WIDENER
HN P2G2 %

Digitized by Google
Original from
HARVARD UNIVERSITY

Oc 4408.79.3

Bd. May, 1884.

The Gift of
the Colonial Museum.

8 Jan. 1884.

Digitized by Google
Original from
HARVARD UNIVERSITY

Digitized by Google
Original from
HARVARD UNIVERSITY

I, 1030

Colonial Museum and Geological Survey Department.

Bond

HANDBOOK

OF

NEW ZEALAND.

BY

JAMES HECTOR, M.D., C.M.G., F.R.S.,

DIRECTOR OF THE GEOLOGICAL SURVEY

WITH MAPS AND PLATES.

[THIRD EDITION, REVISED]

Wellington.
BY AUTHORITY: GEORGE DIDSBURY, GOVERNMENT PRINTER
1883.

Digitized by Google
Original from HARVARD UNIVERSITY

Digitized by Google
Original from
HARVARD UNIVERSITY

Account of Land in Cultivation and Agricultural Produce.—Seasons 1881 and 1882.

(From statistics collected in February.)

Provincial Districts.		Numbers of Holdings over 1 Acre in Extent.			Extent of Land broken up, but not under Crop.	In Wheat.		In Oats.			In Barley.		In Potatoes.		In Other Crops.	Total Number of Acres under Crop, exclusive of Land under Grasses.	In Sown Grasses.			
																	In Hay.			
		Freehold.	Rented.	Part Freehold, Part Rented.		Area.	Estimated Gross Produce (in bushels).	For Green Food or Hay.	For Grain.	Estimated Gross Produce of Grain (in bushels).	Area.	Estimated Gross Produce (in bushels).	Area.	Estimated Gross Produce (in tons).	Area.		Area.	Estimated Gross Produce (in tons).	In Grasses, after having been broken up (including such as in Hay).	Grass-sown Land not previously ploughed (including such as in Hay).
					Acres.	Acres.		Acres.	Acres.		Acres.		Acres.		Acres.	Acres.	Acres.		Acres.	Acres.
Auckland ...	1882	4,704	937	423	26,973	8,100	213,842	7,589	3,268	88,319	427	10,515	5,208	29,623	16,301	40,893	16,615	19,454	264,962	292,844
,, ...	1881	4,565	845	390	35,114	5,127	130,520	8,124	2,353	55,755	348	8,142	5,115	24,068	17,153	38,220	13,528	15,075	252,972	279,843
Taranaki ...	1882	943	249	139	1,351	2,960	76,771	375	1,975	60,019	94	2,363	644	3,154	3,008	9,056	2,703	4,212	35,419	93,002
,, ...	1881	722	261	139	2,294	2,103	48,068	467	1,230	36,495	168	3,910	644	2,646	2,558	7,170	2,357	3,368	30,800	84,127
Wellington ...	1882	2,142	913	334	5,027	12,013	278,884	2,369	8,902	259,150	640	18,484	1,537	9,750	7,808	33,269	7,353	11,084	121,475	750,426
,, ...	1881	1,868	774	278	15,385	11,550	239,193	1,974	7,365	174,056	731	18,424	1,758	8,908	4,796	28,174	5,649	7,702	106,305	666,240
Hawke's Bay ...	1882	683	267	132	10,484	1,608	44,503	957	3,947	88,582	296	7,252	840	5,037	2,672	10,320	9,720	14,349	103,514	579,233
,, ...	1881	647	210	112	14,530	2,008	43,297	997	2,911	60,409	517	17,682	864	5,051	2,788	10,085	6,813	8,853	94,622	566,802
Marlborough ...	1882	424	127	96	10,401	3,789	88,780	1,408	2,080	58,918	2,669	76,518	587	3,756	1,749	12,282	1,085	1,471	22,574	38,233
,, ...	1881	396	81	65	4,482	3,224	68,975	1,546	1,999	54,977	4,064	110,986	590	3,454	892	12,315	1,035	1,380	22,966	44,352
Nelson ...	1882	866	442	297	4,551	3,207	55,394	4,137	2,105	47,028	3,009	63,230	1,145	5,366	4,443	18,046	3,232	4,206	49,108	76,066
,, ...	1881	776	501	263	3,948	2,246	41,298	3,432	2,009	46,953	3,798	90,740	1,151	5,190	5,125	17,761	3,375	3,759	42,279	66,227
Westland ...	1882	229	69	21	82	2	32	411	10	233	2	4	247	824	343	1,015	208	229	3,503	6,286
,, ...	1881	150	87	20	1,308	5	...	465	1	30	5	...	214	622	201	891	265	150	2,604	7,594
Canterbury ...	1882	3,649	1,451	706	100,662	237,015	5,047,883	19,633	102,370	2,540,591	17,728	347,075	5,930	31,508	119,728	502,404	15,647	16,917	674,895	176,050
,, ...	1881	3,355	1,347	677	130,208	208,561	4,915,298	15,331	89,280	2,406,476	28,640	732,345	6,264	29,112	113,283	461,359	11,992	14,573	567,445	148,835
Otago ...	1882	4,092	1,377	586	89,021	97,021	2,491,801	24,552	118,730	3,782,008	4,943	138,652	6,402	32,872	123,550	375,178	11,860	17,168	496,425	154,054
,, ...	1881	3,447	1,514	657	86,203	90,125	2,661,148	18,851	107,882	4,056,810	8,607	239,047	5,953	26,974	110,378	341,796	9,083	13,919	448,577	124,359
Totals ...	1882	17,732	5,832	2,734	248,552	365,715	8,297,890	61,431	243,387	6,924,848	29,808	664,093	22,540	121,890	279,602	1,002,483	68,423	89,081	1,771,875	2,166,194
,, ...	1881	15,926	5,620	2,601	293,472	324,949	8,147,797	51,187	215,030	6,891,961	46,878	1,221,276	22,553	106,025	257,174	917,771	54,097	68,779	1,568,570	1,988,379
Increase in	1882	1,806	212	133	...	40,766	150,093	10,244	28,357	32,887	...	...	...	15,865	22,428	84,712	14,326	20,302	203,305	177,815
Decrease in	1882	...	...	...	44,920	...	...	...	...	...	17,070	557,183	13	...	...	...	...	...	...	...

