7,271,678	1,946,498	36	874,783
1899.....	7,722,591	450,913	6	1,359,948

The districts contributing most largely to the output in 1899 were, COPPER. Trail creek, or Rossland, with nearly 74 per cent of the whole, and Nelson with about 18 per cent both in West Kootenay, the balance coming chiefly from the coast districts.

In the Trail Creek mining division, in which it must be remembered the ores are mined more especially for their gold than their copper values, there was mined during the year 172,665 tons of ore, the copper contents of which amounted to 5,693,889 lbs., or an average of 1.65 per cent. About 94 per cent of the shipments of this division came from the Le Roi, War Eagle, and Centre Star mines alone.

In the Nelson division there was mined 58,302 tons of ore of which the copper contents amounted to 1,370,513 lbs., or an average percentage of 1.17.

The output of copper from the coast districts is yet small and is chiefly the product of mines in Texada island, on Mt. Sicker on the east coast, and near Alberni on the west coast of Vancouver Island.

GRAPHITE.

GRAPHITE.

According to the returns received from various operators the production of graphite in 1899 was 1,310 tons valued at \$24,179.

This is the largest production reported in any one year and greater than the value of the output of 1898 by \$10,481.

The greater part of the product was crude graphite shipped from the Black Donald mine, Renfrew county, Ontario, by the Ontario Graphite Company of Ottawa. At Buckingham no mining was reported but the North American Graphite Company shipped some prepared graphite from stock in hand.

Some new work was undertaken by the Keystone Graphite Company of Scranton, Pennsylvania, on lot 10 A, range V. of Grenville township, Argenteuil county. According to Mr. H. P. Brumell, late manager, some shipments of fine lump ore were made to New Jersey and Chicago.

GRAPHITE.
Production.

TABLE 1.
GRAPHITE.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.
1886.....	500	\$4,000
1887.....	300	2,400
1888.....	150	1,200
1889.....	242	3,160
1890.....	175	5,200
1891.....	260	1,560
1892.....	167	3,763
1893.....	nil.	nil.
1894*.....	3	223
1895.....	220	6,150
1896.....	139	9,455
1897.....	436	16,240
1898.....	.....	13,698
1899.....	1,130	24,179

* Exports.

The exports and imports of graphite are shown in Tables 2 and 3 the total values of the exports in 1899 being \$22,490 and of the imports \$62,803.

Exports.

TABLE 2.
GRAPHITE.
EXPORTS.

Calendar Year.	N. Brunswick.		Ontario.		Quebec.		Nova Scotia.	
	Cwt.	Value	Cwt.	Value	Cwt.	Value	Cwt.	Value
		\$		\$		\$		\$
1886.....	8,142	3,586	.....	.....	.....	.....	.....	.....
1887.....	6,294	3,017	.....	.....	.....	.....	.....	.....
1888.....	2,700	1,080	.....	.....	.....	.....	.....	.....
1889.....	660	422	22	116	.....	.....	.....	.....
1890.....	400	160	329	1,369	.....	.....	.....	.....
1891.....	464	72	.....	.....	.....	.....	.....	.....
1892.....	1,224	449	15	60	4,590	3,443	.....	.....
1893.....	.....	.....	12	38	.....	.....	.....	.....
1894.....	.....	.....	69	223	.....	.....	.....	.....
1895.....	1	8	1,087	4,825	.....	.....	.....	.....
1896.....	270	106	2,235	7,418	.....	351	160	1,605
1897.....	.....	.....	850	1,286	.....	1,332	3,240	1,707
1898.....	1,356	635	10,445	10,878	.....	1,575	9	10
1899 (Crude.....	.....	.....	24,208	17,626	.....	.....	540	1,700
Manufact'd..	.....	.....	.....	.....	.....	3,164	.....	.....
	.....	.....	24,208	17,626	.....	3,164	540	1,700

TABLE 3.

GRAPHITE.

GRAPHITE.

Imports.

IMPORTS OF RAW AND MANUFACTURED GRAPHITE.

Fiscal Year.	Plumbago.	Manufactures of plumbago.	
		Black-lead.	Other Manufactures.
1880.....	\$1,677	\$18,055	\$2,738
1881.....	2,479	23,544	1,202
1882.....	1,028	25,132	2,181
1883.....	3,147	21,151	2,141
1884.....	2,891	24,002	2,152
1885.....	3,729	24,487	2,805
1886.....	5,522	23,211	1,408
1887.....	4,020	25,766	2,830
1888.....	3,802	7,824	22,604
1889.....	3,546	11,852	21,789
1890.....	3,441	10,276	26,605
1891.....	7,217	8,292	26,201
1892.....	2,988	13,560	23,085
1893.....	3,293	16,595	23,051
1894.....	2,177	17,614	16,686
1895.....	2,586	13,922	21,988
1896.....	2,865	18,434	19,497
1897.....	1,406	17,863	20,674
1898.....	1,862	19,638	32,653
1899	Duty.		
	Plumbago, not ground, etc.	10 p.c.	\$4,979
	Black-lead.....	25 "	\$ 21,334
	Plumbago, ground and manufactures of, N.E.S.	25 "	
Crucibles, clay and plumbago.....	Free.....		\$22,140
Total, 1899.....		\$4,979	\$21,334
			\$36,490

GYPSUM.

GYPSUM.

The production of gypsum, including plaster of Paris, and other manufactured products, in 1899 reached the highest value yet reported, amounting in all to 244,566 tons, valued at \$257,329, or an average of \$1.05 per ton. Compared with 1898 this is an increase of 11 per cent in quantity and 10 per cent in value, though only greater than the production in 1897 by 2 per cent in quantity and 5 per cent in value.

The output is, as usual, almost entirely from the eastern provinces of Nova Scotia and New Brunswick, a small amount being still mined in Ontario. In Nova Scotia a decrease in production is again shown, while in New Brunswick a considerable increase is evidenced.

GYPSUM.

The statistics of production since 1886, are shown in Tables 1 and 2.

Production.

The production for the past three years arranged according to class of product, viz : crude gypsum, calcined and land plaster and plaster of Paris and terra alba, is shown below.

Production 1897.	Tons.	Value.	Value per Ton.
		\$	\$ cts.
Crude gypsum.....	228,416	187,918	0·82
Calcined and land plaster.....	1,956	4,753	2·43
Plaster of Paris and terra alba.....	9,319	51,860	5·62
Total	239,691	244,531	1·02

Production 1898.	Tons.	Value.	Value per Ton.
		\$	\$ cts.
Crude gypsum.....	208,061	174,445	0·84
Calcined and land plaster.....	1,583	4,574	2·89
Plaster of Paris and terra alba.....	9,612	53,496	5·57
Total	219,256	232,515	1·06

Production 1899.	Tons.	Value.	Value per Ton.
		\$	\$ cts.
Crude gypsum.....	233,819	198,831	0·85
Calcined and land plaster.....	717	2,246	3·13
Plaster of Paris and terra alba.....	10,030	56,252	5·61
Total	244,566	257,329	1·05

TABLE 1.
GYPSUM.
ANNUAL PRODUCTION.

GYPSUM.
Production

Calendar Year.	Tons.	Value.	Average price per ton.
1886.....	162,000	\$178,742	\$ 1.10
1887.....	154,008	157,277	1.02
1888.....	175,887	179,393	1.01
1889.....	213,273	205,108	0.96
1890.....	226,509	194,033	0.86
1891.....	203,605	206,251	1.01
1892.....	241,048	241,127	1.00
1893.....	192,568	196,150	1.02
1894.....	223,631	202,031	0.90
1895.....	226,178	202,608	0.89
1896.....	207,032	178,061	0.86
1897.....	239,691	244,531	1.02
1898.....	219,256	232,515	1.06
1899 { Nova Scotia.....	126,754	102,055	0.81
1899 { New Brunswick.....	116,792	151,296	1.30
1899 { Ontario.....	1,020	3,978	3.90
Total, 1899.....	244,566	\$257,329	\$1.05

It will be seen that the greater part of the product, over 95 per cent., is crude gypsum. The plaster of Paris, with the exception of a small amount which is made in Ontario, is derived almost entirely from the Province of New Brunswick, and is manufactured by the Albert Manufacturing Company, at their Hillsborough Quarries, Albert county.

TABLE 2.
GYPSUM.
ANNUAL PRODUCTION BY PROVINCES.

CALENDAR YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		ONTARIO.		TOTAL.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$		\$
1886.....							162,000	178,742
1887.....	116,346	116,346	29,102	29,216	8,560	11,715	154,008	157,277
1888.....	124,818	120,429	44,369	48,764	6,700	10,200	175,887	179,393
1889.....	165,025	142,850	40,866	49,130	7,382	13,128	213,273	205,108
1890.....	181,285	154,972	39,024	30,986	6,200	8,075	226,509	194,033
1891.....	161,934	153,955	36,011	33,996	5,660	18,300	203,605	206,251
1892.....	197,019	170,021	39,709	65,707	4,320	5,399	241,048	241,127
1893.....	152,754	144,111	36,916	41,846	2,898	10,193	192,568	196,150
1894.....	168,300	147,644	52,962	48,200	2,369	6,187	223,631	202,031
1895.....	156,809	133,929	66,949	63,839	2,420	4,840	226,178	202,608
1896.....	136,590	111,251	67,137	59,024	3,305	7,786	207,032	178,061
1897.....	155,572	121,754	82,658	118,116	1,461	4,661	239,691	244,531
1898.....	132,086	106,610	86,083	121,704	1,087	4,201	219,256	232,515
1899.....	126,754	102,055	116,792	151,296	1,020	3,978	244,566	257,329

GYPSUM.

The exports and imports of gypsum are shown in Tables 3, 4 and 5.

Exports.

TABLE 3.

GYPSUM.

EXPORTS OF CRUDE GYPSUM.

Calendar Year.	NOVA SCOTIA.		NEW BRUNSWICK.		ONTARIO.		TOTAL.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
1874	67,830	\$ 68,164	.....	.....	.....	.....	67,830	\$ 68,164
1875	86,065	86,193	5,420	\$ 5,420	.....	.....	91,485	91,613
1876	87,720	87,590	4,925	6,616	120	\$ 180	92,765	94,386
1877	106,950	93,867	5,030	5,030	.....	.....	111,980	98,897
1878	88,631	76,695	16,335	16,435	489	675	105,455	93,805
1879	95,623	71,353	8,791	8,791	579	720	104,993	80,864
1880	125,685	111,833	10,375	10,987	875	1,240	136,935	124,060
1881	110,303	100,284	10,310	15,025	657	1,040	121,270	116,349
1882	133,426	121,070	15,597	24,581	1,249	1,946	150,272	147,597
1883	145,448	132,834	20,242	35,557	462	837	166,152	169,228
1884	107,653	100,446	21,800	32,751	688	1,254	130,141	134,451
1885	81,887	77,898	15,140	27,730	525	787	97,552	106,415
1886	118,985	114,116	23,498	40,559	350	538	142,833	155,213
1887	112,557	106,910	19,942	39,295	225	337	132,724	146,542
1888	124,818	120,429	20	50	670	910	125,508	121,389
1889	146,204	142,850	31,495	50,862	483	692	173,182	194,404
1890	145,452	139,707	30,034	52,291	205	256	175,691	192,254
1891	143,770	140,438	27,536	41,350	5	7	171,311	181,795
1892	162,372	157,463	27,488	43,623	.....	.....	189,860	201,086
1893	132,131	122,556	30,061	36,706	.....	.....	162,192	159,262
1894	119,569	111,586	40,843	46,538	.....	.....	160,412	158,124
1895	133,369	125,651	56,117	67,593	.....	.....	189,486	193,244
1896	116,331	109,054	64,946	77,535	.....	.....	181,277	186,589
1897	122,984	116,665	66,222	80,485	.....	.....	189,206	197,150
1898	99,215	93,474	70,399	81,433	.....	.....	169,614	174,907
1899	104,795	99,984	96,831	108,094	* $\frac{1}{2}$	12	201,626	208,090

*Exported from British Columbia.

TABLE 4.

GYPSUM.

EXPORTS OF GROUND GYPSUM.

Calendar Year.	Nova Scotia.	New Brunswick.	Ontario.	Total.
	\$	\$	\$	\$
1890.....	.....	.....	.....	105
1891.....	.....	.....	.....	588
1892.....	.....	.....	.....	20,255
1893.....	.....	.....	.....	22,132
1894.....	2,124	17,930	.....	20,054
1895.....	3,364	18,827	42	22,233
1896.....	1,270	19,246	751	21,267
1897.....	1,655	5,024	84	6,763
1898.....	1,548	4,900	.....	6,448
1899.....	205	7,898	20	8,123

TABLE 5.
GYPSUM.
IMPORTS OF GYPSUM, ETC.

GYPSUM.
Imports.

Fiscal Year.	Crude Gypsum.		Ground Gypsum.		Plaster of Paris.	
	Tons.	Value.	Pounds.	Value.	Pounds.	Value.
1880.....	1,854	\$3,203	1,606,578	\$ 5,948	667,676	\$ 2,376
1881.....	1,731	3,442	1,544,714	4,676	574,006	2,864
1882.....	2,132	3,761	759,460	2,576	751,147	4,184
1883.....	1,384	3,001	1,017,905	2,579	1,448,650	7,867
1884.....		3,416	687,432	1,936	782,920	5,226
1885.....	1,353	2,354	461,400	1,177	689,521	4,809
1886.....	1,870	2,429	224,119	675	820,273	5,463
1887.....	1,557	2,492	13,266	73	594,146	4,342
1888.....	1,236	2,193	106,068	558	942,338	6,662
1889.....	1,360	2,472	74,390	372	1,173,996	8,513
1890.....	1,050	1,928	434,400	2,136	693,435	6,004
1891.....	376	640	36,500	215	1,035,605	8,412
1892.....	626	1,182	310,250	2,149	1,166,200	5,595
1893.....	496	1,014	140,830	442	552,130	3,143
1894.....		1,660	23,270	198	422,700	2,386
1895.....	603	960	20,700	88	259,200	1,619
1896.....	1,045	848	64,500	198	297,000	2,000
1897.....		772	45,000	123	969,900	4,489
1898.....	1,147	1,742	35,700	293	329,600	2,025
1899.....	325	692	*33,900	338	496,300	3,120

*113 barrels.

Crude gypsum, duty free. Ground gypsum, duty 15%. Plaster of Paris, duty 12½c. per 100 lbs.

IRON.

IRON.

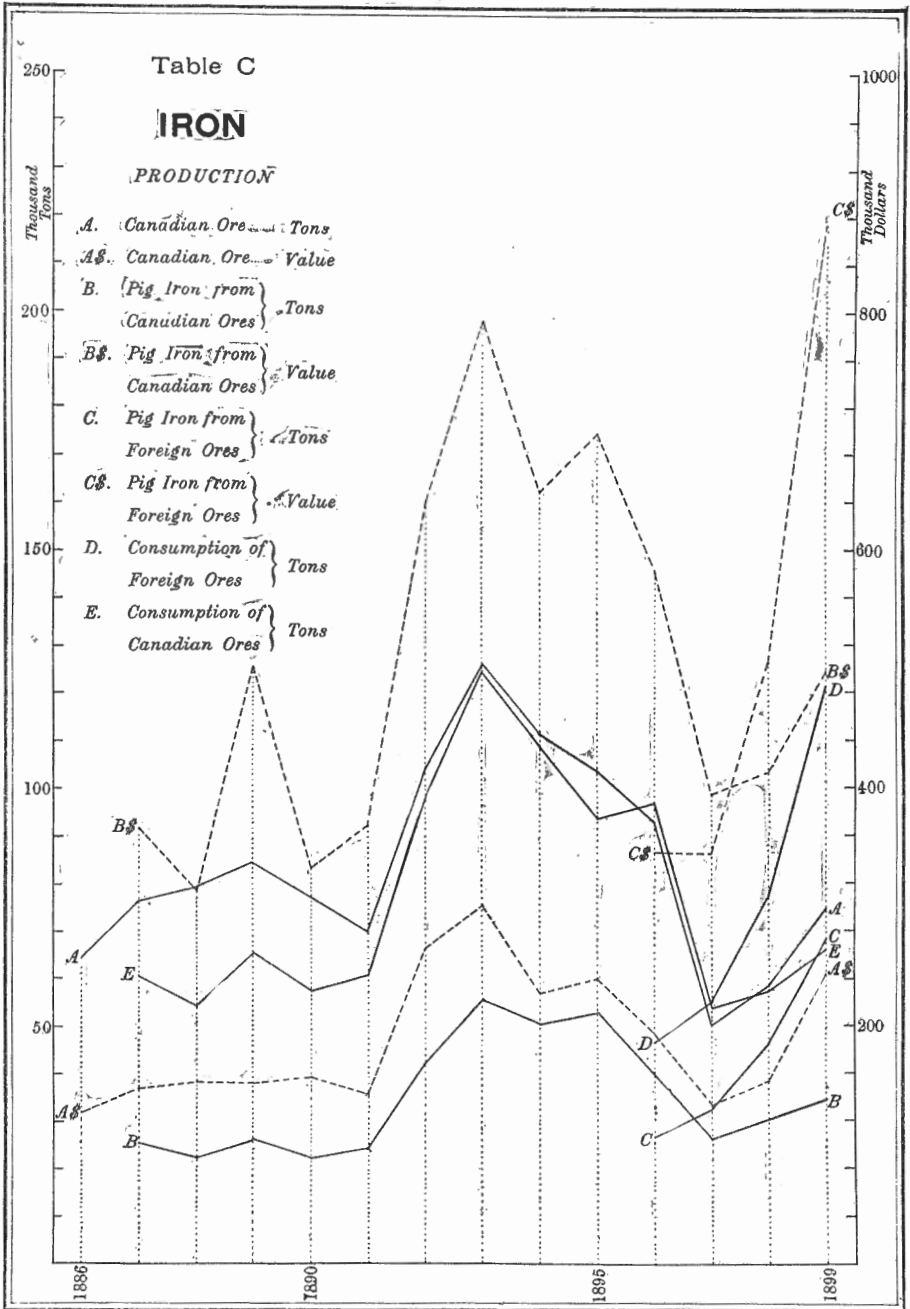
The production of iron ore in Canada is still comparatively small, amounting in 1899 to 74,617 tons valued at \$240,542, though the increase over the production of 1898 was 16,274 tons and \$87,754.

The output is used almost altogether in the blast furnaces, only small quantities being exported.

The ores mined in 1899 were those at Bridgeville, Nova Scotia, which were used by the Nova Scotia Steel Co., in conjunction with Newfoundland ores, and by the Mineral Products Co., the bog iron ore of Quebec, used in the manufacture of charcoal pig iron at the furnaces at Radnor and Drummondville, the ore found in eastern Ontario in Hastings county, etc., and used in the blast furnace at Hamilton, and some British Columbia ores from the Glen Iron mine near Kamloops and from Texada Island used as a flux by the smelters.

The production of pig iron in Canadian furnaces has increased rapidly during the past few years. This, however, can now only be partially claimed as a Canadian product, since in 1899 less than 40 per cent of the ore used in the furnaces was obtained from our own mines.

The annual production of ore, pig iron, etc., since 1886 is shown graphically in Table C below.



The production of ore by provinces in 1898 and 1899 was as IRON. follows :—

Production of ore.

Province.	1898.		1899.	
	Tons.	Value.	Tons.	Value.
Nova Scotia.....	19,079	\$ 42,928	28,000	\$ 84,000
Quebec.....	17,873	46,033	19,420	50,161
Ontario.....	21,111	63,077	25,126	100,806
British Columbia.....	280	750	2,071	5,575
Total.....	58,343	152,788	74,617	240,542

The production of ore by provinces from 1886 to 1897 is given in Table 1, while in Table 2, the production in Nova Scotia since 1876 is shown.

TABLE 1.
IRON.
PRODUCTION OF ORE BY PROVINCES.

Province.	1886.	1887.	1888.	1889.	1890.	1891.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Nova Scotia.....	44,388	43,532	42,611	54,161	49,206	53,649
Quebec.....	16,032	13,404	10,710	14,533	22,305	14,380
Ontario.....	3,941	16,598	16,894	.....	5,000	.....
British Columbia.....	.....	2,796	8,372	15,487	.....	950
Total.....	64,361	76,330	78,587	84,181	76,511	68,979

Province.	1892.	1893.	1894.	1895.	1896.	1897.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Nova Scotia.....	78,258	102,201	89,379	83,792	58,810	23,400
Quebec.....	22,690	22,076	19,492	17,783	17,630	22,436
Ontario.....	.....	.....	.....	.....	15,270	2,770
British Columbia.....	2,300	1,325	1,120	1,222	196	2,099
Total.....	103,248	125,602	109,991	102,797	91,906	50,705

IRON.

Production
of ore.

The relative proportion of the output of ore by the different provinces in each of the last five years is shown in the following table:—

TABLE 1A.
PROPORTIONAL PRODUCTION OF ORE BY PROVINCES.

Province.	1895.	1896.	1897.	1898.	1899.
	%	%	%	%	%
Nova Scotia.....	81·51	63·99	46·15	32·70	37·52
Quebec.....	17·30	19·18	44·25	30·63	26·03
Ontario.....		16·62	5·46	36·19	33·67
British Columbia.....	1·19	0·21	4·14	·48	2·78
	100·00	100·00	100·00	100·00	100·00

TABLE 2.

IRON.

Nova Scotia.

NOVA SCOTIA:—ANNUAL PRODUCTION OF ORE.

Calendar Year.	Tons.
1876.....	15,274
1877.....	16,879
1878.....	36,600
1879.....	29,889
1880.....	51,193
1881.....	39,843
1882.....	42,135
1883.....	52,410
1884.....	54,885
1885.....	48,129
1886.....	44,388
1887.....	43,532
1888.....	42,611
1889.....	54,161
1890.....	49,206
1891.....	53,649
1892.....	78,258
1893.....	102,201
1894.....	89,379
1895.....	83,792
1896.....	58,810
1897.....	23,400
1898.....	19,079
1899.....	28,000

The exports of iron ore which are of small amount in recent years IRON. are given in Table 3.

Exports of
ore.

TABLE 3.
IRON.
EXPORTS OF ORE.

Province.	CALENDAR YEAR.							
	1896.		1897.		1898.		1899.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
Ontario.....	*1,033	\$ 1,911	.....	.....	143	\$ 172	633	\$ 2,834
Quebec.....	.....	.....	151	\$ 286	39	106	1,761	4,507
Nova Scotia.....	.....	.....	.....	.....	.....	.....	.....	.....
British Columbia.....	.....	.....	252	525	.....	.....	1,751	2,197
Total	1,033	\$1,911	403	\$ 811	182	\$ 278	4,145	\$ 9,538

* Probably the product of the Province of Quebec, shipped via Ontario.

The production of pig iron in Canada in 1899 from Canadian and imported ores, according to returns furnished by furnace operators, was 102,940 tons valued at \$1,377,306, or an average per ton of \$13.38. These figures, however, do not include the output of the furnace of the Pictou Charcoal Iron Co. at Bridgeville, N.S., which was leased to the Mineral Products Co. for the manufacture of ferro-manganese, for which returns were not received. This furnace was in blast from about the 1st April to the 1st December, when an accident occurred preventing further operations. The total shipments according to an estimate received, were about 1,350 tons of spiegel, 450 tons of ferro-manganese and 900 tons of foundry pig. This would increase the year's output to over 105,000 tons.