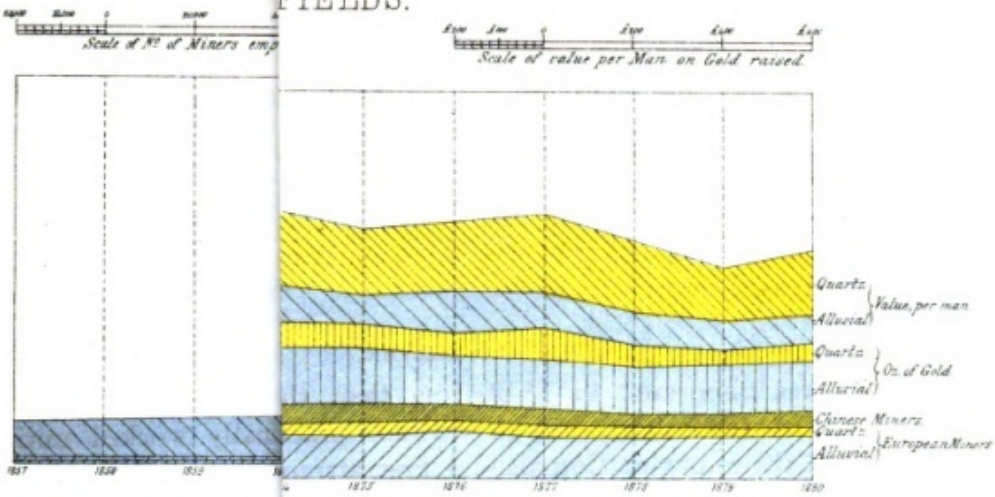
Digitized by Google
Original from HARVARD UNIVERSITY

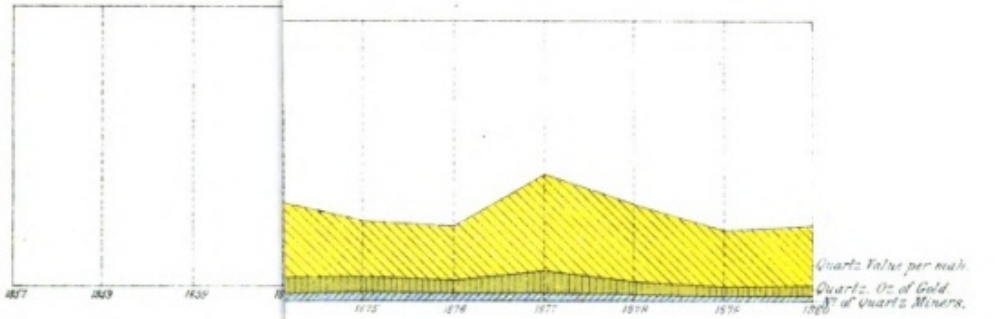
Working Coal Mines in New Zealand.