The production of pig iron since 1887 is shown in Table 4. The increase in production in 1899 over 1898, excluding the output of the Mineral Products Company, was 25,925 tons, or 33 per cent in quantity and \$464,911 or nearly 50 per cent in value. The total quantity of ore entering into the production was 187,034 tons, of which 66,384 tons or 35 per cent was mined in Canada, and 120,650 tons or 65 per cent imported. In 1898, 43 per cent of the ore mined was the product of Canadian mines and 57 per cent imported, while in 1897 and 1896 the percentages of Canadian ore used were respectively 49 per cent and 67.5 per cent. Previous to 1896 the iron was made entirely from Canadian ore.

Of the product in 1899, 19.5 per cent. or 20,104 tons was charcoal iron, while the balance, 82,839 tons was made with coke as fuel.

IRON.

Pig Iron
Production.

To estimate the approximate amount of pig iron which should be credited to Canadian ore the output of each furnace has been divided in the proportion of the Canadian and foreign ores entering into its composition. On this basis the production of pig iron in the past four years has been as follows :—

Year.	From Canadian Ore.	From Imported Ore.
	Tons.	Tons.
1896	40,720	26,548
1897	26,200	31,807
1898	30,553	46,462
1899	34,244	68,699

These figures are, however, necessarily only approximate, since we are assuming the average iron contents of the various classes of ore used to be the same.

TABLE 4.
IRON.
PIG IRON PRODUCTION: CONSUMPTION OF ORE, FUEL, ETC.

CALENDAR YEAR.	IRON ORE CONSUMED.		FUEL CONSUMED.						FLUX CONSUMED.		PIG IRON MADE.		
	Tons.	Value. \$	Charcoal.		Coke.		Coal.		Tons.	Value. \$	Tons.	Value. \$	Value per ton. \$
			Bushels.	Value. \$	Tons.	Value. \$	Tons.	Value. \$					
1887.....	60,434	130,808	940,400	48,593	30,248	89,123	3,333	5,877	17,171	17,500	24,827	366,192	14.75
1888.....	54,956	102,343	804,286	41,800	28,031	82,986	2,197	4,709	16,857	16,833	21,790	313,235	14.37
1889.....	65,670	126,064	755,800	41,568	33,289	94,791	3,044	6,525	22,122	21,969	25,321	499,872	19.28
1890.....	57,304	117,880	589,860	29,493	32,832	97,659	1,241	2,638	18,478	18,361	21,772	331,688	15.23
1891.....	60,933	130,955	441,812	22,091	30,626	98,402	2,170	2,868	11,377	11,546	23,891	368,901	15.44
1892.....	96,948	250,966	1,131,365	78,291	50,882	152,311	1,740	1,797	22,967	21,687	42,443	637,421	15.02
1893.....	124,053	296,979	1,302,720	90,976	58,711	163,849	6,621	13,539	27,797	27,519	55,947	790,283	14.13
1894.....	108,871	223,861	1,173,970	53,958	59,373	142,303	7,653	14,571	35,101	34,347	49,367	646,447	12.94
1895.....	93,208	218,336	789,561	31,582	48,540	139,475	3,089	5,396	31,585	29,922	52,454	696,440	13.28
1896.....	(a) 96,560	200,887	756,600	32,256	(a) 48,660	106,939	1,407	2,288	37,462	36,140	67,268	924,129	13.74
	(b) 46,300	100,205			(b) 33,990	108,253							
1897.....	(a) 53,658	131,705	1,031,800	43,230	(a) 35,800	71,600			31,273	30,258	58,007	738,701	12.73
	(b) 55,722	138,504			(b) 27,810	94,553							
1898.....	(a) 57,881	151,760	836,400	41,820	(a) 31,952	63,904			33,913	31,153	77,015	912,895	11.85
	(b) 77,107	213,165			(b) 50,407	158,783							
1899.....	(a) 66,384	216,322	1,928,025	87,858	(a) 44,844	134,532			51,826	44,286	102,940	1,377,306	13.38
	(b) 120,650	402,860			(b) 64,648	193,944							

(a) Canadian. (b) Foreign.

IRON.
Pig Iron
Production.

IRON.
Pig Iron
Production.

There were altogether six furnaces in blast during the year, two in Nova Scotia, two in Quebec, and two in Ontario.

In Nova Scotia the Mineral Products Co., of Hillsborough, New Brunswick, as before mentioned, operated the furnace leased from the Pictou Charcoal Iron Co. Theirs was the first spiegeleisen and ferromanganese produced in Canada. A mixture of charcoal and coke was used for fuel. The Nova Scotia Steel Co. operated continuously during the year with increased output. They continue to import a large proportion of their ore from Newfoundland. Only 40 per cent of the ore charged during the year was from Canadian mines. The furnace of the Londonnery Iron Company was not operated during the year.

The Dominion Iron and Steel Co., Ltd., in the fall of 1899 commenced the erection at Sydney of four blast furnaces. These will be the largest furnaces in Canada. They are to be 85 feet high, 17 feet in diameter at the bosh and will have an annual capacity of about 400,000 tons of iron. The company will bring in ore from the hæmatite deposits in Belle Island, Newfoundland. Operations have also been begun on 400 ovens of the Otto Hoffman type, for the manufacture of coke, in which the by-products will be saved, and the gas used in the blast furnaces. Preparation is also being made for the manufacture of steel.

The output of the furnaces at Radnor and Drummondville remained about the same. They are owned and operated respectively by the Canada Iron Furnace Co., and John McDougall & Co., of Montreal. They utilize the bog iron ores found in the counties of Champlain, Joliette and Vaudreuil and in Drummond and Nicolet, and employ charcoal as fuel.

In Ontario the manufacture of pig iron was commenced at the new furnace at Deseronto, by the Deseronto Iron Company, Ltd. Imported ore was charged, and charcoal employed for fuel. The Hamilton Blast Furnace Company increased their output. They use Pennsylvania coke as fuel, while about 72 per cent of the ore charged was obtained from the great iron deposits on the south shore of Lake Superior, the balance being derived largely from the deposits in eastern Ontario. Work was commenced on a new furnace at Midland, Ont., by the Canada Iron Furnace Company and it is expected to be ready to blow in in the latter part of 1900. The furnace will be 65 feet high and its bosh diameter 12 feet, and will have an annual capacity of about 30,000 tons of pig iron.

Table 5 shows the exports of iron and steel goods. In the exports of iron stoves and iron castings, small decreases are shown from the

figures of the previous year, but in all the other items substantial IRON. increases are indicated. The value of the scrap iron exported in 1899 was over ten times that sent out of the country in 1898. The exports of pig iron increased from a value of \$32,645 to \$149,190. Manufactured iron, machinery, hardware, etc., showed an increase of 47 per cent, and steel and manufactures of, an increase of about 70 per cent.

TABLE 5.

IRON.

EXPORTS OF IRON AND STEEL GOODS, THE PRODUCT OF CANADA.

CALENDAR YEAR 1899.

Exports.

Province.	Scrap Iron.	Iron Stoves.	Iron Castings.	Pig Iron.	*Iron, all other, and Hardware.	Steel and manu- factures of.	Totals.
	\$	\$	\$	\$	\$	\$	\$
Ontario.....	24,732	455	62,342	40,924	260,051	33,161	421,665
Quebec.....	37,722	335	23,834	57,206	229,818	13,233	362,198
Nova Scotia.....	.....	2,021	1,658	51,060	63,793	40,330	158,862
New Brunswick.....	5,260	215	177	.....	3,135	2,070	10,857
Prince Edward Island.....	115	.....	.....	.....	277	.....	392
Manitoba.....	179	.....	.....	.....	908	278	1,365
North-west Territories....	246	90	.....	.....	46	669	1,051
British Columbia.....	3,869	.....	1,550	.....	11,579	1,989	18,987
Total.....	72,123	3,116	89,561	149,190	569,607	91,780	975,377

Machinery, N.E.S., sewing machines and hardware, N.E.S.

IRON.

The imports of iron in its cruder forms are shown in Tables 6, 7 and 8. These tables as well as 9a and 9b following are made up from the Trade and Navigation Reports, and are for the fiscal year.

TABLE 6.

IRON.

Imports.

IMPORTS OF IRON, PIG, SCRAP, ETC.

Fiscal Year.	Pig Iron.		Charcoal Pig Iron.		Old and Scrap Iron.		Wrought Scrap and Scrap Steel.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
1880	(a) 23,159	\$ 371,956	.....	.....	928	\$ 14,042	.....	.....
1881	(a) 43,630	715,997	.....	.....	584	8,807	.....	.....
1882	56,594	811,221	6,837	211,791	1,327	20,406	.....	.....
1883	75,295	1,085,755	2,198	58,994	709	7,776	.....	.....
1884	49,291	653,708	2,893	66,602	3,136	44,223	.....	.....
1885	42,279	545,426	1,119	27,333	3,552	46,275	.....	.....
1886	42,463	528,483	3,185	60,086	10,151	158,100	.....	.....
1887	46,295	554,388	3,919	77,420	17,612	220,167	(b) 79	1,086
	Pig Iron, etc. (c)							
	Tons.	Value.						
		\$						
1888	48,973	648,012	.....	.....	.....	.....	23,293	297,496
1889	72,115	864,752	.....	.....	.....	.....	26,794	335,090
1890	87,613	1,148,078	.....	.....	.....	.....	47,846	678,574
1891	81,317	1,085,929	.....	.....	.....	.....	43,967	652,842
1892	68,918	886,485	.....	.....	.....	.....	32,627	433,695
	Pig Iron.		Charcoal Pig Iron.		Cast Scrap Iron.			
	Tons.	Value.	Tons.	Value.	Tons.	Value.		
		\$		\$		\$		
1883	56,849	682,209	5,944	84,358	729	9,317	45,459	574,809
1884	42,376	483,787	2,906	34,968	78	771	30,850	369,682
1895	(d) 31,637	341,259	2,780	31,171	643	4,347	23,390	244,388
1896	(d) 36,131	394,591	917	11,726	93	741	13,607	157,996
1897	(d) 25,766	291,788	2,936	35,373	238	1,362	7,903	93,541
1898	(d) 37,186	382,103	2,250	23,533	1,559	13,251	(e) 48,903	534,577
1899	(d) 44,261	452,911	(f) 1,955	19,123	(f) 2,378	22,594	(e) 28,352	301,268

(a) Comprises pig-iron of all kinds.

(b) From May 13 only.

(c) These figures appear in Customs reports under heading 'Iron in pigs, iron kentledge and cast scrap-iron.'

(d) Includes iron kentledge. Duty \$2.50 per ton.

(e) Scrap iron and scrap steel, old, and fit only to be remanufactured, being part of, or recovered from, any vessel wrecked in waters subject to the jurisdiction of Canada. Duty free.

Iron or steel scrap, wrought, being waste or refuse, including punchings, cuttings and clippings of iron or steel plates or sheets, having been in actual use, crop ends of tin plate bars, blooms and rails, the same not having been in actual use. Duty \$1 per ton.

(f) Duty \$2.50 per ton.

TABLE 7.
IRON.
IMPORTS OF FERRO-MANGANESE, ETC.

IRON.

Imports.

Fiscal Year.	Tons.	Value.
*1887	123	\$ 1,435
*1888	1,883	29,812
*1889	5,868	72,108
*1890	696	18,895
*1891	2,707	40,711
*1892	1,311	23,930
*1893	529	15,858
*1894	284	9,885
†1895	164	5,408
†1896	652	12,811
†1897	426	9,233
†1898	1,418	22,516
†1899	1,160	22,539

* These amounts include:—ferro-manganese, ferro-silicon, spiegel, steel bloom ends, and crop ends of steel rails, for the manufacture of iron or steel.

† Ferro-silicon, spiegeleisen and Ferro-manganese.

TABLE 8.

IRON.

IMPORTS: IRON IN SLABS, BLOOMS, LOOPS AND PUDDLED BARS, ETC.

Fiscal Year.	Cwt.	Value.
1880.....	195,572	\$244,601
1881.....	111,666	111,374
1882.....	203,888	222,056
1883.....	258,639	269,818
1884.....	252,310	264,045
1885.....	312,329	287,734
1886.....	273,316	248,461
1887.....	522,853	421,598
1888.....	110,279	93,377
1889.....	80,383	67,181
1890.....	15,041	45,923
1891.....	41,567	38,931
1892.....	64,397	56,186
1893.....	65,269	58,533
1894.....	50,891	45,018
1895.....	78,639	67,321
1896.....	128,535	110,757
1897.....	56,560	48,954
1898.....	162,891	122,426
1899*.....	124,311	103,198

* Iron or steel ingots, blooms, slabs, billets, puddled bars and loops of other forms, N.O.P., less finished than iron or steel bars, but more advanced than pig iron, except castings. Duty, \$2 per ton.

IRON.

TABLE 9a.

Imports.

IRON.
IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
			\$
Bar iron or steel rolled, whether in coils, bundles, rods or bars, comprising rounds, ovals, squares and flats and rolled shapes, N.O.P. Cwt.	\$7 per ton.	325,946	448,569
Castings, iron or steel, in the rough, N.E.S. Canada plates, Russia iron, flat galvanized iron or steel sheets, terne plates and rolled sheets of iron or steel coated with zinc, spelter or other metal, of all widths or thicknesses, N.O.P. Cwt.	25 %	.....	111,702
Iron or steel bridges or parts thereof, iron or steel structural work, columns, shapes or sections drilled, punched, or in any further stage of manufacture than as rolled or cast, N.E.S. "	5 "	426,950	954,605
Malleable iron castings and iron or steel castings, N.E.S. "	55 "	301,428	540,430
Mould boards, or shares or plough plates land sides and other plates for agricultural implements, cut to shape from rolled plates of steel but not moulded, punched, or otherwise manufactured. "	25 "	6,390	16,649
Iron or steel railway bars or rails of any form, punched or not punched, N.E.S., for railways, which term for the purposes of this item shall include all kinds of railways, street railways and tramways, even although the same are used for private purposes only, and even although they are not used or intended to be used in connection with the business of common carrying of goods or passengers. Tons.	5 "	48,849	133,764
Railway fish-plates and tie plates. "	30 "	4,823	86,614
Rolled iron or steel angles, tees, beams, channels, joists, girders, zees, stars or rolled shapes, or trough, bridge, building, or structural rolled sections, or shapes not punched, drilled or further manufactured than rolled, N.E.S., and flat-iron barblanks not punched or drilled. Cwt.	\$8 per ton.	5,821	131,498
Rolled iron or steel hoop, band, scroll or strip, 8 inches or less in width, No. 18 gauge and thicker, N.E.S. "	10 %	241,407	251,205
Rolled iron or steel hoop, band, scroll or strip, thinner than No. 18 gauge, N.E.S. "	\$7 per ton.	31,497	43,300
Rolled iron or steel angles, tees, beams, channels, girders and other rolled shapes or sections, weighing less than 35 lbs. per lineal yard, not punched, drilled or further manufactured than rolled, N.O.P. "	5 %	154,639	86,518
Rolled iron or steel plates or sheets, sheared or unsheared, and skelp iron or steel, sheared or rolled in grooves, N.E.S. "	\$7 per ton.	100,413	113,945
	\$7 "	73,128	101,305
Carried forward.			3,030,104

TABLE 9a—Continued.

IRON.

IRON.

Imports.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
			\$
Brought forward.....			3,030,104
Rolled iron or steel plates, not less than 30 inches in width and not less than $\frac{1}{4}$ inch in thickness, N.O.P..... Cwt.	10 %	172,396	221,778
Rolled iron or steel sheets No. 17 gauge and thinner, N.O.P..... "	5 "	119,622	230,828
Rolls of chilled iron or steel..... "	30 "	1,820	7,247
Skelp iron or steel, sheared or rolled in grooves, imported by manufacturers of wrought iron or steel pipe for use only in the manufacture of wrought iron or steel pipe in their own factories..... "	5 "	215,179	223,368
Swedish rolled iron and Swedish rolled steel nail rods under half an inch in diameter for the manufacture of horse-shoe nails.. "	15 "	24,283	39,383
Switches, frogs, crossings and intersections for railways..... "	30 "	2,052	3,065
Steel—chrome steel..... "	15 "	3,210	16,741
Steel plate, universal mill or rolled edge bridge plates imported by manufacturers of bridges..... "	10 "	37,656	39,434
Steel in bars, bands, hoops, scroll or strips, sheets or plates, of any size, thickness or width when of greater value than 2 $\frac{1}{2}$ c. per lb., N.O.P..... "	5 "	108,812	272,271
Hoop iron not exceeding $\frac{3}{8}$ of an inch in width and being No. 25 gauge and thinner, used for the manufacture of tubular rivets..... "	Free.	32	310
Iron or steel beams, sheets, plates, angles, knees and cable chains for wooden, iron, steel, or composite ships or vessels..... "	"	45,040	57,421
Locomotive and car wheel tires of steel, in the rough..... "	"	16,051	49,134
Steel for saws and straw cutters cut to shape, but not further manufactured..... "	"	10,985	74,908
Crucible sheet steel, 11 to 16 gauge, 2 $\frac{1}{2}$ to 18 inches wide, imported by manufacturers of mower and reaper knives for manufacture of such knives in their own factories..... "	"	8,574	36,533
Steel of No. 20 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of corset steels, clock springs and shoe shanks imported by the manufacturers of such articles for the exclusive use in the manufacture thereof in their own factories..... "	"	2,368	7,997
Steel valued at 2 $\frac{1}{2}$ cents per lb. and upward, imported by the manufacturers of skates, for use exclusively in the manufacture thereof in their own factories..... "	"	294	1,383
Carried forward.....			4,301,905

IRON.

TABLE 9a—*Concluded.*

Imports

IRON.
IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
			\$
Brought forward.....			4,301,905
Steel, under $\frac{1}{2}$ -inch in diameter, or under $\frac{1}{2}$ inch square, imported by the manufacturers of cutlery, or of knobs, or of locks, for use exclusively in the manufacture of such articles in their own factories..... Cwt.	Free.	1,981	4,571
Steel, No. 12 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of buckle clasps, bed fasts, furniture castors and ice creepers, imported by the manufacturers of such articles, for use exclusively in the manufacture thereof in their own factories.....	"	879	1,995
Steel of No. 24 and 17 gauge, in sheets sixty-three inches long, and from 18 inches to 32 inches wide, imported by manufacturers of tubular bow sockets for use in the manufacture of such articles in their own factories.....	"	930	2,004
Steel for International Bridge, Cornwall, (O.C.).....	"	13,460	26,863
Steel for the manufacture of bicycle chain, imported by the manufacturers of bicycle chain for use in the manufacture thereof in their own factories.....	"	1,155	3,450
Steel for Niagara Falls Arch Bridge (O.C.).....	"	12,000	26,552
Steel for the manufacture of files, augers, auger bits, hammers, axes, hatchets, scythes, reaping hooks, hoes, hand rakes, hay or straw knives, windmills and agricultural or harvesting forks imported by the manufacturers of such or any of such articles for use exclusively in the manufacture thereof in their own factories...	"	50,922	89,330
Steel springs for the manufacture of surgical trusses imported by the manufacturers for use exclusively in the manufacture thereof in their own factories.....	"	139	979
Barbed fencing wire of iron and steel.....	"	169,180	316,286
Total.....			4,773,935

TABLE 9b.
IRON.
IMPORTS OF IRON AND STEEL GOODS.

IRON.

Imports.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
			\$
Agricultural implements, N.E.S., viz:			
Binding attachments..... No.	20 %	103,312	32,756
Cultivators..... " 20 "	"	2,502	17,954
Drills, grain seed..... " 20 "	"	2,912	64,683
Farm, road or field rollers..... " 25 "	"	5	160
Forks, pronged..... " 25 "	"	46,997	11,005
Harrows..... " 20 "	"	4,091	53,739
Harvesters, self binding and without binders..... " 20 "	"	6,931	664,610
Hay tedders..... " 25 "	"	170	4,652
Hoes..... " 25 "	"	27,976	3,120
Horse rakes..... " 20 "	"	4,330	69,043
Knives, hay or straw..... " 25 "	"	213	104
" edging..... " 25 "	"	16	23
Lawn mowers..... " 35 "	"	2,573	6,545
Manure spreaders..... " 20 "	"	26	697
Mowing machines..... " 20 "	"	10,332	348,735
Ploughs..... " 20 "	"	9,617	192,158
Post hole diggers..... " 25 "	"	485	195
Potato diggers..... " 25 "	"	17	307
Rakes, N.E.S..... " 25 "	"	26,867	4,920
Reapers..... " 20 "	"	504	25,066
Scythes and snaths, sickles or reaping hooks..... Doz.	25 "	9,118	34,271
Spades and shovels and spade and shovel blanks, and iron or steel cut to shape for the same..... "	35 "	7,860	27,686
Weeders..... No.	20 "	7,953	56,856
All other agricultural implements, N.E.S. \$	25 "		21,785
Anvils and vises..... "	30 "		20,132
Cart or wagon skeins or boxes..... Lbs.	30 "	5,642	988
Springs, axles, axle bars, N.E.S., and axle blanks and parts thereof of iron or steel, for railway or tramway or other vehicles..... Cwt.	35 "	14,793	43,867
Butts and hinges, N.E.S. \$	30 "		17,124
Cast iron pipe of every description..... Cwt.	\$8 per ton	105,914	105,573
Chains, coil chains, chain links and chain shackles of iron or steel 5-16 of an inch in diameter and over..... "	5 %	31,956	60,975
Chain, malleable sprocket or link belting, for binders..... \$	20 "		26,653
Chains, N.E.S..... "	30 "		25,302
Tacks, shoe..... Lbs.	35 "	53,915	4,002
Cut tacks, brad sprigs, or shoe nails, double pointed, and other tacks of iron and steel, N.O.P..... "	35 "	180,692	11,910
Engines, locomotives for railways, NES No.	35 "	67	398,118
Fire..... " 35 "	"		1,733
Fire extinguishing machines..... " 35 "	"		31,197
Steam engines and boilers..... " 25 "	"	332	107,984
Fittings, iron or steel, for iron and steel pipe..... Lbs.	30 "	3,527,921	165,532
Carried forward.....			2,662,160

IRON.

TABLE 9b—Continued.

Imports.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
			\$
Brought forward.....			2,662,160
Forgings of iron or steel, of whatever shape or size, or in whatever stage of manufacture, N.E.S., and steel shafting, turned, compressed or polished, and hammered iron or steel bars or shapes, N.O.P.....	" 30 "	2,518,063	59,738
Hardware, viz:			
Builders', cabinet-makers', upholsterers', harness-makers', saddlers' and carriage hardware, including currycombs and horse boots, N.E.S.....	\$ 30 "		572,928
Horse, mule and ox shoes.....	" 30 "		12,767
Locks of all kinds.....	" 30 "		130,188
Machines and machinery, &c.:			
Fanning mills.....	No. 25 "	46	518
Grain crushers.....	" 25 "	16	961
Windmills.....	" 25 "	350	15,708
Ore crushers and rock crushers, stamp mills, cornish and belted rolls, rock drills, air compressors, cranes, derricks and percussion coal cutters.....	\$ 25 "		33,780
Portable machines:			
Fodder or feed cutters.....	No. 25 "	5	35
Horse powers.....	" 25 "	34	2,213
Portable engines.....	" 25 "	101	72,061
Portable saw mills and planing mills.....	" 25 "	11	15,779
Threshers and separators.....	" 25 "	178	71,738
All other portable machines.....	" 25 "	1,947	45,634
Parts of portable machines.....	\$ 25 "		19,099
Sewing machines and parts of.....	No. 30 "	7,630	158,918
Slot machines.....	" 25 "	293	7,811
Machines, type-writing.....	" 25 "	1,588	92,052
All other machinery composed wholly or in part of iron or steel, N.O.P.....	\$ 25 "		2,293,904
Nails and spikes, composition and sheathing nails.....	Lbs. 15 "	30,255	2,674
Nails and spikes, wrought and pressed, trunk, clout, coopers, cigar box, Hungarian horseshoe and other nails, N.E.S.....	" 30 "	264,819	8,896
Nails and spikes, cut, and railway spikes.....	" 1/2c. per lb.	925,653	16,962
Nails, wire of all kinds, N.O.P.....	" 1/2c. "	388,326	10,330
Pumps, N.E.S.....	\$ 25 "		113,816
Safes, doors for safes and vaults.....	" 30 "		19,319
Screws, iron and steel, commonly called "woodscrews," N.E.S.....	Lbs. 35 "	217,409	17,254
Scales, balances, weighing beams and strength testing machines.....	\$ 30 "		76,673
Skates of all kinds and parts thereof.....	Pairs 35 "	184,166	71,610
Stoves of all kinds and parts thereof, N.E.S.....	\$ 25 "		126,949
Stove plates, and sad or smoothing, hatters' and tailors' irons, plated wholly or in part or not.....	" 25 "		9,853
Carried forward.....			6,742,328

TABLE 9b—Continued.