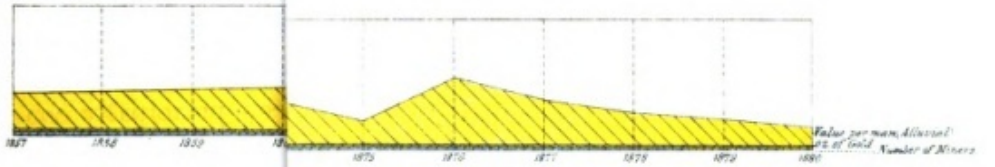
Number.	Name of Mine and Locality.	Number of Years working.	Quality of Coal.	Number of Seams worked.	Thickness of Seam.	Output for 1881.	
						Coal.	Slack.
					Feet.	Tons.	Tons.
	Kawakawa District.						
1	Kawakawa, Bay of Islands ...	17	semi-bit.	1	4′ to 15′	50,277	...
2	Kamo, near Whangarei ...	5	brown	1	5′ to 12′	10,178	...
3	Whauwhau, near Whangarei ...	17	brown	1	5′ to 9′	2,084	...
	Waikato District.						
4	Huntly, Taupiri	6	brown	2	6′ to 40′	20,334	...
5	Huntly, Kupakupa, Waikato ...	5	brown	1	10′ to 18′	7,860	...
	Pelorus District.						
1	Picton, Picton	1	...	...	...	75	...
2	Picton, Picton	1	...	...	...	...	...
	West Wanganui District.						
3	Wallsend, Collingwood ...	13	bitum.	2	27″ to 32″	nil	
	Westport District.						
4	Mokihinui, Mokihinui ...	1½	pitch	2	6½′ to 7′ 3½″	...	...
5	Koranui, Waimangaroa, Westport	1	bitum.	...	...	nil	
6	Banbury, Waimangaroa ...	3	bitum.	1	4′ 6″	21,693	2,505
7	Energetic, Reefton	6	pitch	1	10′ 2″	852	...
8	Golden Treasure, Reefton ...	10	pitch	1	6′	270	...
9	Lankey's Gully, Reefton ...	...	pitch	1	11′	310	...
10	Newcastle, Reefton	7	pitch	1	9′	nil	
11	Dudley, Reefton	8	pitch	1	21″	150	20
12	Golden Fleece, Reefton ...	11	pitch	1	16′	...	...
13	Dugan's, Reefton	...	pitch	2	23″, 1″ to 8″	200	70
14	Burke's, Reefton	...	pitch	1	10′	100	30
15	Brunner, Greymouth ...	17	bitum.	1	12′ to 16′	25,436	6,045
16	Coal-Pit Heath, Greymouth ...	5	bitum.	1	16′	13,957	1,912
	Greymouth District.						
17	Wallsend, Greymouth ...	5	bitum.	1	16′	nil	
18	Wallsend No. 2, Greymouth ...	5	bitum.	1	17′	3,000	369
	Malvern District.						
19	Springfield, Springfield ...	2	brown	2	4′, 7′ 6″	11,127	801
20	Smithfield, Springfield ...	1	brown	3	4′, 1′, 2′ 3″	1,200	...
21	Kowai Pass, Springfield ...	2½	brown	3	19″, 9″, 18″	693	...
22	Canterbury, Sheffield	19	brown	2	2′ each	2,514	40
23	Homebush, South Malvern ...	9	brown	2	3′, 7′	5,763	260
24	Hart's, South Malvern ...	...	altered brown	3	18″, 18″, 22″	350	
25	Wallsend, South Malvern ...	5	brown	3	3′ each	nil	
26	Brockley, South Malvern ...	2½	alt. brn.	1	3′ 6″	2,480	...
27	Dudley, South Malvern ...	¼	...	5	thin	nil	
28	Rockwood, South Malvern ...	1	alt. brn.	1	9″	nil	
29	Lee's, South Malvern	1	brown	1	6′	100	...
30	Mount Somers, Mount Somers ...	16	brown	1	25′	...	...
	Timaru District.						
31	Kakahu, Geraldine	1½	brown	1	8′		
	Otago District.						
32	Wharekuri, Wharekuri ...	15	brown	1	25′	300	...
33	Kurow, Kurow	2	brown	1	8′	205	40
34	Prince Alfred No. 1, Oamaru ...	...	brown	2	9′	925	...
35	Prince Alfred No. 2, Oamaru ...	5	brown	2	9′	1,760	...

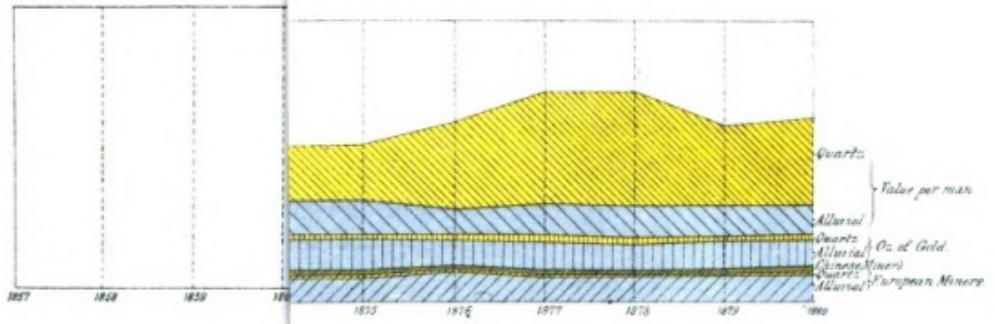
Digitized by Google Original from HARVARD UNIVERSITY