IRON.

IRON.

Imports.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
Brought forward			\$ 6,742,328
Tubing:			
Boiler tubes of wrought iron or steel, including flues and corrugated tubes for marine boilers	Lbs. 5 %	5,382,203	185,421
Tubes of rolled steel, seamless, not joined or welded, not more than 1½ inches in diameter	" 10 "	109,940	11,482
Tubes, seamless steel, for bicycles	" 10 "	746,774	58,770
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled or not, over two inches in diameter, N. E.S.	" 15 "	13,253,641	293,220
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled or not, 2 inches or less in diameter, N. E.S.	" * 35 "	11,052,903	253,224
Other iron or steel tubes or pipes, N.O.P.	" 30 "	559,969	25,476
Ware, galvanized sheet iron or of galvanized sheet steel, manufactures of, N.O.P.	\$ 25 "		28,059
Ware, agate, granite or enamelled iron or steel hollow ware	" 35 "		26,356
Ware, enamelled iron or steel ware, N. E.S., iron or steel hollow ware, plain black, tinned or coated, and nickel and aluminium kitchen or household hollow ware, N.E.S.	" 30 "		79,499
Wire cloth or wove wire and netting of iron or steel	Lbs. 30 "	262,003	18,161
Wire screens, doors and windows	\$ 30 "		4,897
Wire fencing, woven, buckthorn strip and wire fencing of iron or steel, N.E.S.	Lbs. 15 "	708,154	23,726
Wire, single or several, covered with cotton, linen, silk, rubber or other material, &c., N.E.S.	" 30 "	3,027,575	304,608
Wire of all kinds, N.O.P.	" 20 "	7,948,386	154,872
Wire rope, stranded or twisted wire, clothes lines, picture or other twisted wire and wire cables, N.E.S.	" 25 "	914,135	68,793
Iron or steel nuts, washers, rivets and bolts with or without threads and nut bolt and hinge blanks, and T. and strap hinges of all kinds, N.E.S.	" ¾ c. p. lb. and 25 %	2,293,608	78,191
Pen-knives, jack-knives and pocket knives of all kinds	\$ 30 %		124,344
Table cutlery, all kinds, N.O.P.	" 30 "		198,786
All other cutlery, N.E.S.	" 30 "		131,294
Guns, rifles, including air guns and air rifles, (not being toys) muskets cannons, pistols, revolvers, or other firearms	" 30 "		123,838
Bayonets, swords, fencing foils and masks	" 30 "		1,811
Needles of any material or kind, N.O.P.	" 30 "		48,514
Carried forward			8,985,670

IRON

TABLE 9b—Continued.

Imports

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
			\$
Brought forward.....			8,985,670
Tools and implements :			
Adzes, cleavers, hatchets, wedges, sledges, hammers, crow bars, cant dogs and track tools, picks, mattocks and eyes or poles for the same.....	" 30 "		25,503
Axes.....	Doz. 25 "	9,738	41,402
Saws.....	\$ 30 "		77,808
Files and rasps, N.E.S.....	" 30 "		76,789
Tools, hand or machine, of all kinds, N.O.P	" 30 "		490,662
Knife blades, or blanks, and forks of iron or steel, in the rough not handled, filed, ground or otherwise manufactured.....	" 10 "		1,910
Manufactured articles or wares not specially enumerated or provided for, composed wholly or in part of iron or steel, and whether partly or wholly manufactured.....	" 30 "		928,799
Anchors.....	Cwt. Free	6,992	8,433
Iron or steel, rolled round wire rods, in the coil not over $\frac{3}{8}$ -inch in diameter, imported by wire manufacturers for use in making wire in the coil in their factories.....	" "	695,992	765,777
Iron or steel masts, or parts of.....	" "	1,800	1,119
Rolled iron tubes not welded, or joined, under $1\frac{1}{2}$ inch in diameter, angle iron 9 and 10 gauge, not over $1\frac{1}{2}$ inch wide, iron tubing lacquered or brass covered, not over $1\frac{1}{2}$ inch diameter, all of which are to be cut to lengths for the manufacture of bedsteads, and to be used for no other purpose, and brass trimmings for bedsteads imported for the manufacture of iron or brass bedsteads.....	" "	13,473	39,429
Steel bowls for cream separators and cream separators.....	\$ "		228,721
Steel rails weighing not less than 45 lbs. per lineal yard for use only in the tracks of railways which are employed in the common carrying of goods and passengers, and are operated by steam motive power only.....	Cwt. "	2,076,658	1,714,228
Steel strip and flat steel wire imported by manufacturers of buckthorn and plain strip fencing, for use in their own factories in the manufacture thereof.....	" "	12,980	22,051
Steel wire, Bessemer soft drawn spring of Nos. 10, 12 and 13 gauge respectively, and homo steel spring wire of Nos. 11 and 12 gauge, respectively, imported by manufacturers of wire mattresses, to be used in their own factories in the manufacture of such articles.....	" "	6,302	7,909
Carried forward.....			13,416,210

TABLE 9b—*Concluded.*

IRON.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Imports.

Fiscal Year, 1899.	Duty.	Quantity.	Value.
Brought forward			\$ 13,416,210
Flat steel wire of No. 16 gauge or thinner imported by the manufacturers of crinoline, corset wire and dress stays, for use in the manufacture of such articles in their own factories..... Cwt.	"	1,914	12,385
Flat spring steel, steel billets and steel axle bars, imported by manufacturers of carriage springs and carriage axles for use exclusively in the manufacture of springs and axles for carriages or vehicles other than railway or tramway. in their own factories	"	51,963	60,017
Spiral spring steel for spiral springs for railways, imported by the manufacturers of railway springs for use exclusively in the manufacture of railway spiral springs in their own factories.....	"	222,015	32,458
Wire, crucible cast steel	"	706,811	36,613
Galvanized iron or steel wire Nos. 9, 12 and 13 gauge..... Cwt.	"	121,778	204,675
Total			13,762,358

TABLE 10.

IRON.

IMPORTS OF PIG IRON, IRON AND STEEL GOODS, ETC., FISCAL YEAR, 1898-9.

Recapitulation of Tables, 6, 7, 8, 9a and 9b.

	Tons.	Value.
Pig iron and iron kentledge	44,261	\$ 452,911
Pig iron, charcoal	1,955	19,123
Scrap iron, cast	2,378	22,594
Scrap steel, wrought	28,352	301,268
Ferro-manganese, etc.	1,160	22,539
Iron in slabs, blooms, puddled bars, etc.	6,216	103,198
Iron and steel goods partially manufactured		4,773,935
Iron and steel goods highly manufactured*		13,762,358
Total		\$19,457,926

* Machinery, etc., classed under iron and steel goods in Customs report.

IRON.

The iron industries of Canada are so well described in the annual statistical report of the American Iron and Steel Association that the following extracts have been reproduced from the report of 1899.

‘On December 31, 1899, the unsold stocks of pig iron in Canada which were in the hands of the manufacturers or their agents, amounted to 9,932 tons, as compared with 9,979 tons on December 31, 1898, 20,265 tons on December 31, 1897, 29,320 tons on December 31, 1896, and 17,800 tons on December 31, 1895. Of the unsold pig iron on hand on December 31, 1899, a little less than one half was charcoal pig iron, the remainder being coke.

‘On December 31, 1899, there were 9 completed blast furnaces in the Dominion, and of this number 4 were in blast and 5 were out of blast. On December 31, 1898, there were also 9 completed furnaces, of which 3 were in blast and 6 were out of blast.

‘The production of Bessemer and of basic and acid open-hearth steel ingots and castings in 1899 was 22,000 gross tons, against 21,540 tons in 1898. Of the total production of open-hearth steel in 1899 about one-third was made by the acid process.

‘The production of iron rails and open hearth steel rails in 1899 amounted to 835 gross tons, against 600 tons in 1898 ; structural shapes, 2,899 tons, against 1,565 tons in 1898 ; cut nails made by rolling mills and steel works having cut nail factories connected with their plants, 235,981 kegs of 100 lbs., against 152,688 kegs in 1898 ; plates and sheets 2,220 tons, against about 1,000 tons in 1898 ; all other rolled products, excluding muck and scrap bars, blooms, billets, sheet bars, etc., 94,153 tons, against 80,322 tons in 1898. Changing the cut nail production from kegs to gross tons, the total quantity of all kinds of iron and steel rolled into finished products in the Dominion in 1899, excluding muck and scrap bars, billets and other intermediate products, amounted to 110,642 tons, against 90,303 tons in 1898, 77,021 tons in 1897, 75,043 tons in 1896, and 66,402 tons in 1895.

‘The total number of completed rolling mills and steel works in Canada on December 31, 1899, was 16. Of this number at least three were idle during the whole of 1899’.

LEAD.

LEAD.

Although the average price of lead in 1899 was much higher than in 1898, the highest in fact since 1890, the production of the metal which was derived entirely from the province of British Columbia amounted to only 21,862,436 lbs. Compared with 1898 this is a decrease of 10,052,883 lbs. or 31 per cent, and compared with 1897 the decrease is 17,155,783 lbs. or about 44 per cent.

Although many reasons will doubtless be assigned for this diminished output, the labour disputes between mine owners and workmen, and the consequent shutting down of many of the largest producers of the Slocan either partially or entirely for the greater part of the year will probably largely account for the decrease during the past year.

The statistics of production since 1887 are given in Table 1, the price per pound being the average market price of the metal for the year in New York.

TABLE 1.

LEAD.

ANNUAL PRODUCTION.

Production.

Calendar Year.	Pounds.	Price per Pound.	Value.
		c.	
1887.....	204,800	4.50	\$ 9,216
1888.....	674,500	4.42	29,813
1889.....	165,100	3.93	6,488
1890.....	105,000	4.48	4,704
1891.....	88,665	4.35	3,857
1892.....	808,420	4.09	33,064
1893.....	2,135,023	3.73	79,636
1894.....	5,703,222	3.29	187,636
1895.....	16,461,794	3.23	531,716
1896.....	24,199,977	2.98	721,159
1897.....	39,018,219	3.58	1,396,853
1898.....	31,915,319	3.78	1,206,399
1899.....	21,862,436	4.47	977,250

Previous to 1891 the greatest output was 337 tons in 1888. With the opening up of the silver-lead deposits of East and West Kootenay the production increased rapidly and from 1891 to 1897 the output jumped from 44 tons to 19,509 tons, falling away again in 1899 to 10,931 tons.

The variations in production and value are shown graphically in Table D.

Table D

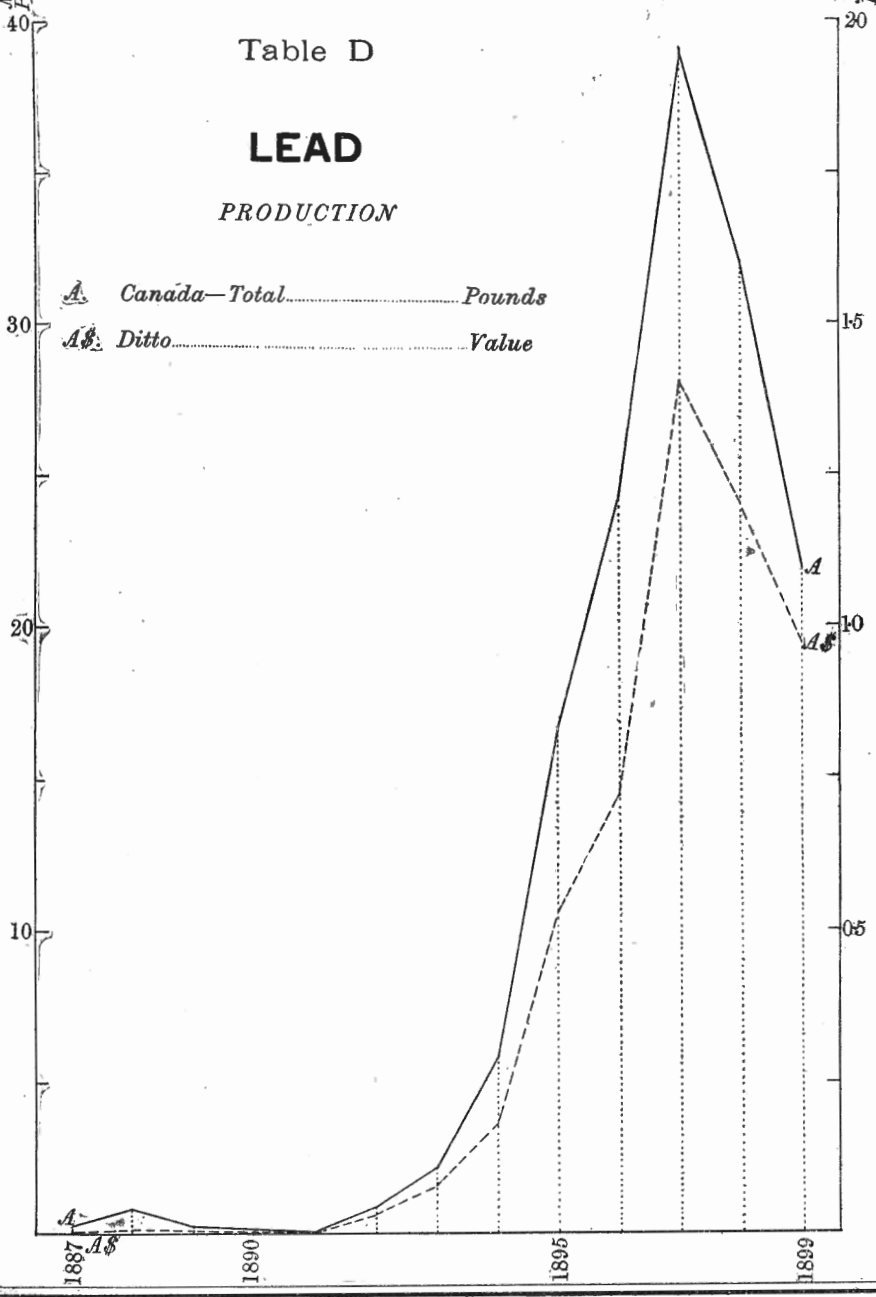
LEAD

PRODUCTION

Million Pounds

Million Dollars

A Canada—Total.....Pounds
A Ditto.....Value



The value of the exports of lead in ore as furnished by the Cus- LEAD. toms Department is shown in Table 2.

The figures for 1899 include \$9,832 worth of pig lead.

TABLE 2.
LEAD.
EXPORTS.

Exports.

Calendar Year.	Value.
1873.....	\$ 1,993
1874.....	127
1875.....	7,510
1876.....	66
1877.....	720
1878.....	
1879.....	230
1880.....	
1881.....	
1882.....	32
1883.....	5
1884.....	36
1885.....	
1886.....	
1887.....	724
1888.....	18
1889.....	
1890.....	
1891.....	5,000
1892.....	2,509
1893.....	3,099
1894.....	144,509
1895.....	435,071
1896.....	462,095
1897.....	925,144
1898.....	885,485
1899 British Columbia.....	466,950

The imports of lead are shown in Tables 3 and 4, and of litharge in Table 5.

The imports of lead unmanufactured amounted in 1899 to about 7,972 tons (Table 3), while the imports of lead manufactures (Table 4) would probably be not much over 1,000 tons or say for the two classes about 9,000 tons. Besides this, however, there is a very large importation of white and red lead and orange mineral though unfortunately in the reports of Trade and Navigation since 1890, the imports of zinc white are included with the lead oxides. Previous to 1890 the statement of importation of zinc white was given separately. In 1899 the importation of dry white and red lead, orange mineral and zinc white amounted to 14,507,945 lbs. or 7,254 tons, valued at \$514,842. Thus

LEAD.

the total value of the importations of lead and manufactures of, including zinc white amounted in 1899 to \$962,122.

Imports.

The imports of white and red lead, etc. are given in Table 6.

TABLE 3.
LEAD.
IMPORTS OF LEAD.

Fiscal Year.	OLD, SCRAP AND FIG.		BARS, BLOCKS, SHEETS.		TOTAL.	
	Cwt.	Value.	Cwt.	Value.	Cwt.	Value.
1880					30,298	\$124,117
1881	16,236	\$ 56,919	18,222	\$70,744	34,458	127,663
1882	36,655	120,870	10,540	35,728	47,195	156,598
1883	48,780	148,759	8,591	28,785	57,371	177,544
1884	39,409	103,413	9,704	28,458	49,113	131,871
1885	36,106	87,038	9,362	24,396	45,468	111,434
1886	39,945	110,947	9,793	28,948	49,738	139,895
1887	61,160	173,477	14,153	41,746	75,313	215,223
1888	68,678	196,845	14,957	45,900	83,635	242,745
1889	74,223	213,132	14,173	43,482	88,396	256,614
1890	101,197	283,096	19,083	59,484	120,280	342,580
1891	86,382	243,033	15,646	48,220	102,028	291,253
1892	97,375	254,384	11,299	32,368	108,674	286,752
1893	94,485	215,521	12,403	32,236	106,888	247,807
1894	70,223	149,440	8,486	20,451	78,709	169,891
1895	67,261	139,290	6,739	16,315	74,000	155,605
1896	72,433	173,162	8,575	23,169	81,008	196,331
1897	65,279	158,381	10,516	29,175	75,795	187,556
	OLD, SCRAP, FIG AND BLOCK.*		BARS AND SHEETS. †		TOTAL.	
1898	88,420	\$260,779	22,214	\$39,041	110,634	\$299,820
1899	114,659	283,432	44,796	39,833	159,455	323,265

* Duty 15 p. c.

† Duty 25 p. c.

TABLE 4.

LEAD.

LEAD.

Imports.

IMPORTS OF LEAD MANUFACTURES.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.	\$15,400	1890.	\$25,600
1881.	22,629	1891.	23,893
1882.	17,282	1892.	22,636
1883.	25,556	1893.	33,783
1884.	31,361	1894.	29,361
1885.	36,340	1895.	38,015
1886.	33,078	1896.	50,722
1887.	19,140	1897.	60,735
1888.	18,816	1898.	63,179
1889.	16,315		
		Duty.	
1899 {	Lead, Tea	Free.	\$46,312
	" Pipe	35 p. c.	8,008
	" Shot and bullets	35 "	2,141
	" Manufactures, N.E.S.	30 "	35,036
Total.....			\$91,497

TABLE 5.

LEAD.

IMPORTS OF LITHARGE.

Fiscal Year.	Cwt.	Value.
1880.	3,041	\$14,334
1881.	6,126	22,129
1882.	4,900	16,651
1883.	1,532	6,173
1884.	5,235	18,132
1885.	4,990	16,156
1886.	4,928	16,003
1887.	6,397	21,865
1888.	7,010	23,808
1889.	8,089	31,082
1890.	9,453	31,401
1891.	7,979	27,613
1892.	10,384	34,343
1893.	7,685	24,401
1894.	33,547	28,685
1895.	11,955	32,953
1896.	10,710	32,817
1897.	12,028	34,588
1898.	11,446	32,904
1899. Duty free.	9,530	32,518

LEAD.

TABLE 6.

Imports.

LEAD.
IMPORTS OF DRY WHITE AND LED READ AND ORANGE MINERAL.

Fiscal Year.	Pounds.	Value.
		\$
1885.....	5,404,753	198,913
1886.....	6,703,077	213,258
1887.....	6,998,820	233,725
1888.....	6,361,334	216,654
1889.....	7,066,465	267,236

IMPORTS OF DRY WHITE AND LED READ, ORANGE MINERAL AND ZINC WHITE.

Fiscal Year.	Pounds.	Value.
		\$
1890.....	10,859,672	381,959
1891.....	8,560,615	337,407
1892.....	10,288,766	351,686
1893.....	10,865,183	364,680
1894.....	10,958,170	353,053
1895.....	8,780,052	282,353
1896.....	11,711,496	367,569
1897.....	10,310,463	347,539
1898.....	12,682,808	448,659
1899..... Duty 5 p.c.	14,507,945	514,842

British
Columbia.

BRITISH COLUMBIA.

The production of lead in British Columbia since 1887 is shown in Table 7 below.

TABLE 7.

LEAD.
BRITISH COLUMBIA : PRODUCTION.

Calendar Year.	Pounds.	Price per Pound.	Value.
		cts.	
1887.....	204,800	4.50	\$ 9,216
1888.....	674,500	4.42	29,813
1889.....	165,100	3.93	6,488
1890.....	Nil	.....	.....
1891.....	"	.....	.....
1892.....	808,420	4.09	33,064
1893.....	2,131,092	3.73	79,490
1894.....	5,703,222	3.29	187,636
1895.....	16,461,794	3.23	531,716
1896.....	24,199,977	2.98	721,159
1897.....	38,841,135	3.58	1,390,513
1898.....	31,693,559	3.78	1,198,017
1899.....	21,862,436	4.47	977,520

The various subdivisions of East and West Kootenay, from which LEAD. the production was all derived, contribute as follows to the output for British Columbia. 1899.

Fort Steele, 4 per cent. Nelson over 2.5 per cent, Ainsworth over 16 per cent, and the Slocan a little over 76 per cent.

MANGANESE.

MANGANESE.

Owing chiefly to the operations of the Mineral Products Company, at Dawson Settlement, in New Brunswick, the production of manganese in 1889 reached a total of 1,581 tons, valued at \$20,004, the largest production recorded since 1890.

The statistics of production since 1886, showing the average value per ton, are given in Table 1.

TABLE 1.
MANGANESE.
ANNUAL PRODUCTION.

Production.

Calendar Year.	Tons.	Value.	Value per ton.
1886.....	1,789	\$41,499	\$23.20
1887.....	1,245	43,658	35.07
1888.....	1,801	47,944	26.62
1889.....	1,455	32,737	22.50
1890.....	1,328	32,550	24.51
1891.....	255	6,694	26.25
1892.....	115	10,250	89.13
1893.....	213	14,578	68.44
1894.....	74	4,180	56.49
1895.....	125	8,464	67.71
1896*.....	123 $\frac{1}{2}$	3,975	32.19
1897*.....	15 $\frac{1}{2}$	1,166	76.46
1898.....	50	1,600	32.00
1899.....	1,581	20,004	12.65

* Exports.

It will be seen that the production of past years has varied much in grade of ore shipped. The average value per ton in 1899 was only \$12.65 while in past years it has gone as high as \$89.