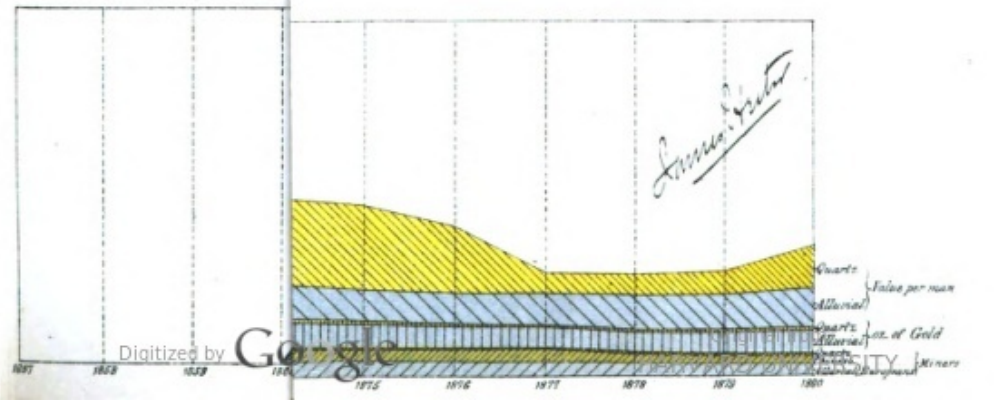
FIELDS.











Digitized by Google

Ironsands.

The following tabular statement gives a particular account of ironsands :—

IRONSANDS OF NEW ZEALAND.

Locality.	Matrix whence probably derived.	Magnetite.	Hæmatite.	Titanite.	Percentage of Iron.	Other Minerals present.
Upper Buller River, Nelson ...	Hornblende rocks	87·5	9·4	...	70·2	
Lower Buller River, Nelson ...	Tertiary gold-drift of diorite slate ...	54·0	...	42·3	59·0	Auriferous.
Upper Molyneux River, Otago ...	Mica-schist	82·7	...	9·7	65·9	Auriferous.
Lower Molyneux River, Otago ...	Mica-schist and Tertiary strata ...	74·4	...	2·5	58·7	Auriferous and with 12 per cent. of glauconite.
Mountain stream, Canterbury ...	Palæozoic slates...	62·7	37·2	...	66·2	
Mountain stream, Otago	Palæozoic slates...	86·1	10·5	...	58·5	Auriferous.
Tuapeka, Otago	Old gold drift	2·2	92·8	...	63·8	Auriferous.
Wakatipu, Otago	Mica-schist	80·0	7·6	...	52·9	Auriferous.
Mataura River (Upper)	Diorite slate	9·8	...	70·9	41·2	
Mataura River	Old gold drift	63·5	16·1	8·0	60·6	
Stewart Island	Granitic rocks with greenstone dykes	77·8	...	20·1	57·3	Auriferous.
Stewart Island	Hornblende rocks	71·5	20·0	8·2	70·1	Auriferous.
Anatoke, Nelson	Granite and hornblende	79·8	7·7	3·4	60·2	Auriferous.
Mahinapua Lake (old channel of Hokitika)	River drift from diorite rocks ...	...	...	58·0	29·1	Auriferous, with garnets, topaz, disthene, &c.
Sea-beach, Hokitika	Sea-sand drift	75·0			54·0	Auriferous.
Motueka River, Nelson	Tertiary strata and granite ...	33·0	32·5		42·0	Auriferous.
Wairau River, Marlborough ...	Tertiary strata and granite-schist ...	21·0	48·4		38·9	Auriferous.
Wanganui River, Nelson	Granite and Tertiary	54·0	13·0		43·2	Auriferous.
Saddle Hill, Otago	Basaltic	58·3	...	25·6	52·9	
Green Island, Otago	Basaltic or sea-beach	53·3	...	29·6	50·3	
Hooper Inlet	Basaltic or sea-beach	20·0	74·2		53·0	
West Bluff, Southland, Foveaux Strait	Diorite or sea-beach	12·2	...	40·6	28·6	Auriferous and platiniferous.
D'Urville Island, Nelson	Diabase and granite	78·6	...	...	57·4	Chrome iron.
Taranaki beach	Trachyte	91·9	...	6·2	70·1	
Taranaki beach	Trachyte	71·0	...	8·0	56·1	Olivine and hornblende.
Tauranga beach	Trachyte	87·4	8·6	...	68·0	

Digitized by Google
Original from HARVARD UNIVERSITY

depositors in the Post-Office Savings-Banks amounted to £1,232,788
At the credit of depositors of other savings-banks ... £316,727

£1,549,515

This amount is equal to £3 1s. 10d. per head of the European population at the same date, as against £2 11s. 7d. for 1878.

These figures are valuable, as giving an indication of the prosperity of the working-classes; but there is a very large amount of savings constantly being invested in building societies, and as constantly being withdrawn for the purchase or erection of dwellings, of which no official record exists.

In No. VII. of the statistical diagrams at the end of this book will be found an interesting representation of the fluctuations in the rate of savings in New Zealand, in comparison with the rates of the Australian Colonies, during the years 1868–81, and with the average rate in Europe for the year 1877.

TRADE, INDUSTRIES, PRODUCTIONS, ETC.

Imports and Exports.

The following table exhibits the rapid growth of the import and export trade of New Zealand, from the date of the colony being established to 1881, inclusive:—

Period.	Imports.	Exports, the Produce of the Colony.
	£	£
1841–45, average for 4 years	139,000	33,000
1845–49 „ 5 „	193,000	77,000
1853–55 „ 3 „	766,000	330,000
1856–60 „ 5 „	1,188,000	438,000
1861–65 „ 5 „	5,352,000	2,718,000
1866–70 „ 5 „	5,168,000	4,335,000
1871–75 „ 5 „	6,367,000	5,276,000
1876–77 „ 2 „	6,939,000	5,783,000
1878	8,755,663	6,015,700
1879	8,374,585	5,743,126
1880	6,162,011	6,352,692
1881	7,457,045	6,060,866

The great bound exhibited in the above table, as taking place in the quinquennial period 1861–65, was caused by the gold discoveries. The first considerable export of this metal occurred in 1861, the value being £752,657, increasing in the following year to £1,591,389, and the year subsequent, 1863, to £2,431,723. A more than corresponding large increase in the imports took place in the same period, due

Digitized by Google Original from HARVARD UNIVERSITY

Mineral Exports from 1853 to 1881, inclusive.

Year.	Coal.		Copper.*		Iron.		Chrome Ore.		Silver.		Gold.	
	Amount.	Value.	Amount.	Value.	Amount.	Value.	Amount.	Value.	Amount.	Value.	Amount.	Value.
	Tons.	£	Tons.	£	Tons.	£	Tons.	£	Oz.	£	Oz.	£
1853	41	114	170	1,750	18	254	...	...	...	...	...	...
1854	...	...	302	3,450	9½	137	...	...	...	...	...	...
1855	94	266	140½	3,800	1½	20	...	...	...	...	...	...
1856	...	...	514	11,418	65½	520	...	...	...	...	...	...
1857	3	9	1½	70	...	...	...	...	...	...	10,297	39,904
1858	2	4	351¼	5,000	...	...	3	25	...	...	13,533	52,443
1859	...	...	245	2,605	...	...	8	120	...	...	7,336	28,427
1860	1	2	137	1,590	...	...	116	1,440	...	...	4,538	17,585
1861	...	...	110	1,300	...	...	52	520	...	...	194,234	752,657
1862	...	...	51	1,024	...	...	3,483	24,719	...	...	410,862	1,591,389
1863	...	...	...	...	...	...	595	4,318	...	...	628,646	2,432,479
1864	...	...	...	...	105	52	768	4,910	...	...	479,914	1,855,830
1865	..	...	...	...	...	...	...	...	...	...	574,574	2,252,689
1866	261	400	...	...	...	...	281	1,315	...	...	735,376	2,897,412
1867	973	1,228	246	2,700	...	...	...	...	...	...	686,753	2,724,276
1868	1,027	1,210	84	977	7	80	...	...	...	...	637,474	2,492,793
1869	756	800	7	179	1	3	...	...	11,063	2,993	614,281	2,362,995
1870	1,672	1,508	7	120	...	...	...	...	37,123	11,380	544,857	2,163,910
1871	1,695	1,612	...	...	...	...	...	...	80,272	23,145	730,023	2,788,368
1872	990	855	...	...	...	...	...	...	37,064	9,910	445,370	1,730,992
1873	724	655	...	...	...	...	...	...	36,187	9,850	505,337	1,987,125
1874	1,463	1,363	...	...	...	...	...	...	40,566	10,380	376,388	1,505,331
1875	3,385	3,129	...	...	...	...	...	...	29,085	7,560	355,322	1,407,769
1876	1,854	1,954	...	...	...	...	...	...	12,683	3,171	318,367	1,268,599
1877	2,658	2,071	...	...	...	...	...	...	33,893	7,556	366,955	1,476,312
1878	6,362	5,139	4	234	...	...	...	...	23,019	5,755	311,437	1,244,190
1879	7,144	6,187	...	...	...	...	...	...	20,645	4,512	284,100	1,134,641
1880	7,020	5,977	...	...	...	...	...	...	20,005	4,500	303,215	1,220,263
1881	6,621	5,610	...	...	...	...	...	...	18,885	4,236	250,683	996,867

Value of Principal Articles of Export from 1869 to 1881.