In Nova Scotia, Mr. Miner T. Foster continued work at the New Ross deposit, Lunenburg county.

From the Jordan Mountain mine, King's county, New Brunswick, a quantity of ore was shipped to Bridgeville, N.S., and operations

MANGANESE.
Exports.

were continued on the bog manganese deposit at Dawson Settlement, Albert county, by the Mineral Products Company.

This bog or "wad" manganese is first dried, then mixed with a suitable binder and shipped in the form of cylindrical bricks 3 inches in diameter and 2½ inches long.

The exports of manganese are given in Table 2, and the imports of oxide of manganese in Table 3.

TABLE 2.
MANGANESE.
EXPORTS OF MANGANESE ORE.

CALENDAR YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		TOTAL.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
1873.....			1,031	\$20,192	1,031	\$20,192
1874.....	6	\$ 12	776	16,961	782	16,973
1875.....		200	194	5,314	203	5,514
1876.....	21	723	391	7,316	412	8,039
1877.....	106	3,699	785	12,210	891	15,909
1878.....	106	4,889	520	5,971	626	10,860
1879.....	154	7,420	1,732	20,016	1,886	27,436
1880.....	79	3,090	2,100	31,707	2,179	34,797
1881.....	200	18,022	1,504	22,532	1,704	40,554
1882.....	123	11,520	771	14,227	894	25,747
1883.....	313	8,635	1,013	16,708	1,326	25,343
1884.....	134	1,054	469	9,035	603	20,089
1885.....	77	5,054	1,607	29,595	1,684	34,649
1886.....	(a) 441	854	1,377	27,484	(a) 1,818	58,338
1887.....	578	14,240	837	20,562	1,415	34,802
1888.....	87	5,759	1,094	16,073	1,181	21,832
1889.....	59	3,024	1,377	26,326	1,436	29,350
1890.....	177	2,583	1,729	34,248	1,906	36,831
1891.....	22	563	233	6,131	255	6,694
1892.....	84	6,180	59	2,025	143	8,205
1893.....	123	12,409	10	112	133	12,521
1894.....	11	720	45	2,400	56	3,120
1895.....	108	6,348	$\frac{3}{10}$	3	$108\frac{3}{10}$	6,351
1896.....	$123\frac{1}{2}$	3,975			$123\frac{1}{2}$	3,975
1897.....	$15\frac{1}{4}$	1,166			$15\frac{1}{4}$	1,166
1898.....	11	325			11	325
1899.....	67	2,328	3	82	70	2,410

(a) 250 tons from Cornwallis should more correctly be classed under the heading of mineral pigments.

TABLE 3.
MANGANESE.
IMPORTS: OXIDE OF MANGANESE.

MANGANESE.
Imports.

Fiscal Year.	Pounds.	Value.
1884.....	3,989	\$ 258
1885.....	36,778	1,794
1886.....	44,967	1,753
1887.....	59,655	2,933
1888.....	65,014	3,022
1889.....	52,241	2,182
1890.....	67,452	3,192
1891.....	92,087	3,743
1892.....	76,097	3,530
1893.....	94,116	3,696
1894.....	101,863	4,522
1895.....	64,151	2,781
1896.....	108,590	4,075
1897.....	70,663	2,741
1898.....	130,456	5,047
1899.....Duty free	141,356	5,539

MERCURY.

MERCURY.

There has been no output of mercury reported since 1897. The small output for the years 1895, 1896 and 1897 was obtained from the cinnabar mines in the vicinity of Kamloops Lake, B.C.

TABLE 1.
MERCURY.
PRODUCTION.

Production.

Calendar Year.	Flasks, (76½ lbs.)	Price per flask.	Value.
1895.....	71	\$ 33 00	\$ 2,343
1896.....	58	33 44	1,940
1897.....	9	36 00	324

MERCURY.

TABLE 2.

MERCURY.

Imports.

IMPORTS.

Fiscal Year.	Pounds.	Value.
1882.	2,443	\$ 965
1883.	7,410	2,991
1884.	5,848	2,441
1885.	14,490	4,781
1886.	13,316	7,142
1887.	18,409	10,618
1888.	27,951	14,943
1889.	22,931	11,844
1890.	15,912	7,677
1891.	29,775	20,223
1892.	30,936	15,038
1893.	50,711	22,998
1894.	36,914	14,483
1895.	63,732	25,703
1896.	77,869	32,343
1897.	76,058	33,534
1898.	59,759	36,425
1899 Duty free. . .	103,017	51,695

MICA.

MICA.

The production of mica has been calculated according to the practice followed during the past few years viz : of adding to the known exports an estimate of the value of the home consumption.

On this basis the production of 1899 was valued at \$163,000, an increase over the production of 1898 of \$44,625 or nearly 38 per cent.

Statistics of production and exports are given in Tables 1 and 2 following.

TABLE 1.

MICA.

ANNUAL PRODUCTION.

Production.

Calendar Year.	Value.
1886.	\$ 29,008
1887.	29,816
1888.	30,207
1889.	28,718
1890.	68,074
1891.	71,510
1892.	104,745
1893.	75,719
1894.	45,581
1895.	65,000
1896.	60,000
1897.	76,000
1898.	118,375
1899.	163,000

TABLE 2.
MICA.
EXPORTS.

MICA,
Exports.

Calendar Year.	Value.
1887.....	\$ 3,480
1888.....	23,563
1889.....	30,597
1890.....	22,468
1891.....	37,590
1892.....	86,562
1893.....	70,081
1894.....	38,971
1895.....	48,525
1896.....	47,756
1897.....	69,101
1898.....	110,507
1899.....	153,002

The mica marketed is chiefly the product of mines in the provinces of Ontario and Quebec, in the district about Ottawa, and is practically all of the phlogopite and biotite varieties.

Within the past two years however, some developments have taken place in occurrences of mica at Tête Jaune Cache in British Columbia. The mica here is a transparent muscovite of excellent quality. Messrs. Samuel Winter & Company of Moncton, New Brunswick, have been doing some prospecting work in the locality and during 1899, they shipped several hundred pounds, valued at from 50 cents to \$1 per pound, besides leaving some tons of marketable mica in the dump.

MINERAL PIGMENTS.

MINERAL
PIGMENTS.

Under this heading is included the production of ochres and baryta.

Ochres.—The production of ochres in 1899 amounted to 3,919 tons valued at \$20,000, a considerable increase over the previous year, and the largest quantity recorded in the table of production.

The product mined is almost entirely from the ochre deposits near Three Rivers, Champlain county, Quebec. In Ontario however there was a small production, in Nelson township, Halton county, where a few tons are yearly mined by the Ontario Mineral Paint Works, for use in the manufacture of their "fire proof paints."

At St. Malo near Three Rivers, Quebec, the Canada Paint Company and the Champlain Oxide Co., continued operations with increased

MINERAL
PIGMENTS.

output, while Thos. H. Argall continues to ship crude ochre to gas companies in both Canada and the United States.

TABLE 1.
MINERAL PIGMENTS.
ANNUAL PRODUCTION OF OCHRES.

Production.

Calendar Year.	Tons.	Value.
1886.	350	\$ 2,350
1887.	485	3,733
1888.	397	7,900
1889.	794	15,280
1890.	275	5,125
1891.	900	17,750
1892.	390	5,800
1893.	1,070	17,710
1894.	611	8,690
1895.	1,339	14,600
1896.	2,362	16,045
1897.	3,905	23,560
1898.	2,226	17,450
1899.	3,919	20,000

TABLE 2.
MINERAL PIGMENTS.
IMPORTS OF OCHRES.

Imports.

Fiscal Year.	Pounds.	Value.	
1880.	571,454	\$ 6,544	
1881.	677,115	8,972	
1882.	731,526	8,202	
1883.	898,376	10,375	
1884.	533,416	6,393	
1885.	1,119,177	12,782	
1886.	1,100,243	12,267	
1887.	1,460,128	17,067	
1888.	1,725,460	17,664	
1889.	1,342,783	12,994	
1890.	1,394,811	14,066	
1891.	1,528,696	20,550	
1892.	1,708,645	22,908	
1893.	1,968,645	23,134	
1894.	1,358,326	18,951	
1895.	793,258	12,048	
1896.	1,159,494	16,954	
1897.	1,504,044	18,504	
1898.	2,126,592	26,307	
1899 {	Duty.		
	Ochres, ochrey earths and raw sien- nas.	20 p. c. 1,107,600	\$ 10,432
	Oxides, fire-proofs, umbers and burnt siennas, N.E.S.	25 " 1,337,098	20,660
Total, 1899.		2,444,698	\$31,092

The exports of mineral pigments, iron oxides, etc., for the past three years has been :—

	Tons.	Value.
1897.....	512	\$7,706
1898.....	283	4,227
1899.....	308	5,408

Imports.

Baryta.—The statistics of production of baryta are given in Table 3. The figures for 1899, 720 tons valued at \$4,402, show a decrease from the production of 1898. The mining of the mineral has been of an exceedingly irregular character, as will be evident from the table.

TABLE 3.
MINERAL PIGMENTS.
ANNUAL PRODUCTION OF BARYTA.

Calendar Year.	Tons.	Value.
1885.....	300	\$ 1,500
1886.....	3,864	19,270
1887.....	400	2,400
1888.....	1,100	3,850
1889.....		
1890.....	1,842	7,543
1891.....		
1892.....	315	1,260
1893.....		
1894.....	1,081	2,830
1895.....		
1896.....	145	715
1897.....	571	3,060
1898.....	1,125	5,533
1899.....	720	4,402

Production of Baryta.

Shipments were made during the year from Lake Ainslie, Inverness county and from Brookfield, Colchester county, Nova Scotia, by Messrs. Henderson and Potts of Halifax. The Canada Paint Company mined several hundred tons near Cantley, Wright county, Quebec.

MINERAL
PIGMENTS.

Imports.

TABLE 4.
MINERAL PIGMENTS.
IMPORTS OF BARYTA.

Fiscal Year.	Cwt.	Value.
1880.	2,230	\$1,525
1881.	3,740	1,011
1882.	497	303
1883. ....	.....	185
1884. ....	.....	229
1885.	7	14
1886. ....	.....	62
1887.	379	676
1888.	236	214
1889.	1,332	987
1890.	1,322	978

TABLE 5.
MINERAL PIGMENTS.
MISCELLANEOUS IMPORTS, FISCAL YEAR, 1899.

—	Duty.	Quantity.	Value.
Paint, ground or mixed in, or with either japan, varnish, lacquers, liquid dryers, collodion, oil finish or oil varnish Lbs.	25 p. c.	68,461	\$ 4,918
Paints and colours, and rough stuff and fillers, anti-corrosive and anti-fouling paints commonly used for ship hulls, N.E.S. "	25 "	83,813	5,200
Paris green, dry "	10 "	232,887	25,051
Paints and colours ground in spirits, and all spirit varnishes and lacquers Galls.	\$1.12½ per gallon	441	1,543
Putty Lbs.	20 p. c.	335,560	4,591
Total . . . . .	.....	.....	41,311

MINERAL
WATER.

MINERAL WATER

Mineral springs are known to occur at many places throughout Canada, and at quite a number the water is being utilized, either put up in bottles for sale throughout the country or used for drinking or bathing purposes at the places where it is found. At several points hotels have been erected at which the guests have the privilege of using the mineral water at the place. In view of this it is difficult to obtain statistics giving an intelligent idea of the extent or value of the industry.

The value of the sales of mineral water in 1899 has been estimated at about \$100,000.

The statistics of production for past years as per returns from individuals and companies operating the springs, are given in Table 1, while the imports of mineral water are given in Table 2.

TABLE 1.
MINERAL WATERS.
ANNUAL PRODUCTION.

Calendar Year.	Gallons.	Value.
1888.....	124,850	\$ 11,456
1889.....	424,600	37,360
1890.....	561,165	66,031
1891.....	427,485	54,268
1892.....	640,380	75,348
1893.....	725,096	108,347
1894.....	767,460	110,040
1895.....	739,382	126,048
1896.....	706,372	111,736
1897.....	749,691	141,477
1898.....	555,000	100,000
1899.....	.....	100,000

TABLE 2.
MINERAL WATERS.
IMPORTS.

Import

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$15,721	1890.....	40,802
1881.....	17,913	1891.....	41,797
1882.....	27,909	1892.....	55,763
1883.....	28,130	1893.....	57,953
1884.....	27,879	1894.....	49,546
1885.....	32,674	1895.....	48,613
1886.....	22,142	1896.....	55,864
1887.....	33,314	1897.....	47,006
1888.....	38,046	1898.....	52,989
1889.....	30,343		
1899 { Mineral waters, natural, not in bottle ... ..Duty free ..			\$ 1,286
{ Mineral and aerated waters..... " 20 p.c.			53,605
Total.....			\$54,891

NATURAL
GAS.

NATURAL GAS.

According to the returns received from the various operators, the total value of the sale of natural gas in 1899 was \$387,271, an increase over the value of 1898 of \$65,148 or over 20 per cent. Practically all the gas sold is obtained from the wells in southern Ontario, the gas found in the North-west Territories not yet having been put to any extended use.

Statistics of production are given in Table 1.

TABLE 1.
NATURAL GAS.
ANNUAL PRODUCTION.

Production.

Calendar Year.	Value.
1892.....	\$ 150,000
1893.....	376,233
1894.....	313,754
1895.....	423,032
1896.....	276,301
1897.....	325,873
1898.....	322,123
1899.....	387,271

There is nothing new to report concerning the Ontario fields, for complete description of which the reader is referred to the report of the Section for 1898.

NICKEL.

NICKEL.

The production of nickel from the Sudbury ores, which continue to be the source of Canada's nickel output, amounted in 1899 to 5,744,000 lbs. or 2,872 tons, which at the average price for refined nickel in New York was worth \$2,067,840. Compared with 1898 this is an increase of 226,310 lbs. or 4 per cent. in quantity and \$247,002 or 13.5 per cent. in value. The price of the metal increased during the latter part of the year averaging about 40 cents per lb. during December.

The quantity of ore treated was 172,761 tons, so that the nickel contents averaged about 1.66 per cent. In 1898 the nickel averaged 2.26 per cent of the ore and in 1897, 2.08 per cent.

The statistics of nickel production since 1889 are given in Table 1 below, the variations being shown graphically in Table E.

TABLE 1.
NICKEL.
ANNUAL PRODUCTION.

NICKEL.
Production.

Calendar Year.	Pounds of nickel in matte.	Price per lb.	Value.
1889.....	*830,477	60c.	\$ 498,286
1890.....	1,435,742	65c.	933,232
1891.....	4,626,627	60c.	2,775,976
1892.....	2,413,717	58c.	1,399,956
1893.....	3,982,982	52c.	2,071,151
1894.....	4,907,430	38½c.	1,870,953
1895.....	3,888,525	35c.	1,360,984
1896.....	3,397,113	35c.	1,188,990
1897.....	3,997,647	35c.	1,399,176
1898.....	5,517,690	33c.	1,820,838
1899.....	5,744,000	36c.	2,067,840

* Calculated from shipments made by rail.

The value of the exports according to the returns made to the Customs Department are given in Table 2, and the imports of nickel in Table 3.

TABLE 2.
NICKEL.
EXPORTS.*

Exports.

Calendar Year.	Value.
1890.....	\$ 89,568
1891.....	667,280
1892.....	293,149
1893.....	629,692
1894.....	559,356
1895.....	521,783
1896.....	658,213
1897.....	723,130
1898.....	1,019,363
1899.....	939,915

* Practically all the nickel-bearing ore and matte produced in Canada is exported, the apparent discrepancy between Tables Nos. 1 and 2 being due to the different basis of valuation adopted in the two instances. Table 1 represents the total final values of the nickel produced in Canada, for the years represented. In Table 2 the worth of the product shipped is entered at its spot value to the operators, and depends upon the particular stage to which they happened to carry the process of extraction at the time *e.g.*, whether the shipments made are raw ore, low grade matte or high grade matte, etc.

Table E

NICKEL

PRODUCTION

A Canada Pounds

B A\$. Ditto Value

Million Pounds

Million Dollars

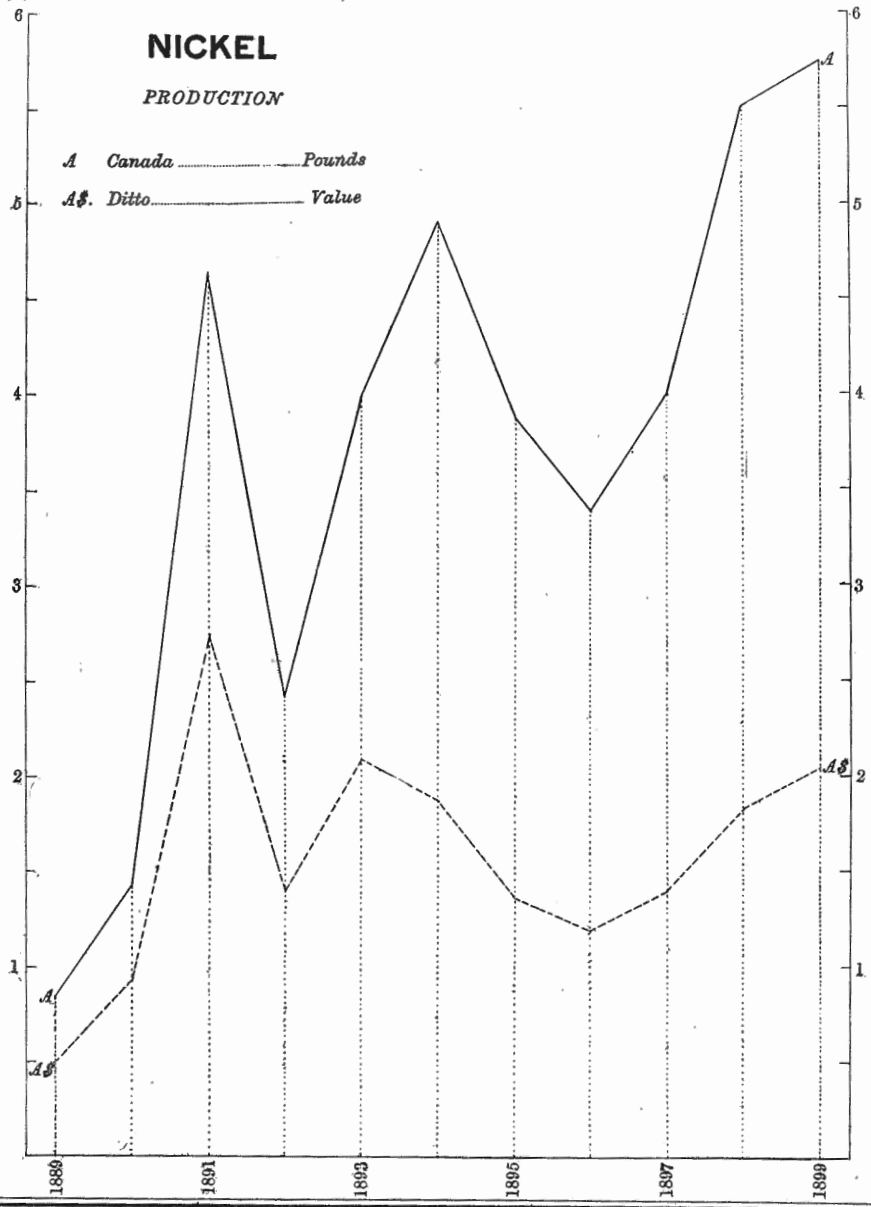


TABLE 3.
NICKEL.
IMPORTS.

NICKEL.
Imports.

Fiscal Year.		Value.
1890	.....	\$ 3,154
1891	.....	3,889
1892	.....	3,208
1893	.....	2,905
1894	.....	3,528
1895	.....	4,267
1896	.....	4,787
1897	.....	4,737
1898	.....	5,882
1899	{ Nickel anodes	Duty.
		10 p. c.
	{ Nickel	Free.
		9,445
		4
		\$ 9,449

PETROLEUM.

PETROLEUM.

The oil refining industry is still confined to the oil fields of southern Ontario.

The consolidation of the various refining industries in 1898 under the name of the Imperial Oil Company, was recorded in the report of this Section for that year. In the same report will be found a description of the chief features of the industry and of the different oil fields, accompanied by a sketch map, showing the oil areas.

There is little variation to report in the statistics of production. The figures of production, as deduced from the inspection returns of the Inland Revenue Department, have already been given in the Summary of the Mineral Production of Canada. The total quantity of refined oils inspected was 11,929,981 galls. Assuming the ratio of crude to refined to be 100 to 42, this is equivalent to 28,399,955 gallons of crude oil or 808,570 barrels of 35 gallons. The average price paid for the oil for the year was \$1.48 $\frac{2}{3}$ an increase over the average price for 1898 of 8 $\frac{2}{3}$ cents, making a total value for the year of \$1,202,020. Tables 1 and 2 give the output of refined products according to direct returns from the refiners for the year 1896, 1897 and 1898. Owing to the confidential nature of the returns, we are unable to give the corresponding figures for the year 1899.

PETROLEUM.

TABLE 1.

Production.

PETROLEUM.

PRODUCTION OF CANADIAN OIL REFINERIES.

Products.	CALENDAR YEARS.						
	1896.		1897.		1898.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
		\$		\$		\$	
Illuminating oils galls.	11,207,150	1,251,122	10,493,449	1,064,130	11,804,667	1,189,871	
Benzine and naphtha	"	719,453	70,733	747,163	71,978	1,229,407	120,651
Paraffine oils..... "	1,014,271	132,308	930,490	136,283	850,863	114,191	
Gas and fuel oils .. "	6,788,353	261,618	6,723,683	249,615	6,399,298	245,101	
Lubricating oils and tar "	1,447,455	77,109	1,148,847	62,058	868,957	53,479	
Paraffine wax.... lbs.	1,532,670	76,249	1,805,365	81,191	2,522,834	101,972	
Axle grease..... "	318,928	7,774	227,079	7,174	.....	.....
Totals.....	.....	1,876,913	.....	1,672,429	.....	1,825,265

TABLE 2.

PETROLEUM.

CONSUMPTION OF CRUDE OIL AND CHEMICALS.

Articles.	CALENDAR YEARS.			
	1895.	1896.	1897.	1898.
Crude petroleum galls.	24,954,855	25,881,095	25,488,230	25,933,807
Sulphuric acid lbs.	4,919,271	5,146,429	5,504,411	6,761,439
Soda..... "	390,781	438,058	479,660	446,529
Litharge	390,573	361,603	504,227	211,546
Sulphur	78,597	80,612	65,349	35,014

The quantity of Canadian refined oil inspected in 1899 has already been mentioned. Table 3 gives similar statistics for past years. In Table 4 which is for the fiscal year, the amounts both of Canadian and imported oil inspected are exhibited side by side, and the percentages of each shown.

TABLE 3.
PETROLEUM.
CANADIAN OILS AND NAPHTHA INSPECTED AND CORRESPONDING
QUANTITIES OF CRUDE OIL.

PETROLEUM.

Inspection of
Oils.

Calendar Year.	Refined Oils Inspected.	Crude Equivalent Calculated.	Ratio of Crude to Refined.	Equivalent in Barrels of 35 Gallons	Average Price per Barrel of Crude.	Value of Crude Oil.
	Galls.	Galls.				
1881.....	6,457,270	12,914,540	100 : 50	368,987		
1882.....	6,135,782	13,635,071	100 : 45	389,573		
1883.....	7,447,648	16,550,328	100 : 45	472,866		
1884.....	7,993,995	19,984,987	100 : 40	571,000		
1885.....	8,225,882	20,564,705	100 : 40	587,563		
1886.....	7,768,006	20,442,121	100 : 38	584,061	\$0.90	\$525,655
1887.....	9,492,588	24,980,494	100 : 38	713,728	0.78	556,708
1888.....	9,246,176	24,332,042	100 : 38	695,203	1.02 ²	713,695
1889.....	9,472,476	24,664,144	100 : 38	704,690	0.92 ²	653,600
1890.....	10,174,894	26,776,037	100 : 38	795,030	1.18	902,734
1891.....	10,065,463	26,435,430	100 : 38	755,298	1.33 ²	1,010,211
1892.....	10,370,707	27,291,334	100 : 38	779,753	1.26 ²	984,438
1893.....	10,618,804	27,944,221	100 : 38	798,406	1.09 ²	874,255
1894.....	11,027,982	29,018,637	100 : 38	829,104	1.00 ²	835,322
1895.....	10,674,232	25,414,838	100 : 42	726,138	1.49 ²	1,086,738
1896.....	10,684,284	25,438,771	100 : 42	726,822	1.59	1,155,647
1897.....	10,434,878	24,844,995	100 : 42	709,857	1.42 ²	1,011,546
1898.....	11,148,348	26,543,685	100 : 42	758,391	1.40	1,061,747
1899.....	11,927,981	28,399,955	100 : 42	808,570	1.48 ²	1,202,020

TABLE 4.
PETROLEUM.
TOTAL AMOUNT OF OIL INSPECTED, CANADIAN AND IMPORTED.

Fiscal Year.	Canadian:	Imported.	Total.	Canadian.	Imported.
	Galls.	Galls.	Galls.	%	%
1881.....	6,406,783	476,784	6,883,567	93.1	6.9
1882.....	5,910,747	1,351,412	7,262,159	81.4	18.6
1883.....	6,970,550	1,190,828	8,161,378	85.4	14.6
1884.....	7,656,001	1,142,575	8,798,586	87.0	13.0
1885.....	7,661,617	1,278,115	8,939,732	85.7	14.3
1886.....	8,149,472	1,327,616	9,477,088	86.0	14.0
1887.....	8,243,962	1,665,604	9,909,566	83.2	16.8
1888.....	9,545,895	1,821,342	11,367,237	84.0	16.0
1889.....	9,462,834	1,767,812	11,230,646	84.3	15.7
1890.....	10,121,210	2,020,742	12,141,952	83.4	16.6
1891.....	10,270,107	2,022,002	12,292,109	83.6	16.4
1892.....	10,238,426	2,423,445	12,667,871	80.8	19.2
1893.....	10,683,806	2,641,690	13,325,496	80.2	19.8
1894.....	10,824,270	5,633,222	16,457,492	65.8	34.2
1895.....	10,936,992	5,650,994	16,587,986	65.9	34.1
1896.....	10,533,951	5,807,991	16,341,942	64.5	35.5
1897.....	10,506,526	6,248,743	16,755,269	62.7	37.3
1898.....	10,796,847	6,880,724	17,677,581	61.1	38.9
1899.....	11,005,804	7,232,348	18,238,152	60.3	39.7

PETROLEUM.

Exports.

The totals of this latter table practically represent the consumption of refined petroleum in Canada. It will be seen that the proportion of imported oils has been slowly but steadily increasing.

Tables 5, 6, 7, 8 and 9, give the exports and imports of petroleum and its products as obtained from the Trade and Navigation Reports.

TABLE 5.
PETROLEUM.
EXPORTS OF CRUDE AND REFINED PETROLEUM.

Calendar Year.	Crude Oil.		Refined Oil.		Total.	
	Gallons.	Value.	Gallons.	Value.	Gallons.	Value.
1881					501	\$ 99
1882					1,119	286
1883					13,283	710
1884					1,098,090	30,168
1885					337,967	10,562
1886					241,716	9,855
1887					473,559	13,831
1888					196,602	74,542
1889					235,855	10,777
1890					420,492	18,154
1891	446,770	\$ 18,471	585	\$104	447,355	18,575
1892	310,387	12,945	1,146	100	311,533	13,045
1893	107,719	3,696	2,196	394	109,915	4,090
1894	53,985	2,773	5,297	513	59,282	3,286
1895	22,831	1,044	10,237	2,023	33,068	3,067
1896	601	101	7,489	999	8,090	1,100
1897			342	49	342	49
1898	96	4	12,735	3,001	12,831	3,005
1899			3,425	859	3,425	859

TABLE 6.
PETROLEUM.
IMPORTS OF PETROLEUM AND PRODUCTS OF.

PETROLEUM.
Imports.

Fiscal Year.	Gallons.	Value.	Fiscal Year.	Gallons.	Value.
		\$			
1880.....	687,641	131,359	1890.....	5,075,650	515,852
1881.....	1,437,475	262,168	1891.....	5,071,386	498,330
1882.....	3,007,702	398,031	1892.....	5,649,145	475,732
1883.....	3,086,316	358,546	1893.....	6,002,141	446,389
1884.....	3,160,282	380,082	1894.....	6,597,108	439,988
1885.....	3,767,441	415,195	1895.....	7,577,674	525,372
1886.....	3,819,146	421,836	1896.....	8,005,891	735,913
1887.....	4,290,003	467,003	1897.....	8,415,302	697,169
1888.....	4,523,056	408,025	1898.....	9,074,311	724,519
1889.....	4,650,274	484,462			
1899 { Oils : Mineral— (a) Coal and kerosene, distilled, purified or refined, naphtha and petroleum, N.E.S. (b) Products of petroleum..... (c) Crude petroleum, fuel and gas oils (other than naphtha, benzine or gasoline) when imported by manufacturers (other than oil refiners) for use in their own factories, for fuel purposes or for the manufacture of gas..... (d) Illuminating oils composed wholly or in part of the products of petroleum, coal, shale or lignite, costing more than 30 cents per gallon..... (e) Lubricating oils composed wholly or in part of petroleum, costing less than 25 cents per gallon.....			Duty.		
			5c. p. gall.	9,363,439	659,452
			5c. "	40,995	5,896
			2½c. "	290,264	12,452
			25 p. c.	13,491	4,647
			5c. p. gall.	686,019	80,856
				10,394,208	763,303

TABLE 7.*

PETROLEUM.

IMPORTS OF CRUDE AND MANUFACTURED OILS, OTHER THAN ILLUMINATING.

Fiscal Year.	Gallons.	Fiscal Year.	Gallons,
1881.....	960,691	1891.....	3,049,384
1882.....	1,656,290	1892.....	3,047,199
1883.....	1,895,488	1893.....	1,481,749
1884.....	2,017,707	1894.....	1,860,829
1885.....	2,489,326	1895.....	1,106,907
1886.....	2,491,530	1896.....	1,079,940
1887.....	2,624,399	1897.....	800,411
1888.....	2,701,714	1898.....	1,046,493
1889.....	2,882,462	1899.....	727,014
1890.....	3,054,908		

* This table is composed of items (b) and (e) of Table 6.

PETROLEUM.

Imports.

TABLE 8.
PETROLEUM.
IMPORTS OF PARAFFINE WAX.

Fiscal Year.	Pounds.	Value.
1883.....	43,716	\$ 5,166
1884.....	39,010	6,079
1885.....	59,967	8,123
1886.....	62,035	7,953
1887.....	61,132	6,796
1888.....	53,862	4,930
1889.....	63,229	5,250
1890.....	239,229	15,844
1891.....	753,854	50,275
1892.....	733,873	48,776
1893.....	452,916	38,935
1894.....	208,099	15,704
1895.....	163,817	11,579
1896.....	150,287	10,042
1897.....	138,703	7,945
1898.....	103,570	5,987
1899 (Duty, 30 p. c.)..	92,242	4,025

TABLE 9.
PETROLEUM.
IMPORTS OF PARAFFINE WAX CANDLES.

Fiscal Year.	Pounds.	Value.
1880.....	10,445	\$2,269
1881.....	7,494	1,683
1882.....	5,818	1,428
1883.....	7,149	1,734
1884.....	8,755	2,229
1885.....	9,247	2,449
1886.....	12,242	2,587
1887.....	21,364	3,611
1888.....	22,054	2,829
1889.....	8,038	1,337
1890.....	7,233	1,186
1891.....	10,598	2,116
1892.....	9,259	1,952
1893.....	8,351	1,735
1894.....	10,818	1,685
1895.....	19,448	2,541
1896.....	25,787	4,072
1897.....	25,114	2,929
1898.....	60,802	4,427
1899... Duty 30 p.c.	62,331	5,856

The average monthly prices for crude oil at Petrolia from 1893 to 1899 are given in Table 10 following.

TABLE 10.
PETROLEUM.
AVERAGE MONTHLY PRICES FOR CRUDE OIL AT PETROLIA.

PETROLEUM.
Prices.

MONTH.	CALENDAR YEAR.						
	1893.	1894.	1895.	1896.	1897.	1898.	1899.
	\$	\$	\$	\$	\$	\$	\$
January	1.18 $\frac{1}{2}$	1.01 $\frac{1}{4}$	1.16	1.72	1.50	1.40	1.40
February	1.18 $\frac{3}{4}$	1.01	1.19 $\frac{3}{4}$	1.72	1.50	1.40	1.40
March	1.19	1.01	1.27	1.72	1.50	1.40	1.40
April	1.19	.99 $\frac{1}{2}$	1.55 $\frac{3}{4}$	1.72	1.40	1.40	1.43
May	1.07	.92	1.67 $\frac{1}{4}$	1.70	1.40	1.40	1.45
June	1.07	.92 $\frac{3}{4}$	1.52	1.50	1.40	1.40	1.45
July	1.06	.94	1.54 $\frac{1}{4}$	1.50	1.40	1.40	1.45
August	1.05	.96	1.54	1.50	1.40	1.40	1.46 $\frac{1}{2}$
September	1.04 $\frac{1}{2}$	.98	1.55 $\frac{1}{2}$	1.50	1.40	1.40	1.52 $\frac{1}{2}$
October	1.04	1.06	1.59 $\frac{1}{2}$	1.50	1.40	1.40	1.57
November	1.04	1.12 $\frac{1}{4}$	1.64 $\frac{1}{2}$	1.50	1.40	1.40	1.63 $\frac{1}{2}$
December	1.02	1.13 $\frac{1}{2}$	1.72 $\frac{3}{8}$	1.50	1.40	1.40	1.66 $\frac{1}{2}$
The Year	1.09 $\frac{1}{2}$	1.00 $\frac{7}{8}$	1.49 $\frac{3}{8}$	1.59	1.42 $\frac{1}{2}$	1.40	1.48 $\frac{3}{8}$

PHOSPHATE (*Apatite*).

PHOSPHATE.

The production of phosphate in 1899 reached a total of 3,000 tons, estimated from railway shipments. This is the largest production since 1894, and is derived from various points in Ontario and Quebec. As practically none of the apatite mines are now being worked as such, the production represents the small quantities of that mineral, stocks of which are accumulated as a by-product, obtained in mining for mica. A little is perhaps also obtained in working over old dumps at the abandoned phosphate mines.

PHOSPHATE. Statistics of production and exports are given in Tables 1 and 2.
Production.

TABLE 1.
PHOSPHATE.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Average Value per ton.	Value.
1886	20,495	\$14. 85	\$304,338
1887	23,690	13. 50	319,815
1888	22,485	10. 77	242,285
1889	30,988	10. 21	316,662
1890	31,753	11. 37	361,045
1891	23,588	10. 24	241,603
1892	11,932	13. 20	157,424
1893	8,198	8. 65	70,942
1894	6,861	6. 00	41,166
1895	1,822	5. 25	9,565
1896	570	6. 00	3,420
1897	908	4. 39	3,984
1898	733	5. 00	3,665
1899	3,000	6. 00	18,000

TABLE 2.
PHOSPHATE.
EXPORTS.

Exports.

Calendar Year.	Ontario.		Quebec.		Totals.	
	Tons.	*Value.	Tons.	*Value.	Tons.	*Value.
1878	824	\$12,278	9,919	\$195,831	10,743	\$208,109
1879	1,842	20,565	6,604	101,470	8,446	122,035
1880	1,387	14,422	11,673	175,664	13,060	190,086
1881	2,471	36,117	9,497	182,339	11,968	218,456
1882	568	6,338	16,585	302,019	17,153	308,357
1883	50	500	19,666	427,168	19,716	427,668
1884	763	8,890	20,946	415,350	21,709	424,240
1885	434	5,962	28,535	490,331	28,969	496,293
1886	644	5,816	19,796	337,191	20,460	343,007
1887	705	8,277	22,447	424,940	23,152	433,217
1888	2,643	30,247	16,133	268,362	18,776	298,609
1889	3,547	38,833	26,440	355,935	29,987	394,768
1890	1,866	21,329	26,591	478,040	28,457	499,369
1891	1,551	16,646	15,720	368,015	17,271	384,661
1892	1,501	12,544	9,981	141,221	11,482	153,765
1893	1,990	11,550	5,748	56,402	7,738	67,952
1894	1,980	10,560	3,470	29,610	5,450	40,170
1895			250	2,500	250	2,500
1896	1	5	299	2,990	300	2,995
1897	70	450	165	400	235	850
1898	21	240	702	8,000	723	8,240
1899	215	1,850	93	1,725	308	3,575

*These values do not compare with those in Table 1 above, the spot value being adopted for the production whilst the exports are valued upon quite a different basis.

PRECIOUS METALS¹PRECIOUS
METALS.

The precious metals, gold and silver, are considered together, following the custom of past years.

GOLD.

Gold.

Owing largely to the continued productiveness of the Yukon placer deposits, the yield of gold in Canada in 1899 reached a total value of \$21,261,584, a value which the yearly total mineral production of Canada previous to 1895 had not attained.

In 1898 the output was \$13,775,420, so that the increase in 1899 amounted to \$7,486,164 or 54 per cent. The increase of 1898 over 1897 was 128 per cent, and of 1897 over 1896 118 per cent.

As has been said, much of these large increases is due to the placer workings on the rivers of the Yukon district, nevertheless while attention is thus drawn to our present chief source of supply, due credit must at the same time be given to our other gold areas whose output has been steadily increasing. Excluding the product of the Yukon, the increase in the output of the other gold fields in 1899 over 1898 amounted to 39·3 per cent, the increase of 1898 over 1897 being 7 per cent, and of 1897 over 1896, 43·6 per cent.

The proportions contributed by the various provinces to the total in 1899, were approximately as follows: Yukon district 75 per cent, British Columbia, nearly 20 per cent, Nova Scotia about 3 per cent, and Ontario about 2 per cent. \$17,364,816 or nearly 82 per cent. of the total was derived from placer workings and \$3,896,768 or 18 per cent. from milling and smelting ores.

Increases in production are shown in all the important gold producing provinces, viz. Nova Scotia, Ontario, British Columbia and the Yukon district, those in which decreases are shown, Quebec and the Saskatchewan River, having but a small output compared with the others.

The production of gold in Canada since 1887 is shown in Table 1, while that by provinces in 1899 is exhibited in Table 2. Table F illustrates graphically, the variations in the output of the provinces and of the Dominion as a whole.

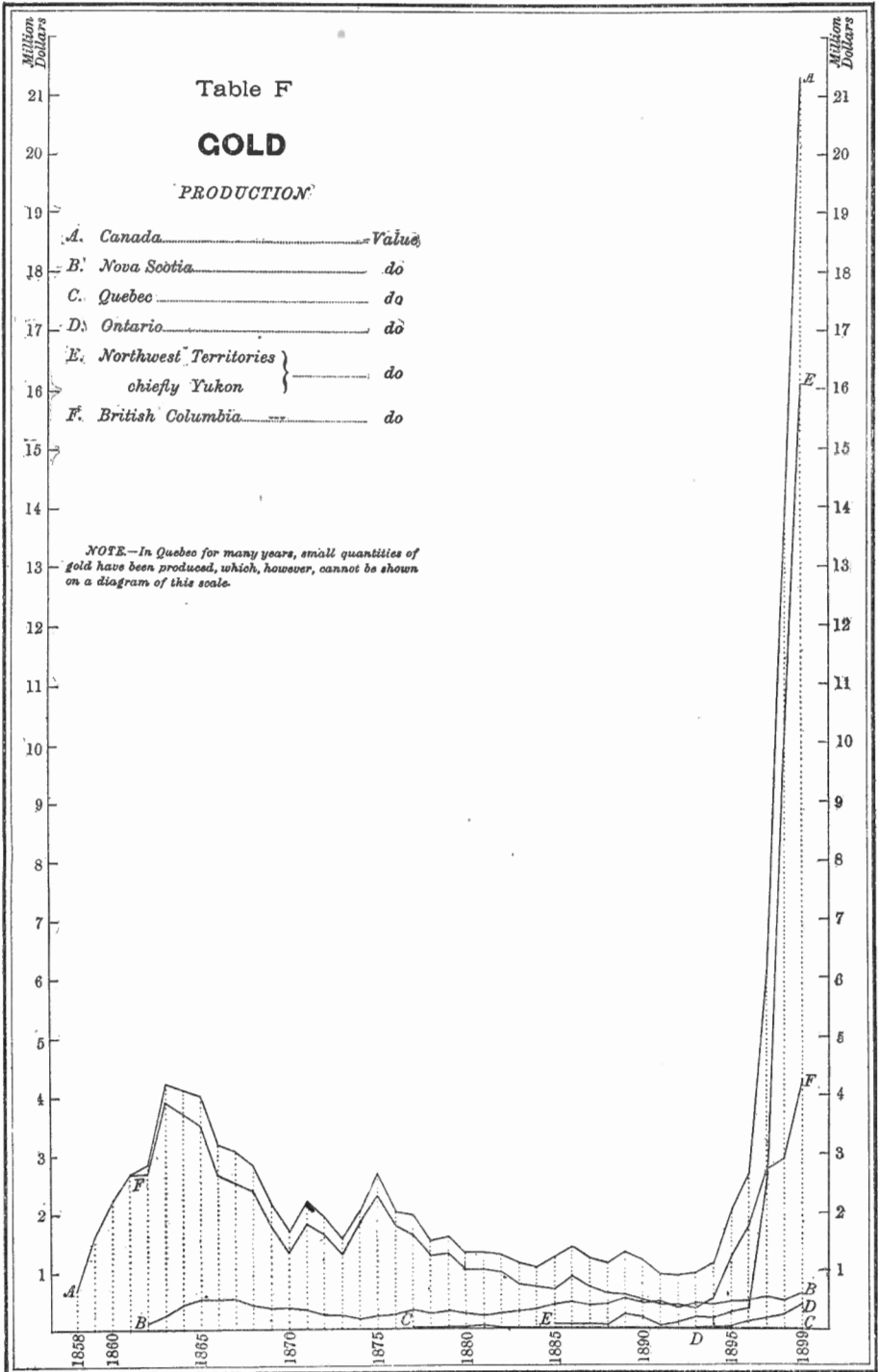


TABLE 1.
PRECIOUS METALS.
GOLD—ANNUAL PRODUCTION IN CANADA.

Calendar Year.	*Ounces. Fine.	Value.
1887	57,465	\$ 1,187,804
1888	53,150	1,098,610
1889	62,658	1,295,159
1890	55,625	1,149,776
1891	45,022	930,614
1892	43,909	907,601
1893	47,247	976,603
1894	54,605	1,128,688
1895	100,806	2,083,674
1896	133,274	2,754,774
1897	291,582	6,027,016
1898	666,445	13,775,420
1899	1,028,620	21,261,584

PRECIOUS
METALS.

Gold.

Production.

* Calculated from the values at the rate of \$20.67 per ounce.

TABLE 2.
PRECIOUS METALS.
GOLD : PRODUCTION BY PROVINCES AND DISTRICTS, CALENDAR
YEAR 1899.

Province.	*Ounces. Fine.	Value.
Nova Scotia	(b) 29,879	\$ 617,604
Quebec	(a) 238	4,916
Ontario	(b) 20,395	421,591
North-west Territories—		
Yukon District	(a) 774,069	16,000,000
Saskatchewan River	(a) 726	15,000
British Columbia	(c) 203,313	4,202,473
Total	1,028,620	\$21,261,584

* Calculated from the values at the rate of \$20.67 per ounce.

(a) Placer gold.

(b) Gold produced in treating free milling ores.

(c) As follows : Gold from placer mining \$1,344,900

" " vein " 2,857,573

\$ 4,202,473

NOVA SCOTIA.

Nova Scotia.

The statistics of gold production in Nova Scotia are given in Tables 3, 4, 5 and 6. Table 3 shows the annual gold output. Table 4, the tons of quartz crushed and the average yield per ton.

In Table 5, the total product of each district from 1862 to the end of 1899 is exhibited as well as the average yield per ton, and Table 6 shows the amount of ore crushed and the yield per district for 1899.

PRECIOUS METALS.

Gold.

Nova Scotia.

The production in 1899 \$617,604 is the highest recorded and is greater than that of the previous year by \$79,014 or nearly 15 per cent. The quantity of quartz crushed increased in even greater proportion than the output of gold, so that the average yield per ton was only \$5.50 as compared with \$6.50 in 1898. An examination of Table 4 will show that from 1862 to 1892 the average yield per ton, varied from \$22 to \$11, while since 1892, the yield has averaged less than \$8 per ton.

In Table 6, the production of 28 different districts is shown, there being 68 mines and 55 mills represented. In 1898 there were but 54 mines and 43 mills represented as producing. Three districts, Stormont, Sherbrooke and Brookfield, are credited with over 54 per cent. of the total output, while four districts, Caribou, Oldham, Salmon River and Wine Harbour, producing over 1,000 ounces each, account for another 21 per cent.

The highest average yield per ton, from districts producing over 1,000 ounces, was from Wine Harbour, the return there being 18 dwt. 12 grs. or \$18.03 and the least was from Salmon River with an average of 1 dwt. 18 grs. or \$1.71 per ton. The greatest yield of any district was obtained from Renfrew with a return of 3 oz. 16 dwt. 21 grs. or \$74.95 per ton. The average yield for the province was 5 dwt. 15 grs. or \$5.50.

TABLE 3.

PRECIOUS METALS.

Production.

GOLD :—NOVA SCOTIA—ANNUAL PRODUCTION.

Calendar Year.	Value.	Calendar Year.	Value.
1862.....	\$141,871	1881.....	\$209,755
1863.....	272,448	1882.....	275,090
1864.....	390,349	1883.....	301,207
1865.....	496,357	1884.....	313,554
1866.....	491,491	1885.....	432,971
1867.....	532,563	1886.....	455,564
1868.....	400,555	1887.....	413,631
1869.....	348,427	1888.....	436,939
1870.....	387,392	1889.....	510,029
1871.....	374,972	1890.....	474,990
1872.....	255,349	1891.....	451,503
1873.....	231,122	1892.....	389,965
1874.....	178,244	1893.....	381,095
1875.....	218,629	1894.....	389,338
1876.....	233,585	1895.....	453,119
1877.....	329,205	1896.....	493,568
1878.....	245,253	1897.....	562,165
1879.....	268,323	1898.....	538,590
1880.....	257,823	1899.....	617,604

TABLE 4.
PRECIOUS METALS.

GOLD:—NOVA SCOTIA, ORE TREATED AND YIELD OF GOLD PER TON.

PRECIOUS
METALS.

Gold.

Nova Scotia.