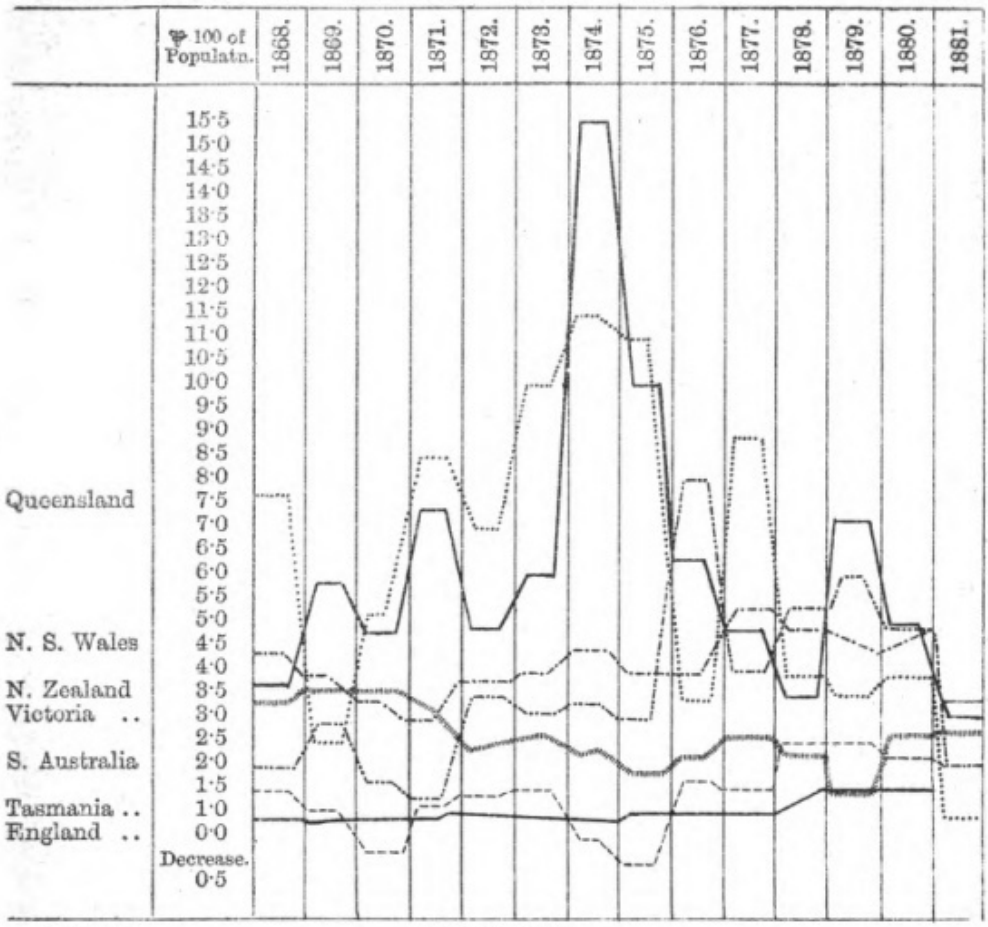
Year.	Wool.	Gold.	Produce.	Tallow.	Kauri Gum.	Timber.
	£	£	£	£	£	£
1869	1,371,230	2,341,592	142,647	13,935	111,307	22,338
1870	1,703,944	2,163,910	184,513	75,583	175,074	18,509
1871	1,606,144	2,788,368	206,333	67,208	167,958	21,079
1872	2,537,919	1,730,992	371,887	68,788	154,167	26,718
1873	2,702,471	1,987,425	328,875	67,118	85,116	44,039
1874	2,834,695	1,505,331	432,924	65,366	79,986	44,450
1875	3,398,155	1,407,770	262,942	55,865	138,523	40,046
1876	3,395,816	1,268,599	399,374	109,896	109,234	49,847
1877	3,658,938	1,476,312	433,741	156,552	118,348	50,901
1878	3,292,807	1,244,192	528,109	178,502	132,975	39,074
1879	3,126,439	1,134,641	763,310	145,595	147,535	35,735
1880	3,169,300	1,220,263	1,009,260	146,535	242,817	51,225
1881	2,909,760	996,867	1,114,253	120,611	253,778	71,328

The very slight increase in the imports from the Australian Colonies is accounted for by a falling-off of £123,338 in the imports from New South Wales, and of £24,531 in the imports from South Australia. The imports from Victoria and Tasmania, however, show an increase of £161,433 and £14,231 respectively, which more than counterbalances the deficiency.