Calendar Year.	Tons Treated.	Yield of Gold per Ton.	Calendar Year.	Tons Treated.	Yield of Gold per Ton.
1862.....	6,473	\$21.91	1881.....	16,556	\$12.66
1863.....	17,000	16.02	1882.....	21,081	13.04
1864.....	21,431	18.21	1883.....	25,954	11.60
1865.....	24,421	20.32	1884.....	25,186	12.44
1866.....	32,157	15.28	1885.....	28,890	14.98
1867.....	31,384	16.96	1886.....	29,010	15.70
1868.....	32,259	12.41	1887.....	32,280	12.81
1869.....	35,144	19.91	1888.....	36,178	12.08
1870.....	30,824	12.56	1889.....	39,160	13.02
1871.....	30,787	12.17	1890.....	42,749	11.11
1872.....	17,089	14.94	1891.....	36,351	12.42
1873.....	17,708	13.05	1892.....	32,552	11.98
1874.....	13,844	12.87	1893.....	42,354	8.99
1875.....	14,810	14.76	1894.....	55,357	7.04
1876.....	15,490	15.08	1895.....	60,600	7.47
1877.....	17,369	18.95	1896.....	69,169	7.13
1878.....	17,989	13.63	1897.....	73,192	7.68
1879.....	15,936	16.83	1898.....	82,774	6.50
1880.....	13,997	18.42	1899.....	112,226	5.50

TABLE 5.

PRECIOUS METALS.

GOLD:—NOVA SCOTIA.—PRODUCTION OF THE DIFFERENT DISTRICTS FROM 1862 TO 1899 INCLUSIVE.

Production.

Districts.	Tons of Ore Crushed.	Total Yield.				Average Yield per Ton of 2,000 lbs.
		Ozs.	Dwts.	Grs.	Value at \$19.50 per Oz.	
					\$	\$ cts.
Brookfield.....	43,955	22,123	13	9	431,411	9.81
Caribou.....	121,691	41,744	2	11	814,010	6.69
Central Rawdon.....	13,340	10,121	11	21	197,371	14.80
Fifteen-mile Stream..	40,280	18,132	13	5	353,587	8.78
Killag.....	1,291	1,967	8	12	38,365	29.72
Lake Catcha.....	14,330	12,384	..	5	241,488	16.85
Malaga.....	24,129	16,790	19	21	327,425	13.57
Montague.....	24,968	39,290	1	5	766,156	30.68
Oldham.....	47,805	51,932	12	20	1,012,687	21.18
Renfrew.....	48,707	34,525	17	2	673,254	13.82
Salmon River.....	99,277	33,303	2	21	649,411	6.54
Sherbrooke.....	230,081	141,026	9	1	2,750,016	11.95
Stormont.....	185,003	67,031	7	11	1,307,112	7.07
Tangier.....	37,181	22,020	2	2	429,392	11.55
Uniacke.....	56,384	38,840	16	8	757,396	13.43
Waverly.....	122,832	61,761	14	21	1,204,354	9.80
Wine Harbour.....	47,358	32,349	9	18	630,815	13.32
Whiteburn.....	7,378	10,218	18	20	199,269	27.01
Other Districts.....	69,189	50,317	1	11	981,183	14.18
Totals.....	1,235,179	705,882	3	8	13,764,702	11.14

PRECIOUS
METALS.

TABLE 6.

PRECIOUS METALS.

Gold.

GOLD:—NOVA SCOTIA, DISTRICT DETAILS—CALENDAR YEAR 1899.

Nova Scotia.

Districts.	Mines.	Mills.	Tons of Ore Crushed.	Total Yield of Gold.			Average Yield of Gold per Ton.		
				Ozs.	Dwt.	Grs.	Oz.	Dwt.	Grs.
Blöckhouse.....	2	1	564	980	..	..	1	14	17
Brookfield.....	2	2	10,117	3,239	1	5	..	6	9
Caribou.....	1	7	14,231	1,509	12	6	..	2	3
Carleton.....	1	1	12	15	..	..	1	5	..
Cow Bay.....	2	1	52	41	13	10	..	16	..
Cranberry Head.....	1	1	56	38	14	..	..	13	11
East Rawdon.....	1	1	20	2	8	6	..	2	10
Gold River.....	2	1	67	17	8	22	..	5	5
Harrigan Cove.....	1	1	720	498	13	12	..	13	20
Kemptonville.....	1	1	138	70	17	..	..	1	6
Killag.....	2	1	264	439	12	..	1	13	..
Lake Catcha.....	4	3	1,093	792	12	22	..	14	12
Lawrencetown.....	1	1	110	69	7	9	..	12	14
Leipsigate.....	3	2	2,818	937	12	..	..	6	15
Liscomb Mills.....	1	..	13	..	10	8	..	..	18
Malaga Barrens.....	1	1	306	184	15	..	..	12	1
Montague.....	2	3	1,517	931	9	19	..	12	6
Oldham.....	4	1	2,254	1,527	8	..	..	13	13
Renfrew.....	3	1	131	503	16	..	3	16	21
Salmon River.....	1	1	15,249	1,336	4	2	..	1	18
Sherbrooke.....	4	4	18,367	4,879	19	15	..	5	8
Shiers Point.....	1	1	573	94	8	15	..	3	7
Stormont.....	10	11	35,398	9,122	12	12	..	5	3
Tangier.....	2	1	1,438	625	..	..	..	8	16
Uniacke.....	4	3	1,309	649	18	..	..	9	22
Waverly.....	1	1	2,878	822	14	2	..	5	17
Whiteburn.....	1	1	10	5	..	..	..	10	..
Wine Harbour.....	3	2	2,521	2,335	18	12	..	18	12
Totals and averages...	68	55	112,226	31,672	7	9	..	5	15

Quebec.

QUEBEC.

In this province work has been continued by the Gilbert Beauce Gold Mining Company and the Compagnie Franco-Canadienne on the Gilbert River, in the Chaudière district, but only mediocre success has attended their efforts.

Statistics of production are shown in Table 7.

TABLE 7.
PRECIOUS METALS.
GOLD:—QUEBEC, ANNUAL PRODUCTION.

Calendar Year.	Value.	Calendar Year.	Value.
1877.....	\$12,057	1889.....	\$1,207
1878.....	17,937	1890.....	1,350
1879.....	23,972	1891.....	1,800
1880.....	33,174	1892.....	12,987
1881.....	56,661	1893.....	15,696
1882.....	17,093	1894.....	29,196
1883.....	17,787	1895.....	1,281
1884.....	8,720	1896.....	3,000
1885.....	2,120	1897.....	900
1886.....	3,981	1898.....	6,089
1887.....	1,604	1899.....	4,916
1888.....	3,740		

PRECIOUS METALS.

Gold.

Quebec.

ONTARIO.

Ontario

Most of the gold output from Ontario is derived from the free milling ore of the western part of the province though the gold found in association with arsenical pyrites in Hastings county is worked to a considerable extent. The gold industry has been of comparatively recent growth, amounting in 1891 to only \$2,000. The output for 1899 was \$421,591, as compared with \$265,889 in 1898, the increase being \$155,702, or 58 per cent.

From 65,403 tons of ore mined there was obtained 25,371 ounces of crude bullion, of an average value per ounce of \$16.62. The value per ton of ore treated ranged from \$3.56 to \$11 and averaged \$6.45 for the total output.

TABLE 8.
PRECIOUS METALS.
GOLD—ONTARIO—ANNUAL PRODUCTION.

Calendar Year.	*Ounces (fine).	Value.
1887.....	327	\$ 6,760
1888.....		
1889.....		
1890.....		
1891.....	97	2,000
1892.....	344	7,118
1893.....	708	14,637
1894.....	1,917	39,624
1895.....	3,015	62,320
1896.....	5,563	115,000
1897.....	9,158	189,294
1898.....	12,864	265,889
1899.....	20,395	421,591

* Calculated from the value at the rate of \$20.67 per ounce.

PRECIOUS
METALS.

The greater part of the production came from six mines, the Regina, Sultana, Mikado and Golden Star, in western Ontario, and the Deloro and Belmont, in Hastings county.

Gold.

Ontario.

The Canadian Gold Fields Ltd., which operated the Deloro Mine, have replaced their buildings and machinery which were destroyed by fire in 1898. The ore is an arsenical pyrites, carrying gold, and the company is now recovering the arsenic as well as the gold.

The Boerth Mining Company have opened up the Boerth Mine in Clarendon township, Frontenac county. A ten stamp mill has been erected. The property is well equipped with necessary buildings and mining machinery, and satisfactory results are reported.

North-west
Territories.

NORTH-WEST TERRITORIES.

The gold-fields of the North-west Territories are confined to the alluvial workings of the Saskatchewan River, and those of the Yukon River and its tributaries. The difficulty of obtaining anything like accurate statistics of the output from such deposits as these, where thousand of men are independently engaged in mining the precious metal, will be easily recognized. Much of the Saskatchewan River gold finds its way to the local banks, and a basis for an estimation of the product is thus found, while the greater part of the Yukon gold is ultimately sold at the different receiving offices of the United States mint. The receipts of these offices, taken in conjunction with careful estimates by government officers, bank managers, and transportation companies at Dawson, furnish a means of estimating the Yukon output, probably as accurately as it is possible to obtain it.

Statistics of production in the two districts since 1887 are shown in Table 9.

TABLE 9.
PRECIOUS METALS.
GOLD—NORTH-WEST TERRITORIES—PRODUCTION.

PRECIOUS
METALS.

Gold.

North-west
Territories.

Calendar Year.	Yukon District.		Saskatchewan River.	
	*Ounces (fine).	Value.	*Ounces (fine).	Value.
		\$		\$
1885)				
1886)	4,838	100,000	.....	.....
1887.....	3,387	70,000	102	2,100
1888.....	1,935	40,000	58	1,200
1889.....	8,466	175,000	968	20,000
1890.....	8,466	175,000	194	4,000
1891.....	1,935	40,000	266	5,500
1892.....	4,233	87,500	508	10,506
1893.....	8,515	176,000	466	9,640
1894.....	6,047	125,000	725	15,000
1895.....	12,095	250,000	2,419	50,000
1896.....	14,514	300,000	2,661	55,000
1897.....	120,948	2,500,000	2,419	50,000
1898.....	483,793	10,000,000	1,209	25,000
1899.....	774,069	16,000,000	726	15,000
Total.....	1,453,241	30,038,500	12,721	262,946

*Calculated from the value at \$20.67 per ounce.

The production of the Yukon District in 1899 is estimated at \$16,000,000 an increase over the previous year of \$6,000,000 or 60 per cent. The total output of this district to the end of 1899, has been over \$30,000,000.

The occurrence of gold and the geological features of the district, are being examined by Mr. R. G. McConnell of the survey, and a full preliminary report of his investigations during the summer of 1899, will be found in the Summary Report for that year.

Mr. McConnell reports 'It is unlikely that the rapid increase in production of the last two years will be continued, as serious inroads have already been made on the rich portions of Eldorado and Bonanza creeks, and to a less extent on Hunker and Dominion creeks, but the amounts remaining, with the long stretches of medium and low grade gravels still untouched on all the creeks, ensure a high production for a number of years.'

'The employment of machinery in the working of Klondyke claims is gradually increasing, but is still insignificant, a fact due largely to the absence of roads and the consequent impossibility of transporting heavy pieces up the creeks. Steam thawers are largely used and

PRECIOUS
METALS.

Gold.

steam pumps are gradually replacing hand pumps, Chinese pumps and water-wheels for draining the pits. Steam-hoists are employed at a few of the mines, but are not in general use.

North-west
Territories.

'The greater part of the work of the camp is still done by hand, and this notwithstanding the fact that, taking into consideration the high price of labour, nowhere in the world could machinery be more profitably employed.'

'Very little work was done during the past season in the Yukon district, outside the Klondyke gold fields. The Stewart River was further prospected by a few parties and reports of strikes on some of the tributaries were current, but it was impossible to learn anything definite about them. A strike is also reported farther to the north on a couple of tributaries of the South fork of the Salmon, and a small quantity of coarse high grade gold purporting to come from there, was seen by the writer when on the way out. The creeks at the head of Sixty-mile River, which was almost abandoned after the Klondike discoveries, are also again beginning to attract some attention.'

British
Columbia.

BRITISH COLUMBIA.

The record production of gold in British Columbia, which was made in 1863, and amounted to \$3,913,563 has at last been exceeded. The output for 1899 was \$4,202,473 and was greater than the output for 1898 by nearly 43 per cent. The production of 1863 and for many years subsequently was derived entirely from placer workings, whereas during the past year 32 per cent. of the product was obtained from the placer and hydraulic workings and 68 per cent. from lode mining.

Statistics of production since 1858 are shown in Table 10 while the production for 1899, by districts, is shown in Table 11.

Placer Mining.—The yield of placer gold was \$1,344,900, an amount not equalled within the past twelve years, and over double the placer yield for 1898. This increase is due to the Atlin District, in the northern part of the province, the output of which is reported as \$800,000. The output of the other placer districts has not changed much from the previous year.

Work has been continued on a number of important hydraulicking enterprises in the Caribou District. The output of gold from these however has not been materially increased.

TABLE 10.
PRECIOUS METALS.
GOLD :—BRITISH COLUMBIA—ANNUAL PRODUCTION.

PRECIOUS METALS.

Gold.

British Columbia.

Calendar Year.	Value.	Calendar Year.	Value.
	\$		\$
1858.....	705,000	1879.....	1,290,058
1859.....	1,615,072	1880.....	1,013,827
1860.....	2,228,543	1881.....	1,046,737
1861.....	2,666,118	1882.....	954,085
1862.....	2,656,903	1883.....	794,252
1863.....	3,913,563	1884.....	736,165
1864.....	3,735,850	1885.....	713,738
1865.....	3,491,205	1886.....	903,651
1866.....	2,662,106	1887.....	693,709
1867.....	2,480,868	1888.....	616,731
1868.....	2,372,972	1889.....	588,923
1869.....	1,774,978	1890.....	494,436
1870.....	1,336,956	1891.....	429,811
1871.....	1,799,440	1892.....	399,525
1872.....	1,610,972	1893.....	379,535
1873.....	1,305,749	1894.....	530,530
1874.....	1,844,618	1895.....	1,266,954
1875.....	2,474,904	1896.....	1,788,206
1876.....	1,786,648	1897.....	2,724,657
1877.....	1,608,182	1898.....	2,939,852
1878.....	1,275,204	1899.....	4,202,473

TABLE 11.
PRECIOUS METALS.
GOLD :—BRITISH COLUMBIA—PRODUCTION BY DISTRICTS.

DISTRICTS.	GOLD, PLACER.		GOLD, LOSE.	
	Ounces.	Value.	Ounces.	Value.
Cariboo :		\$		\$
Richfield Division.....	9,000	180,000		
Quesnel ".....	9,665	193,300		
Omineca ".....	430	8,600		
Cassiar :				
Atlin Lake Division.....	40,000	800,000		
All other.....	969	19,380		
East Kootenay :				
Fort Steele Division.....	500	10,000		
West Kootenay :				
Ainsworth Division.....			91	1,888
Nelson ".....			16,569	342,308
Slocan ".....			14	284
Trail Creek ".....			102,976	2,127,482
All other ".....	300	6,000	118	2,439
Lillooet.....	2,135	42,700	1,300	26,858
Yale :				
Osoyoos Division.....	180	3,600	11,086	229,028
Similkameen ".....	330	6,600		
Yale ".....	3,736	74,720	2	45
Coast and other Districts.....			6,159	127,241
Total.....	67,245	1,344,900	138,315	2,857,573

PRECIOUS METALS.

Gold.

Lode Mining.—As usual the Rossland Camp contributed the greater part of the output of gold from lode mining, over 74 per cent, and this chiefly from the LeRoi, War Eagle, and Centre Star mines.

British Columbia.

The Nelson Division of West Kootenay, contributed about 12 per cent, derived largely from the operation of the Ymir mines. The Osoyoos Division of Yale accounted for about 8 per cent. of the total, being almost all the product of the Cariboo and other claims, owned by the Cariboo McKinney Gold Mining and Milling Co., Ltd.

The following tables compiled from the Reports of the Minister of Mines for British Columbia, show the production of the Rossland mines, and illustrate the average results attained during the past six years.

NET PRODUCTION, PER SMELTER RETURNS.

Year.	Ore, tons, 2,000 lbs.	Gold, oz.	Silver, oz.	Copper, lbs.	Value.
1894.....	1,856	3,723	5,357	106,229	\$ 75,510
1895.....	19,693	31,497	46,702	840,420	702,459
1896.....	38,075	55,275	89,285	1,580,635	1,243,360
1897.....	68,804	97,024	110,068	1,819,586	2,097,280
1898.....	111,282	87,343	170,804	5,232,011	2,470,811
1899.....	172,665	102,976	185,818	5,693,889	3,229,086
Total.....	412,375	377,838	608,034	15,272,770	9,818,506

AVERAGE NET SMELTER RETURNS, OR ACTUAL YIELD PER TON.

Year.	Gold.	Silver.	Copper.	Value.
	Ounces.	Ounces.	%	\$
1894.....	2·00	2·89	2·85	40·69
1895.....	1·60	2·41	2·10	35·67
1896.....	1·45	2·34	2·08	32·65
1897.....	1·42	1·60	1·32	30·48
1898.....	·78	1·54	2·35	22·10
1899.....	·596	1·07	1·65	18·70
Average 412,375 tons.....	·916	1·47	1·85	23·81

Silver.

SILVER.

The production of silver in Canada reached a maximum in 1897, when the output was 5,558,446 ounces valued at \$3,323,395. The past two years have shown successive decreases, so that the output of 1899 which was 3,411,644 ounces valued at \$2,032,658 or 59·58 cents per ounce, was less than the output of 1897 by over a million dollars.

The statistics of production of silver since 1887, are shown in Table 12 below, and the variations are exhibited graphically in Table G.

PRECIOUS METALS.

Silver.

Production.

TABLE 12.
PRECIOUS METALS.
SILVER :—ANNUAL PRODUCTION.

CALENDAR YEAR.	ONTARIO.		QUEBEC.		BRITISH COLUMBIA.		TOTAL.		
	Ounces.	Value.	Ounces.	Value.	Ounces.	Value.	Ounces.	Value.	
1887..	190,495	\$186,304	146,898	\$143,666	17,690	\$17,301	355,083	\$347,271	
1888..	208,064	195,580	149,388	140,425	79,780	74,993	437,232	410,998	
1889..	181,609	169,986	148,517	139,012	53,192	49,787	383,318	358,785	
1890..	158,715	166,016	171,545	179,436	70,427	73,666	400,687	419,118	
1891..	225,633	222,926	185,584	183,357	3,306	3,266	414,523	409,549	
1892..	41,581	36,425	191,910	168,113	77,160	67,592	310,651	272,130	
1893..	.....	8,689	.....	126,439	.....	195,000	.....	330,128
1894..	.....	.....	101,318	63,830	746,379	470,219	847,697	534,049
1895..	.....	.....	81,753	53,369	1,496,522	976,930	1,578,275	1,030,299
1896..	.....	.....	70,000	46,942	3,135,343	2,102,561	3,205,343	2,149,503
1897..	5,000	2,990	80,475	48,116	5,472,971	3,272,289	5,558,446	3,323,395	
1898..	85,000	49,521	74,932	43,655	4,292,401	2,500,753	4,452,333	2,593,929	
						Ounces.	Value.		
1899	Quebec.....					40,231	\$ 23,970		
	Ontario.....					202,000	120,352		
	Yukon district.....					230,000	137,034		
	British Columbia.....					2,939,413	1,751,302		
Total.....						3,411,644	2,032,658		

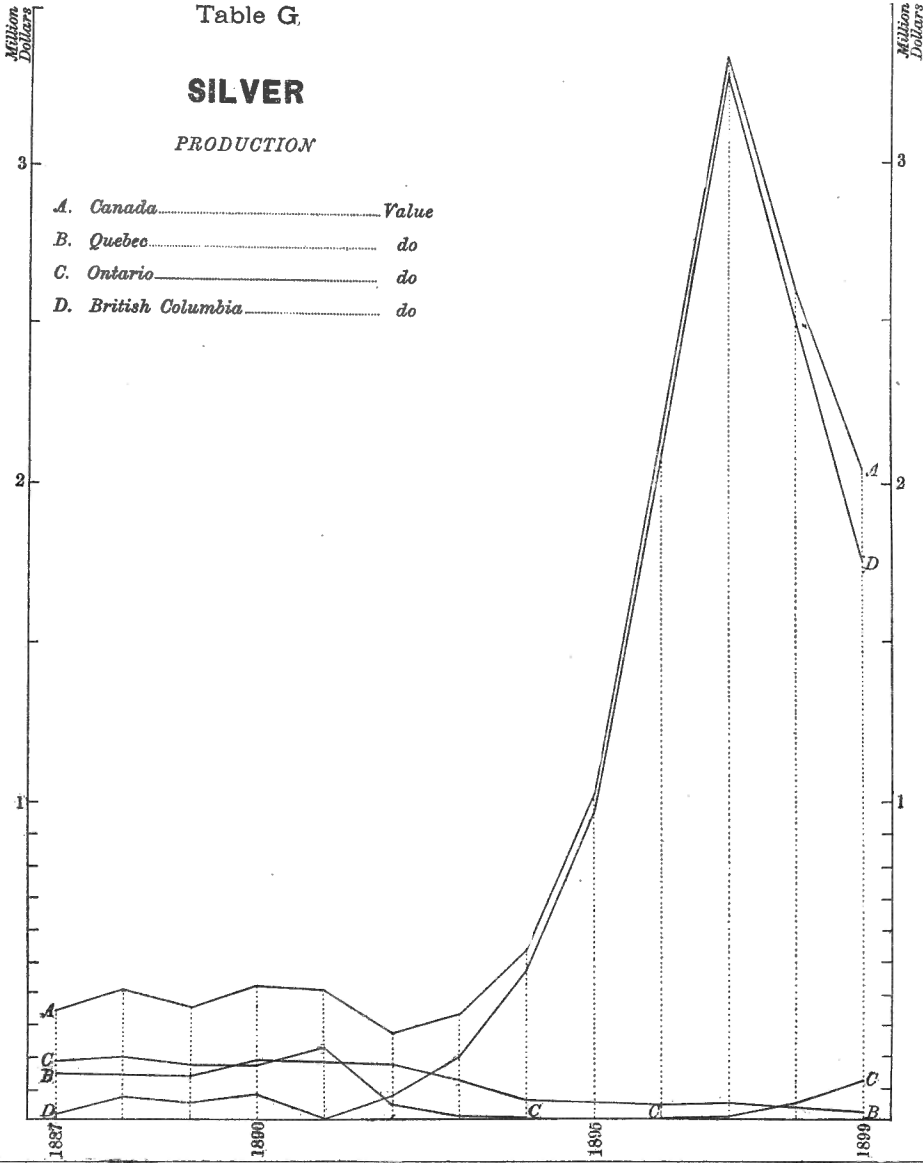
The production of silver has increased very largely since 1894 due, as will be seen from the table, entirely to the output from British Columbia. The other provinces, Ontario and Quebec were, previous to 1894, the most important silver producers, British Columbia in these years occupying but a secondary position. Since 1894, however, production in the eastern provinces has greatly fallen away, ceasing altogether in Ontario in 1894, 1895 and 1896, while in Quebec the output is not much more than one fourth of what it was ten years ago.

Table G.

SILVER

PRODUCTION

- A. Canada.....Value
- B. Quebec.....do
- C. Ontario.....do
- D. British Columbia.....do



During the past three years there has been a small revival of interest in Ontario, the West End Mines Syndicate having reopened a number of mines in the Thunder Bay district.

PRECIOUS METALS.

Silver.

In Quebec the silver is as usual derived from the pyrites deposits in the vicinity of Capelton, in the Eastern Townships. The pyrites is mined primarily as a source of sulphur for acid making, but the silver is saved as a by-product.

BRITISH COLUMBIA.

British Columbia.

The silver production in British Columbia, is chiefly from the silver-lead ores of the Slocan, the silver-copper ores of Nelson, the pyrrhotite and chalcopyrite ores of Rossland also contributing to the total output.

The production by districts in 1898 and 1899 was as follows :— Production.

District.	1898.	1899.
	Oz.	Oz.
Kootenay East—		
Fort Steele Division.....	69,780	33,516
Other Divisions.....		1,627
Kootenay West—		
Ainsworth Division ...	167,147	268,165
Nelson "	692,367	483,659
Slocan "	3,068,648	1,891,025
Trail Creek "	170,804	185,818
Other "	121,510	48,463
Yale—Osoyoos Division.....		2,719
Similkameen		16
Yale.....		47
Coast and other districts....	2,145	24,358
Total	4,292,401	2,939,413

The most important change is the large decrease in the output of the Slocan. In this division in 1899, 21,507 tons of ore were mined as compared with 30,691 tons in 1898 and 33,567 tons in 1897. The labour troubles of 1899 doubtless had much to do with this decrease.

The following tables show the output, and average yield per ton of the Slocan mines for the past five years.

NET PRODUCTION PER SMELTER RETURNS.

Year.	Ore, Tons, 2,000 lbs.	Silver, oz.	Lead, lbs.	Gold, oz.	Values.
1895.....	9,514	1,122,770	9,666,324	6	\$1,045,600
1896.....	16,560	1,954,258	18,175,074	152	1,854,011
1897.....	33,567	3,641,287	30,707,705	193	3,280,686
1898.....	30,691	3,068,648	27,063,595	60	2,619,852
1899.....	21,507	1,891,025	16,660,910	14	1,740,372
Totals.....	111,839	11,677,988	102,273,608	425	\$10,540,521

PRECIOUS METALS.

ACTUAL YIELD PER TON.

Silver.

British Columbia.

Year.	Silver.	Lead.	Value.
1895.....	118·0 oz.	50·8%	\$109 90
1896.....	118·0 "	54·9%	111 95
1897.....	108·5 "	45·7%	97 73
1898.....	100·0 "	44·1%	85 36
1899.....	87·9 "	38·7%	80 92
For 111,839 tons....	104·4	45·7%	94 25

The following Table, No. 13, gives the exports of silver ores as entered in the customs returns. Attention should perhaps be drawn to the discrepancies between this and Table 12, the table of production, since it would appear to show that more silver has been exported than has been produced during the past four years. The figures of production for these years are known to be based upon smelter returns and the quantities are valued at the average market value for the refined metal ; they can therefore be assumed to be the more correct.

TABLE 13.

PRECIOUS METALS.

SILVER :—EXPORTS OF ORE.*

Exports.

Province.	CALENDAR YEAR.						
	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Ontario.....	\$ 7,878	\$	\$ 100	\$	\$ 5,885	\$ 40,298	\$ 61,948
Manitoba.....	820	.....	.....	.....	.....	.....	.....
N.-W. Territories.....	.....	.....	.....	.....	.....	1,212	7,743
British Columbia.	204,997	359,731	994,254	2,271,959	3,570,506	2,860,767	1,554,214
Totals.....	213,695	359,731	994,354	2,271,959	3,576,391	2,902,277	1,623,905

* The production of silver given under the heading Quebec, in Table 12, represents the amount of that metal in the pyritous copper ores produced and exported from that province. Being but in small proportion, it is ignored, and does not appear under the heading silver in the export returns.

PYRITES.

PYRITES.

The mines of the Eustis Mining Co. and the Nichols Chemical Co. in the Eastern Townships, province of Quebec, continue to be the source of production of pyrites, statistics of which are given in Table 1 below. The mines are situated in the township of Ascot, in the vicinity of Capelton. The ore, which consists mainly of the sulphides of iron and copper, carries about 42 per cent of sulphur, from 3 to 4 per cent of copper and from 2 to 4 ounces of silver per ton. Although mined primarily for use in the manufacture of sulphuric acid, both the copper and silver are extracted with some profit. A small proportion is used in Canada for making sulphuric acid; but the bulk of the ore is shipped to the manufacturing establishments of the Nichols Company, and to other plants in the United States.

TABLE 1.

PYRITES.

ANNUAL PRODUCTION.

Production.

Calendar Year.	Tons. 2,000 lbs.	Value.
		\$
1886	42,906	193,077
1887	38,043	171,194
1888	63,479	285,656
1889	72,225	307,292
1890	49,227	123,067
1891	67,731	203,193
1892	59,770	179,310
1893	58,542	175,626
1894	40,527	121,581
1895	34,198	102,594
1896	33,715	101,155
1897	38,910	116,730
1898	32,218	123,872
1899	27,687	110,748

PYRITES.

TABLE 2.

Imports.

PYRITES.

IMPORTS.—BRIMSTONE AND CRUDE SULPHUR.

Fiscal Year.	Pounds.	Value.
1880	1,775,489	\$27,401
1881	2,118,720	33,956
1882	2,375,821	40,329
1883	2,336,085	36,737
1884	2,195,735	37,463
1885	2,243,986	35,043
1886	2,922,043	43,651
1887	3,103,644	38,750
1888	2,048,812	25,318
1889	2,427,510	34,006
1890	4,440,799	44,276
1891	3,601,748	46,351
1892	4,769,759	67,095
1893	6,381,203	77,216
1894	5,845,463	61,558
1895	4,900,225	56,965
1896	6,934,190	63,973
1897	8,672,751	87,719
1898	38,026,798	373,786
1899*	24,517,026	265,799

* Brimstone, crude, or in roll or flour, and sulphur crude in roll or flour. Duty free.

SALT.

SALT.

The production of salt in 1899 amounted to 59,339 tons valued at \$254,390 or an average of \$4.28 per ton being an increase over the previous year of 2,197 tons or 3.8 per cent in quantity and \$5,751 or 2.3 per cent in value.

This is entirely the output of the Ontario salt fields, returns having been received from some twelve operators.

Small quantities of salt are occasionally produced at the Sussex salt works in New Brunswick, and at Lake Winnipegosis, Man., but these were not operated during 1899.

There is a considerable amount of salt imported for use in the sea and gulf fisheries, but otherwise the imports of salt entering into direct competition with the Canadian product are of comparatively small amount. The value of these in 1899 was \$32,792 or less than 13 per cent. of the home output.

TABLE 1.
SALT.
PRODUCTION.

SALT.
Production.

Calendar Year.	Tons.	Value.
1886	62,359	\$227,195
1887	60,173	166,394
1888	59,070	186,460
1889	32,832	129,547
1890	43,754	198,857
1891	45,021	161,179
1892	45,486	162,041
1893	62,324	195,926
1894	57,199	170,687
1895	52,376	160,455
1896	43,960	169,693
1897	51,348	225,730
1898	57,142	248,639
1899	59,339	254,390

TABLE 2.
SALT.
EXPORTS.

Exports.

Calendar Year.	Bushels.	Value.
1880	467,641	\$46,211
1881	343,208	44,627
1882	181,758	18,350
1883	199,733	19,492
1884	167,029	15,291
1885	246,794	18,756
1886	224,943	16,886
1887	154,045	11,526
1888	15,251	3,987
1889	8,557	2,390
1890	6,605	1,667
1891	5,290	1,277
1892	2,000	504
1893	4,940	1,267
1894	4,639	1,120
1895	4,865	959
1896	3,842	899
1897	5,383	1,193
1898	5,202	1,252
1899	11,205	2,773

SALT.

Imports.

TABLE 3.

SALT.

IMPORTS—SALT PAYING DUTY.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1880.....	726,640	\$ 3,916	1890.....	15,135,109	\$57,549
1881.....	2,588,465	6,355	1891.....	15,140,827	59,311
1882.....	3,679,415	12,318	1892.....	18,648,191	65,963
1883.....	12,136,968	36,223	1893.....	21,977,339	79,838
1884.....	12,770,950	38,949	1894.....	15,867,825	53,336
1885.....	10,397,761	31,726	1895.....	8,498,404	29,881
1886.....	12,266,021	39,181	1896.....	7,665,257	24,550
1887.....	10,413,258	35,670	1897.....	11,911,766	33,470
1888.....	10,509,799	32,136	1898.....	11,068,785	32,792
1889.....	11,190,088	38,968			
			Duty.		
1899	{	Salt, coarse, N.E.S.....	5c. per 100 lbs.	5,659,390	11,917
		Salt, fine, in bulk.....	5c. "	1,707,050	3,000
		Salt, N.E.S., in bags, barrels or other packages.....	7½c. "	4,415,013	17,922
		Total		11,781,453	32,839

TABLE 4.

SALT.

IMPORTS—SALT NOT PAYING DUTY.

Fiscal Year.	Pounds.	Value.
1880.....	212,714,747	\$400,167
1881.....	231,640,610	488,278
1882.....	166,183,962	311,489
1883.....	246,747,113	386,144
1884.....	225,390,121	321,243
1885.....	171,571,209	255,719
1886.....	180,205,949	255,359
1887.....	203,042,332	285,455
1888.....	184,166,986	220,975
1889.....	180,847,800	253,009
1890.....	158,490,075	252,291
1891.....	195,491,410	321,239
1892.....	201,831,217	314,995
1893.....	191,595,530	281,462
1894.....	196,668,730	328,300
1895.....	201,691,248	332,711
1896.....	205,005,100	338,888
1897.....	215,844,484	312,117
1898.....	202,634,927	293,410
1899*.....	183,046,365	267,520

* Salt, imported from the United Kingdom, or any British possession, or imported for the use of the sea or gulf fisheries.

STRUCTURAL MATERIALS.

STRUCTURAL
MATERIALS.

Under this heading are comprised building stone, granites, marbles, slates, flagstones, cements, lime, etc., as well as the manufactures of clay, which include building bricks, tiles, drain-pipe, earthenware and coarse pottery.

The industries based on the structural materials are so widespread and are carried on in so many different places, on various scales and often intermittently, that it is impossible to obtain anything like complete returns of quantity or value of the products. The figures of production are therefore to be taken only as rough approximations.

TABLE 1.
STRUCTURAL MATERIALS.
PRODUCTION OF BUILDING STONE.

Building
Stone.

Calendar Year.	Value.
1886.....	\$ 642,509
1887.....	552,267
1888.....	641,712
1889.....	913,691
1890.....	964,783
1891.....	708,736
1892.....	609,827
1893.....	1,100,000
1894.....	1,200,000
1895.....	1,095,000
1896.....	1,000,000
1897.....	1,000,000
1898.....	1,300,000
1899.....	1,500,000

TABLE 2.
STRUCTURAL MATERIALS.
EXPORTS OF STONE AND MARBLE, WROUGHT AND UNWROUGHT.

Stone and
Marble.

Province.	WROUGHT.		UNWROUGHT.	
	Calendar Years.			
	1898.	1899.	1898.	1899.
Ontario.....	\$379	\$4,495	\$63,755	\$96,976
Quebec.....	708	170	...	4
Nova Scotia	932	248	885	4,494
New Brunswick.....	507	169	730	273
British Columbia		10	.....	184
Totals.....	\$2,526	\$5,092	\$65,370	\$101,931

STRUCTURAL
MATERIALS.Building
Stone.TABLE 3.
STRUCTURAL MATERIALS.
IMPORTS OF BUILDING STONE.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$ 35,970	1890.....	\$ 132,155
1881.....	58,149	1891.....	170,890
1882.....	33,623	1892.....	95,550
1883.....	35,061	1893.....	56,510
1884.....	51,088	1894.....	52,908
1885.....	30,491	1895.....	44,282
1886.....	41,675	1896.....	54,130
1887.....	54,368	1897.....	38,714
1888.....	86,373	1898.....	28,495
1889.....	100,314		
1899	{ Flagstones, granite and rough freestone, sandstone, and all building stone, not hammered or chiselled. Duty 15 p.c. Granite and freestones, dressed; all other building stone dressed, except marble. Duty 20 p.c.		\$43,494
			4,546
			\$48,040

TABLE 4.
STRUCTURAL MATERIALS.
IMPORTS OF MANUFACTURES OF STONE OR GRANITE, N.E.S.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$29,408	1890.....	\$84,396
1881.....	36,877	1891.....	61,051
1882.....	37,267	1892.....	39,479
1883.....	45,636	1893.....	49,323
1884.....	45,290	1894.....	49,510
1885.....	39,867	1895.....	51,050
1886.....	41,984	1896.....	51,499
1887.....	41,829	1897.....	34,026
1888.....	47,487	1898.....	41,240
1889.....	61,341		
1899	{ Granite—Sawn only Duty 20 p.c. Finished and polished..... " 35 p.c. Manufactures of, N.O.P. " 35 p.c. Manufactures of stone, N.O.P. " 30 p.c.		\$ 420
			12,371
			32,734
			14,623
			\$60,148

TABLE 5.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF MARBLE.

STRUCTURAL
MATERIALS.

Marble.

Calendar Year.	Tons.	Value.
1886	501	\$9,900
1887	242	6,224
1888	191	3,100
1889	83	980
1890	780	10,776
1891	240	1,752
1892	340	3,600
1893	590	5,100
1894	Nil.	Nil.
1895	200	2,000
1896	224	2,405
1897	Nil.	Nil.
1898	Nil.	Nil.
1899	Nil.	Nil.

TABLE 6.
STRUCTURAL MATERIALS.
IMPORTS OF MARBLE.

Fiscal Year.	Value.
1880	\$ 63,015
1881	85,977
1882	109,505
1883	128,520
1884	108,771
1885	102,835
1886	117,752
1887	104,250
1888	94,681
1889	118,421
1890	99,353
1891	107,661
1892	106,268
1893	96,177
1894	94,657
1895	83,422
1896	90,065
1897	77,150
1898	\$95,894
1899 { Marble and manufactures of :—	Duty.
Marble sawn only	20 p. c. \$64,212
Finished and polished	35 " 19,961
Rough, not hammered or chiselled	15 " 2,012
Manufactures of, N.O.P.	35 " 15,694
Total, marble and manufactures of	\$101,879

STRUCTURAL
MATERIALS.

Granite.

TABLE 7.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF GRANITE.

Calendar Year.	Tons.	Value.
1886.....	6,062	\$63,309
1887.....	21,217	142,506
1888.....	21,352	147,305
1889.....	10,197	79,624
1890.....	13,307	65,985
1891.....	13,637	70,056
1892.....	24,302	89,326
1893.....	22,521	94,393
1894.....	16,392	109,936
1895.....	19,238	84,838
1896.....	18,717	106,709
1897.....	10,345	61,934
1898.....	23,879	81,073
1899.....	13,418	90,542

Slate

TABLE 8.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF SLATE.

Calendar Year.	Tons.	Value.
1886.....	5,345	\$64,675
1887.....	7,357	89,000
1888.....	5,314	90,689
1889.....	6,935	119,160
1890.....	6,368	100,250
1891.....	5,000	65,000
1892.....	5,180	69,070
1893.....	7,112	90,825
1894.....	.....	75,550
1895.....	.....	58,900
1896.....	.....	53,370
1897.....	.....	42,800
1898.....	.....	40,791
1899.....	.....	33,406

TABLE 9.
STRUCTURAL MATERIALS.
EXPORTS OF SLATE.

STRUCTURAL
MATERIALS.

Slate.

Calendar Year.	Tons.	Value.
1884.....	539	\$6,845
1885.....	346	5,274
1886.....	34	495
1887.....	27	373
1888.....	22	475
1889.....	26	3,303
1890.....	12	153
1891.....	15	195
1892.....	87	2,038
1893.....	178	3,168
1894.....	187	3,610
1895.....	36	574
1896.....	301	8,913
1897.....	Nil.	Nil.
1898.....	Nil.	Nil.
1899.....	Nil.	Nil.

TABLE 10.
STRUCTURAL MATERIALS.
IMPORTS OF SLATE.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$21,431	1890.....	\$22,871
1881.....	22,184	1891.....	46,104
1882.....	24,543	1892.....	50,441
1883.....	24,968	1893.....	51,179
1884.....	28,816	1894.....	29,267
1885.....	28,169	1895.....	19,471
1886.....	27,852	1896.....	24,176
1887.....	27,845	1897.....	21,615
1888.....	23,151	1898.....	24,907
1889.....	41,370		

		Duty.		
1899	{ Slate and manufactures of—	Mantels.....	30 p. c.	\$ 304
		Roofing slate.....	25 p. c. not over 75c. per square	
		School writing slates.....	25 p. c.	9,096
		Slate pencils.....	25 p. c.	11,558
		Slate of all kinds and manufactures of, N.E.S.	30 p. c.	3,135
	Total		9,007	\$33,100

STRUCTURAL
MATERIALS.

Flagstone.

TABLE II.
STRUCTURAL MATERIALS.
PRODUCTION OF FLAGSTONE.

Calendar Year.	Quantity, Sq. ft.	Value.
1886.....	70,000	\$ 7,875
1887.....	116,000	11,600
1888.....	64,800	6,580
1889.....	14,000	1,400
1890.....	17,865	1,643
1891.....	27,300	2,721
1892.....	13,700	1,869
1893.....	40,500	3,487
1894.....	152,700	5,298
1895.....	80,005	6,687
1896.....	.....	6,710
1897.....	.....	7,190
1898.....	.....	4,250
1899.....	.....	7,600

TABLE 12.
STRUCTURAL MATERIALS.
IMPORTS OF FLAGSTONE.

Fiscal Year.	Tons.	Value.
1881.....	23	\$ 241
1882.....	90	848
1883.....	10	99
1884.....	137	1,158
1885.....	205	1,756
1886.....	1,602	9,443
1887.....	1,316	10,966
1888.....	2,642	21,077
1889.....	1,669	15,451
1890.....	5,665	48,995
1891.....	3,770	36,348
1892.....	1,571	15,048
1893.....	884	8,500
1894.....	218	2,429
1895.....	15	84
1896.....	Nil.	Nil.
1897.....	13	227
1898*.....	587	1,540
1899.....	Nil.	Nil.

* Flagstones, dressed. (See Table 3).

Cement.

Cement.—The manufacture of cement is an industry which has been rapidly gaining in importance in Canada during the past few years. From a production in 1890, valued at less than \$100,000 the output has reached in 1899 a value of \$633,291. The value of the product of 1897 has been more than doubled, and the increase over 1898 has

been 58 per cent in quantity, and 59 per cent in value. The average price per barrel, was about the same as in 1898, viz. 84 cents for natural rock and \$2 for Portland. Of the total output less than 19 per cent of the value was in natural rock cement, the balance over 81 per cent being Portland. The province of Ontario was the largest producer, turning out over 87 per cent of the whole product.

STRUCTURAL MATERIALS.
Cement

The number of works engaged in manufacturing was greater than in previous years by two, the total being eleven, viz; eight in Ontario, two in Quebec, and one in British Columbia. Natural rock cement was made at four works in Ontario and one in Quebec, while Portland cement was made by four works in Ontario, two in Quebec and one in British Columbia.

The two new works started up were the Georgian Bay Portland Cement Co.; Ltd., at Owen Sound, Ont., afterwards called the Imperial Cement Co., Ltd., which only began operations late in the year, capacity 300 barrels a day, and the Beaver Portland Cement Company, Ltd., with works at Marlbank, Ontario, and head office at Montreal, now merged into the Canadian Portland Cement Co., Ltd.

In spite of the large increase in home production the imports of Portland cement have also increased rapidly during the past two years. The imports of Portland cement in 1899 were of the value of \$467,994, the increase over 1898 being \$112,730 or nearly 32 per cent.

TABLE 13.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF CEMENT.

Calendar Year.		Barrels.	Value.
1887	.....	69,843	\$ 81,909
1888	.....	50,668	35,593
1889	.....	90,474	69,790
1890	.....	102,216	92,405
1891	.....	93,473	108,561
1892	.....	117,408	147,663
1893	.....	158,597	194,015
1894	.....	108,142	144,637
1895	.....	128,294	173,675
1896	.....	149,090	201,651
		Barrels.	Value.
1897	{ Natural	85,450	\$ 65,893
	{ Portland	119,763	209,380
			} 205,213
1898	{ Natural	87,125	73,412
	{ Portland	163,084	324,168
			} 250,209
1899	{ Natural	141,387	119,308
	{ Portland	255,366	513,983
			} 396,753
			633,291

STRUCTURAL
MATERIALS.

Cement.

TABLE 14.
STRUCTURAL MATERIALS.
EXPORTS OF CEMENT.

Province.	CALENDAR YEAR.					
	1894.	1895.	1896.	1897.	1898.	1899.
Ontario... ..	\$339	\$662	\$484	\$535	\$632	\$ 959
Quebec	42	30	625	109	604	1,134
Nova Scotia....	101	245	219	.....	881	507
British Columbia .....	.....	.....	.....	.....	.....	133
Totals....	\$482	\$937	\$1,328	\$644	\$2,117	\$2,733

TABLE 15.
STRUCTURAL MATERIALS.
IMPORTS OF CEMENT IN BULK OR BAGS.

Fiscal Year.	Bushels.	Value.
1880.....	65	\$ 28
1881.....	579	298
1882.....	386	86
1883.....	1,759	548
1884.....	4,626	1,236
1885.....	4,598	1,315
1886.....	6,808	1,851
1887.....	5,421	1,419
1888.....	23,919	5,787
1889.....	32,818	10,668
1890.....	21,055	5,443
1891.....	11,281	2,890
1892.....	14,351	3,394
1893.....	12,534	2,909
1894.....	9,027	2,618
1895.....	.....	2,112
1896.....	.....	3,672
1897.....	.....	4,318
1898.....	.....	3,263
1899*.....	.....	8,929

*Cement, N.E.S., duty 20 p.c.

TABLE 16.
STRUCTURAL MATERIALS.
IMPORTS OF HYDRAULIC CEMENT.

STRUCTURAL
MATERIALS.

Cement.

Fiscal Year.	Barrels.	Value.
1880.....	10,034	\$ 10,306
1881.....	7,812	7,821
1882.....	11,945	13,410
1883.....	11,659	13,755
1884.....	8,606	9,514
1885.....	5,613	5,396
1886.....	6,164	6,028
1887.....	6,160	8,784
1888.....	5,636	7,522
1889.....	5,835	7,467
1890.....	5,440	9,048
1891.....	3,515	6,152
1892.....	2,214	2,782
1893.....	4,896	8,060
1894.....	1,054	985
1895.....	5,333	7,001
1896.....	5,688	8,948
1897.....	2,494	3,937
	Cwt.	
1898.....	16,033	7,097
1899 (cement, hydraulic or waterlime)*.....	1,678	694

*Duty 12½c. per 100 lbs.

TABLE 17.
STRUCTURAL MATERIALS.
IMPORTS OF PORTLAND CEMENT.

Fiscal Year.	Barrels.	Value.
1880.....		\$ 55,774
1881.....		45,646
1882.....		66,579
1883.....		102,537
1884.....		102,857
1885.....		111,521
1886.....		120,398
1887.....	102,750	148,054
1888.....	122,402	177,158
1889.....	122,273	179,406
1890.....	192,322	313,572
1891.....	183,728	304,648
1892.....	187,233	281,553
1893.....	229,492	316,179
1894.....	224,150	280,841
1895.....	196,281	242,813
1896.....	204,407	242,409
1897.....	210,871	252,587
	Cwt.	
1898.....	1,073,058	355,264
1899 (Portland or Roman)*.....	1,300,424	467,994

* Duty, 12½c. per 100 lbs.