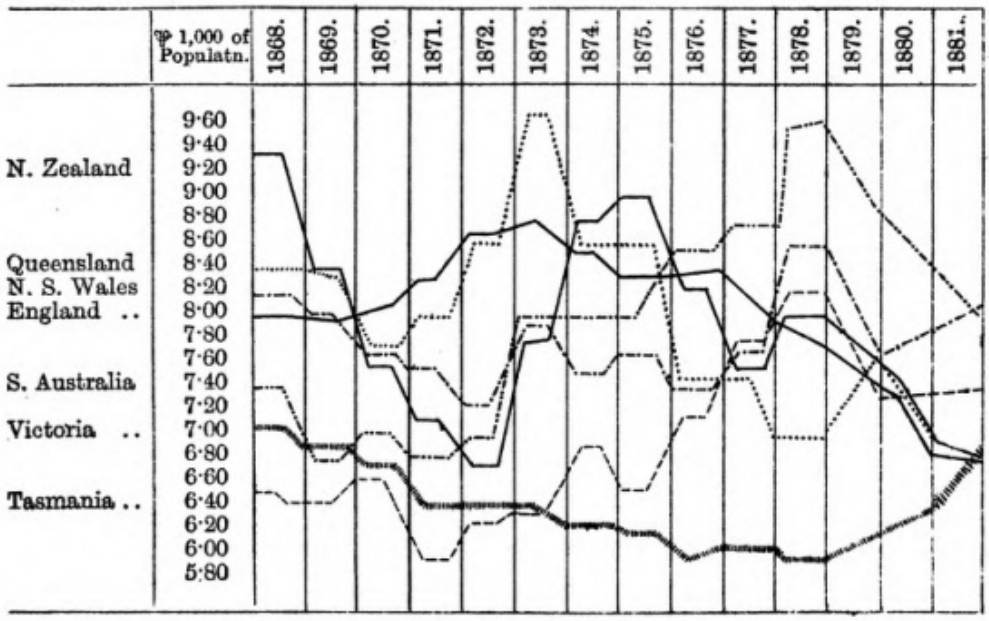
* Approximate return for period prior to 1853, 2,400 tons, £70,000.

Digitized by Google Original from HARVARD UNIVERSITY

No. I. INCREASE OF POPULATION.



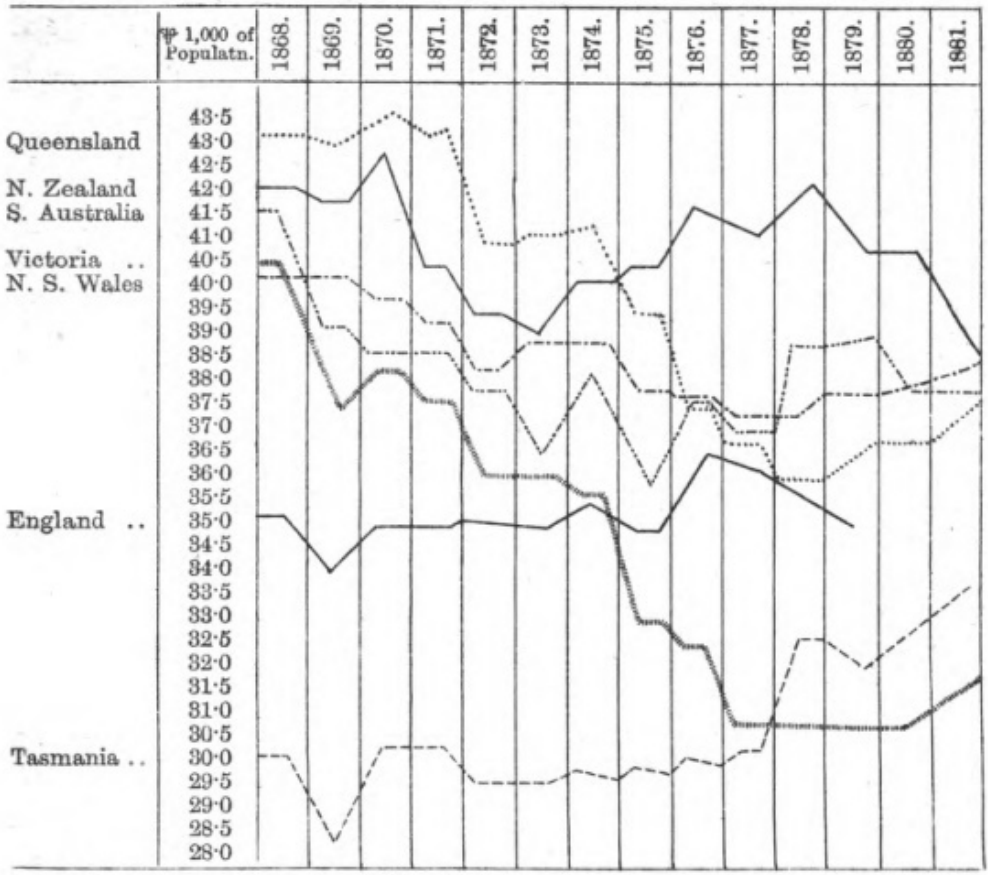
No. II. MARRIAGES.