STRUCTURAL
MATERIALS.Roofing
Cement.TABLE 18.
STRUCTURAL MATERIALS.
PRODUCTION OF ROOFING CEMENT.

Calendar Year.	Tons.	Value.
1890.....	1,171	\$ 6,502
1891.....	1,020	4,810
1892.....	800	12,000
1893.....	951	5,441
1894.....	815	3,978
1895.....	.....	3,153
1896.....	86	430
1897.....	Nil.	Nil.
1898.....	Nil.	Nil.
1899.....	Nil.	Nil.

Lime.

TABLE 19.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF LIME.

Calendar Year.	Value.
1886.....	\$283,755
1887.....	394,859
1888.....	339,951
1889.....	362,848
1890.....	412,308
1891.....	251,215
1892.....	411,270
1893.....	900,000
1894.....	900,000
1895.....	700,000
1896.....	650,000
1897.....	650,000
1898.....	650,000
1899.....	800,000

TABLE 20.
STRUCTURAL MATERIALS.
EXPORTS OF LIME.

Province.	Calendar Year.			
	1896.	1897.	1898.	1899.
Ontario.....	\$25,500	\$17,730	\$ 31,465	\$ 60,573
Quebec.....	18,067	21,786	15,800	5,595
Nova Scotia.....	3,195	2,390	245	388
New Brunswick.....	24,058	11,021	2,047	6,988
Manitoba.....	.....	250	.....	21
British Columbia.....	.....	.....	37	.....
Totals.....	\$ 70,820	\$ 53,177	\$49,594	\$ 73,565

TABLE 21.
STRUCTURAL MATERIALS.
IMPORTS OF LIME.

STRUCTURAL
MATERIALS.
Lime.

Fiscal Year.	Barrels.	Value.
1880.....	6,100	\$ 6,013
1881.....	5,796	4,177
1882.....	5,064	5,365
1883.....	7,623	9,224
1884.....	10,804	11,200
1885.....	12,072	11,503
1886.....	11,021	9,347
1887.....	10,835	8,524
1888.....	10,142	7,537
1889.....	13,079	9,363
1890.....	8,149	5,360
1891.....	6,259	4,273
1892.....	6,132	4,241
1893.....	6,879	4,917
1894.....	6,766	4,907
1895.....	12,008	5,743
1896.....	10,239	7,331
1897.....	16,108	10,529
1898.....	12,850	9,002
1899.....Duty 20 p.c.	15,720	11,124

TABLE 22.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF BUILDING BRICKS.

Building
Bricks.

Calendar Year.	Value.
1886.....	\$ 873,600
1887.....	986,689
1888.....	1,036,746
1889.....	1,273,884
1890.....	1,266,982
1891.....	1,061,536
1892.....	1,251,934
1893.....	1,800,000
1894.....	1,800,000
1895.....	1,670,000
1896.....	1,600,000
1897.....	1,600,000
1898.....	1,900,000
1899.....	2,195,000

STRUCTURAL
MATERIALS.

Bricks.

TABLE 23.
STRUCTURAL MATERIALS.
EXPORTS OF BRICK.

Province.	CALENDAR YEARS.									
	1895.		1896.		1897.		1898.		1899.	
	M	Value	M	Value	M	Value	M	Value	M	Value
		\$		\$		\$		\$		\$
Ontario.....	1,053	4,420	266	1,473	178	940	9	59	45	406
Quebec.....	82	1,092	41	200	316	1,114	16	88	24	96
Nova Scotia....	199	834	600	3,276	31	285	11	74	8	89
New Brunswick...	321	2,319	76	729	48	340	23	155	86	516
British Columbia..	.....	.....	.....	.....	.....	.....	6	66	9	244
Totals.....	1,655	8,665	983	5,678	573	2,679	65	442	172	1,351

TABLE 24.
STRUCTURAL MATERIALS.
IMPORTS OF BUILDING BRICKS.Building
Bricks.

Fiscal Year.	Value.
1880.....	\$ 2,067
1881.....	4,251
1882.....	24,572
1883.....	14,234
1884.....	20,258
1885.....	14,632
1886.....	5,929
1887.....	2,440
1888.....	20,720
1889.....	24,585
1890.....	12,500
1891.....	9,744
1892.....	5,075
1893.....	14,108
1894.....	18,320
1895.....	4,705
1896.....	23,189
1897.....	10,336
1898.....	6,652
1899..... Duty 20 p.c.	21,306

Imports of paving bricks in 1898: Value, \$2,337; duty, 20 p.c.
" " 1899: " \$23,648; " "

TABLE 25.
STRUCTURAL MATERIALS.
PRODUCTION OF TERRA COTTA, ETC.

STRUCTURAL
MATERIALS.

Terra Cotta.

Calendar Year.	Value.
1888.....	\$ 49,800
1889.....	Not available.
1890.....	90,000
1891.....	113,103
1892.....	97,239
1893.....	55,704
1894.....	65,600
1895.....	195,123
1896.....	83,855
1897.....	155,595
1898.....	167,902
1899.....	220,258

TABLE 26.
STRUCTURAL MATERIALS.
PRODUCTION OF SEWER PIPES, ETC.

Sewer Pipes.

Calendar Year.	Value.
1888.....	\$266,320
1889.....	Not available.
1890.....	348,000
1891.....	227,900
1892.....	367,660
1893.....	350,000
1894.....	250,325
1895.....	257,045
1896.....	153,875
1897.....	164,250
1898.....	181,717
1899.....	161,546

STRUCTURAL
MATERIALS.Drain Tiles
and Sewer
Pipes.TABLE 27.
STRUCTURAL MATERIALS.
IMPORTS OF DRAIN TILES AND SEWER PIPES.

Fiscal Year.		Value.	
1880		\$ 33,796	
1881		37,368	
1882		70,065	
1883		70,699	
1884		71,755	
1885		69,589	
1886		57,953	
1887		71,203	
1888		101,257	
1889		83,215	
1890		77,434	
1891		87,195	
1892		59,537	
1893		39,001	
1894		24,625	
1895		21,053	
1896		19,296	
1897		34,286	
1898		29,611	
1899	Drain tile, not glazed	20 p. c.	\$ 1,827
	Drain pipes, sewer pipes, chimney linings or vents, chimney tops and inverted blocks, glazed or unglazed	35 "	32,071
	Total		\$33,898

TABLE 28.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF POTTERY.

Pottery.

Calendar Year.	Value.
1888	\$ 27,750
1889	Not available.
1890	195,242
1891	258,844
1892	265,811
1893	213,186
1894	162,144
1895	151,588
1896	163,427
1897	129,629
1898	214,675
1899	185,000

TABLE 29.
STRUCTURAL MATERIALS.
IMPORTS OF EARTHENWARE.

STRUCTURAL MATERIALS.
Earthenware.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$322,333	1890.....	\$695,206
1881.....	439,029	1891.....	634,907
1882.....	646,734	1892.....	748,810
1883.....	657,886	1893.....	709,737
1884.....	544,586	1894.....	695,514
1885.....	511,853	1895.....	547,935
1886.....	599,269	1896.....	575,493
1887.....	750,691	1897.....	595,822
1888.....	697,082	1898.....	675,874
1889.....	697,949		

		Duty.	
1899	Earthenware and china :—		
	Baths, tubs and washstands, of earthenware, stone, cement or clay, or of other material, N.O.P.....	30 p. c.	\$ 26,413
	Brown or coloured earthen and stoneware, and Rockingham ware.....	30 p. c.	12,276
	Decorated, printed or sponged, and all earthenware, N.E.S.....	30 p. c.	234,060
	Demijohns, churns and crocks.....	30 p. c.	3,133
	White granite or ironstone ware, C.C. or cream coloured ware.....	30 p. c.	203,404
	China and porcelain ware.....	30 p. c.	273,900
	Earthenware tiles.....	35 p. c.	32,235
	Manufactures of earthenware, N.E.S.....	30 p. c.	131,306
Total.....		916,727	

TABLE 30.
STRUCTURAL MATERIALS.
EXPORTS OF SAND AND GRAVEL.

Sand and Gravel.

Calendar Year.	Tons.	Value.	
1893.....	329,116	\$ 121,795	
1894.....	324,656	86,940	
1895.....	277,162	118,359	
1896.....	224,769	80,110	
1897.....	152,963	76,729	
1898.....	165,954	90,498	
1899 {	Ontario.....	240,306	94,810
	Quebec.....	1,744	5,230
	Nova Scotia.....	400	1,600
Total.....	242,450	101,640	

MISCELLA-
NEOUS.

MISCELLANEOUS.

Antimony.

Antimony :—The production of antimony which was renewed at the Rawdon mines in Nova Scotia in 1898, after an idleness of six years appears not to have been continued during 1899. No returns were received.

TABLE 1.
MISCELLANEOUS.
ANNUAL PRODUCTION OF ANTIMONY ORE.

Calendar Year.	Tons.	Value.
1886	665	\$31,490
1887	584	10,860
1888	345	3,696
1889	55	1,100
1890	26½	625
1891	10	60
1892 to 1897	Nil	Nil
1898	1,944	20,000
1899	Nil	Nil

TABLE 2.
MISCELLANEOUS.
EXPORTS OF ANTIMONY ORES.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
1880	40	\$ 1,948	1886	665	\$31,490
1881	34	3,308	1887	229	9,720
1882	323	11,673	1888	352½	6,894
1883	165	4,200	1889	30	695
1884	483	17,875	1890	38	1,000
1885	758	36,250	1891*	3½	60
1898			1,232	15,295	
1899, Nova Scotia			6¾	190	

*No exports between 1891 and 1898.

MISCELLA-
NEOUS.

Antimony.

TABLE 3.
MISCELLANEOUS.
IMPORTS OF ANTIMONY.

Fiscal Year.	Pounds.	Value.
1880.....	42,247	\$ 5,903
1881.....		7,060
1882.....	183,597	15,044
1883.....	105,346	10,355
1884.....	445,600	15,564
1885.....	82,012	8,182
1886.....	89,787	6,951
1887.....	87,827	7,122
1888.....	120,125	12,242
1889.....	119,034	11,206
1890.....	117,066	17,439
1891.....	114,084	17,483
1892.....	130,308	17,680
1893.....	181,823	14,771
1894.....	139,571	12,249
1895.....	79,707	6,131
1896.....	163,209	9,557
1897.....	134,661	8,031
1898.....	156,451	12,350
1899 { Antimony, or regulus of, not ground pulverized or otherwise manufactured. Antimony salts.....	Duty.	
	Free.	157,599
	"	131,467
Total.....		289,066
		16,851

Arsenic.

Arsenic.—A production of arsenic is reported in 1899 of 57 tons valued at \$4,872. This is the product chiefly of the Canadian Gold Fields, Limited, at Deloro, Hastings county, Ontario, and with the exception of some small output in 1894 is the first product since 1891. The ore which consists of irregular veinlike masses of quartz containing a considerable amount of arsenopyrite (mispickel), besides smaller amounts of other sulphides and carbonates, is mined primarily for the gold which is finely disseminated through the sulphides. A new plant was erected by the present company for refining the arsenic. It is situated in the old mill which originally contained the machinery used for this purpose. The finished product is sold in New York where there is said to be a good demand for it.

MISCELLA-
NEOUS.

Arsenic.

TABLE 4.
MISCELLANEOUS.
ANNUAL PRODUCTION OF ARSENIC.

Calendar Year.	Tons.	Value.
1885.....	440	\$17,600
1886.....	120	5,460
1887.....	30	1,200
1888.....	30	1,200
1889.....	Nil.	Nil.
1890.....	25	1,500
1891.....	20	1,000
1892.....	Nil.	Nil.
1893.....	"	"
1894.....	7	420
1895.....	Nil.	Nil.
1896.....	"	"
1897.....	"	"
1898.....	"	"
1899.....	57	4,872

TABLE 5.
MISCELLANEOUS.
IMPORTS OF ARSENIC.

Fiscal Year.	Pounds.	Value.
1880.....	18,197	\$ 576
1881.....	31,417	1,070
1882.....	138,920	3,962
1883.....	51,953	1,812
1884.....	19,337	773
1885.....	49,080	1,566
1886.....	30,181	961
1887.....	32,436	1,116
1888.....	27,510	1,016
1889.....	69,269	2,434
1890.....	138,509	4,474
1891.....	115,248	4,027
1892.....	302,958	9,365
1893.....	447,079	12,907
1894.....	292,505	10,018
1895.....	1,115,697	31,932
1896.....	664,854	27,523
1897.....	152,275	8,378
1898.....	291,967	14,270
1899..... Duty free.	582,383	24,203

TABLE 6.
MISCELLANEOUS.
PRODUCTION OF FELSPAR.

MISCELLA-
NEOUS.

Felspar.

Calendar Year.	Tons.	Value.
1890.....	700	\$3,500
1891.....	685	3,425
1892.....	175	525
1893.....	575	4,525
1894.....	Nil.	Nil.
1895.....	.....	*2,545
1896.....	972	*2,583
1897.....	1,400	3,290
1898.....	2,500	6,250
1899.....	3,000	6,000

* Exports.

TABLE 7.
MISCELLANEOUS.
PRODUCTION OF FIRECLAY.

Fireclay.

Calendar Year.	Tons.	Value.
1889.....	400	\$4,800
1890.....	Nil.	Nil.
1891.....	250	750
1892.....	1,991	4,467
1893.....	540	700
1894.....	539	2,167
1895.....	1,329	3,492
1896.....	842	1,805
1897.....	2,118	5,759
1898.....	670	1,680
1899.....	599	1,295

Moulding Sand :—The moulding sand for which statistics appear ^{Moulding} Sand. is nearly all the production of western Ontario, the figures being obtained from railway shipments. Such sands are doubtlessly available and used locally at various places but records of production have not been obtained.

MISCELLA-
NEOUS.Moulding
Sand.TABLE 8.
MISCELLANEOUS.
PRODUCTION OF MOULDING SAND.

Calendar Year.	Tons.	Value.
1887	160	\$ 800
1888	169	845
1889	170	850
1890	320	1,410
1891	230	1,000
1892	345	1,380
1893	4,370	9,086
1894	6,214	12,428
1895	6,765	13,530
1896	5,739	11,478
1897	5,485	10,931
1898	10,572	21,038
1899	13,724	27,430

Platinum.

TABLE 9.
MISCELLANEOUS.
ANNUAL PRODUCTION OF PLATINUM.

Calendar Year.	Value.
1887	\$ 5,600
1888	6,000
1889	3,500
1890	4,500
1891	10,000
1892	3,500
1893	1,800
1894	950
1895	3,800
1896	750
1897	1,600
1898	1,500
1899	825

TABLE 10.
MISCELLANEOUS.
IMPORTS OF PLATINUM.

MISCELLANEOUS.

Platinum.

Fiscal Year.	Value.
1883.....	\$ 113
1884.....	576
1885.....	792
1886.....	1,154
1887.....	1,422
1888.....	13,475
1889.....	3,167
1890.....	5,215
1891.....	4,055
1892.....	1,952
1893.....	14,082
1894.....	7,151
1895.....	3,937
1896.....	6,185
1897.....	9,081
1898.....	9,781
1899*.....	9,671

* Platinum wire and platinum in bars, strips, sheets or plates; platinum retorts, pans, condensers, tubing and pipe, imported by manufacturers of sulphuric acid for use in their works. Duty free.

TABLE 11.
MISCELLANEOUS.
ANNUAL PRODUCTION OF QUARTZ.

Quartz.

Calendar Year.	Tons.	Value.
1890.....	200	\$ 1,000
1891.....		
1892.....		
1893.....	100	500
1894.....		
1895.....		
1896.....	10	50
1897.....		
1898.....	284	570
1899.....	600	1,260

MISCELLA-
NEOUS.

Quartz.

TABLE 12.
MISCELLANEOUS.
IMPORTS OF 'SILEX' CRYSTALLIZED QUARTZ.

Fiscal Year.	Cwt.	Value.
1880.....	5,252	\$ 2,290
1881.....	3,251	1,659
1882.....	3,283	1,678
1883.....	3,543	2,058
1884.....	3,259	1,709
1885.....	3,527	1,443
1886.....	2,520	1,313
1887.....	14,533	5,073
1888.....	4,808	2,385
1889.....	5,130	1,211
1890.....	1,768	2,617
1891.....	3,674	1,929
1892.....	1,429	1,244
1893.....	2,447	1,301
1894.....	2,451	1,521
1895.....	2,882	1,881
1896.....	3,289	2,174
1897.....	2,564	3,415
1898.....	3,104	2,773
1899..... Duty free.	3,951	2,595

Soapstone.

TABLE 13.
MISCELLANEOUS.
ANNUAL PRODUCTION OF SOAPSTONE.

Calendar Year.	Tons.	Value.
1886.....	50	\$ 400
1887.....	100	800
1888.....	140	280
1889.....	195	1,170
1890.....	917	1,239
1891.....	Nil	Nil
1892.....	1,374	6,240
1893.....	717	1,920
1894.....	916	1,640
1895.....	475	2,138
1896.....	410	1,230
1897.....	157	350
1898.....	405	1,000
1899.....	450	1,960

TABLE 14.
MISCELLANEOUS.
IMPORTS OF TIN AND TINWARE.

MISCELLANEOUS.

Tin and Tinware.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$ 281,880	1890.....	1,289,756
1881.....	413,924	1891.....	1,206,918
1882.....	790,285	1892.....	1,594,205
1883.....	1,274,150	1893.....	1,242,994
1884.....	1,018,493	1894.....	1,310,389
1885.....	1,060,883	1895.....	973,397
1886.....	1,117,368	1896.....	1,237,684
1887.....	1,187,312	1897.....	1,274,108
1888.....	1,164,273	1898.....	1,550,851
1889.....	1,243,794		
		Duty.	
1899	Tin crystals.....	Free.	\$ 2,574
	Tin in blocks, pigs and bars.....	"	306,085
	Tin plates and sheets.....	"	927,036
	Tin foil.....	"	38,401
	Tin strip waste.....	"	3,216
	Tin and manufactures of :—		
	Tin plate in sheets, decorated.....	25 p. c.	857
	Tinware, plain, japanned, or lithographed, and all manufactures of tin, N.E.S.....	25 "	94,644
	Total.....		\$1,372,813

Tripolite :—Direct returns of the production of tripolite at the Nova Scotia deposits in 1899 were not received, but Dr. Gilpin, inspector of Mines for the province, has estimated the production of tripolite and silica at about 893 gross tons, or in round numbers say about 1,000 short tons. At an average value per ton of \$15 this output would approximate in value \$15,000. There has been a small production since 1896.

TABLE 15.
MISCELLANEOUS.
PRODUCTION OF TRIPOLITE.

Calendar Year.	Tons.	Value.
		\$
1896.....	664	9,960
1897.....	15	150
1898.....	1,017	16,660
1899.....	1,000	15,000

MISCELLANEOUS.

Whiting.

TABLE 16.
MISCELLANEOUS.
IMPORTS OF WHITING.

Fiscal Year.	Cwt.	Value.
1880.....	84,115	\$26,092
1881.....	47,480	16,637
1882.....	36,270	16,318
1883.....	76,012	29,334
1884.....	76,268	28,230
1885.....	67,441	23,492
1886.....	65,124	25,533
1887.....	47,246	15,191
1888.....	76,619	20,508
1889.....	84,658	22,735
1890.....	96,243	27,471
1891.....	84,679	27,504
1892.....	102,985	26,867
1893.....	88,835	25,563
1894.....	103,633	26,649
1895.....	102,751	25,441
1896.....	113,791	27,322
1897.....	102,453	22,541
1898.....	166,293	25,761
*1899.....	134,884	34,310

* Whiting or whitening, gilders' whiting and Paris white. Duty free.

Chalk.

TABLE 17.
MISCELLANEOUS.
IMPORTS OF CHALK.

Fiscal Year.	Value.
1880.....	\$2,117
1881.....	2,768
1882.....	2,882
1883.....	5,067
1884.....	2,589
1885.....	8,003
1886.....	6,583
1887.....	5,635
1888.....	5,865
1889.....	5,336
1890.....	7,221
1891.....	8,193
1892.....	9,558
1893.....	9,966
1894.....	11,308
1895.....	7,730
1896.....	6,467
1897.....	7,432
1898.....	9,338
*1899.....	10,461

* Chalk prepared. Duty 20 p. c.

Zinc.—The Grand Calumet Mining Company of Ottawa which in 1898 was working the blende and galena deposits on Calumet Island, Pontiac county, Quebec, transferred their operations in 1899 to the Zinc Zenith mine north of Nipigon Bay. Lake Superior, Ontario. MISCELLANEOUS.

This deposit has been known for many years. It was visited by Dr. Selwyn in 1895. At that time several hundred tons of ore had been raised but as there was no available road from the mine the ore was not shipped and nothing further appears to have been accomplished until last year.

The present owners shipped in 1899, 865 gross tons of ore averaging 42 per cent. zinc, yielding therefore about 407 tons of metallic zinc.

In 1898, the production of zinc from the Calumet mine was 394 tons.

TABLE 18.
MISCELLANEOUS.
IMPORTS OF ZINC IN BLOCKS, PIGS AND SHEETS.

Fiscal Year.	Cwt.	Value.
1880.....	13,805	\$67,881
1881.....	20,920	94,015
1882.....	15,021	76,631
1883.....	22,765	94,799
1884.....	18,945	77,373
1885.....	20,954	70,598
1886.....	23,146	85,599
1887.....	26,142	98,557
1888.....	16,407	65,827
1889.....	19,782	83,935
1890.....	18,236	92,530
1891.....	17,984	105,023
1892.....	21,881	127,302
1893.....	26,446	124,360
1894.....	20,774	90,680
1895.....	15,061	63,373
1896.....	20,223	80,784
1897.....	11,946	57,754
1898.....	35,148	112,785
1899... ..Duty free	18,785	107,477

MISCELLA-
NEOUS.

Zinc.

TABLE 19.
MISCELLANEOUS.
IMPORTS OF SPELTER..

Fiscal Year.	Cwt.	Value.
1880.....	1,073	\$ 5,310
1881.....	2,904	12,276
1882.....	1,654	7,779
1883.....	1,274	5,196
1884.....	2,239	10,417
1885.....	3,325	10,875
1886.....	5,432	18,238
1887.....	6,908	25,007
1888.....	7,772	29,762
1889.....	8,750	37,403
1890.....	14,570	71,122
1891.....	6,249	31,459
1892.....	13,909	62,550
1893.....	10,721	49,822
1894.....	8,423	35,615
1895.....	9,249	30,245
1896.....	10,897	40,548
1897.....	8,342	32,826
1898.....	2,794	13,561
1899*.....Duty free	5,450	29,687

* Spelter in blocks and pigs.

TABLE 20.
MISCELLANEOUS.
IMPORTS OF ZINC, MANUFACTURES OF.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$ 8,327	1890.....	6,472
1881.....	20,178	1891.....	7,178
1882.....	15,526	1892.....	7,563
1883.....	22,599	1893.....	7,464
1884.....	11,952	1894.....	6,193
1885.....	9,459	1895.....	5,581
1886.....	7,345	1896.....	6,290
1887.....	6,561	1897.....	5,145
1888.....	7,402	1898.....	10,503
1889.....	7,233		
		Duty.	
1899 { Zinc, seamless drawn tubing		Free.	\$ 5,037
" manufactures of, N.O.P.....		25 p. c.	9,624
Total.....			14,661

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