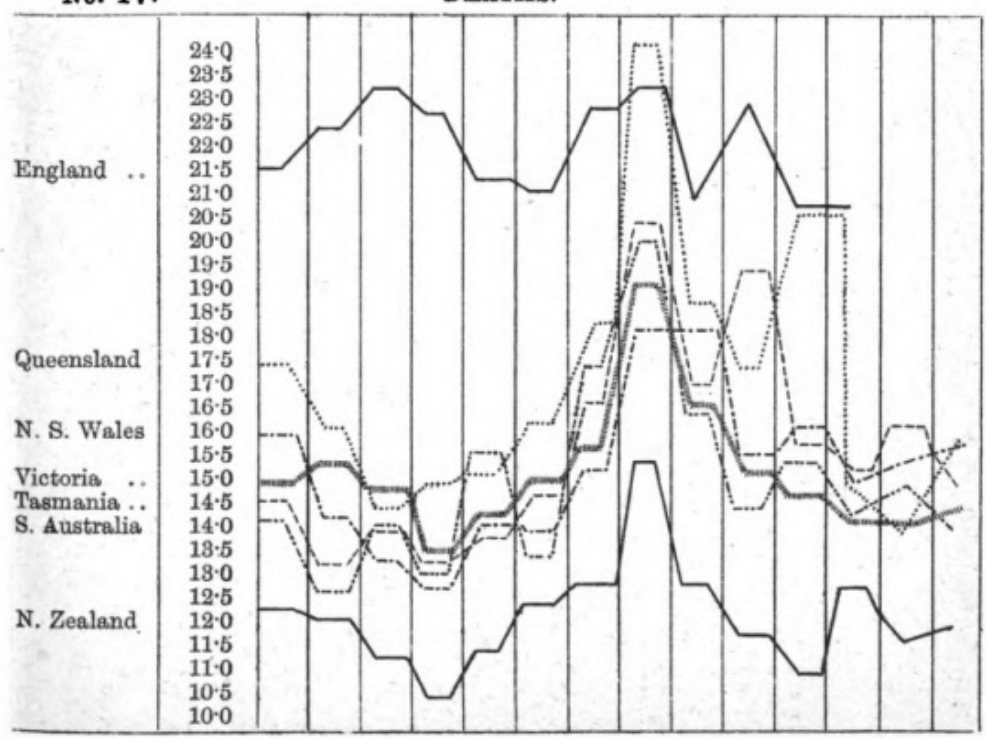
Digitized by Google

Original from
HARVARD UNIVERSITY

No. III. BIRTHS.

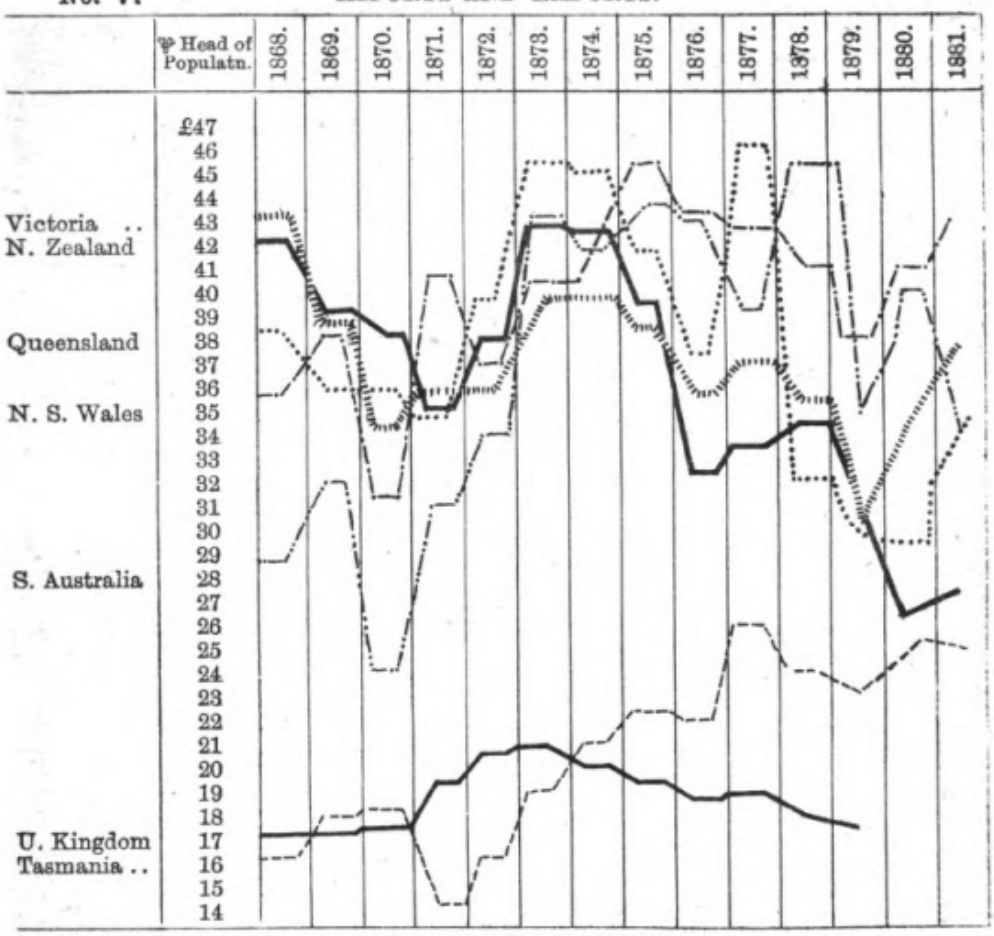


No. IV. DEATHS.

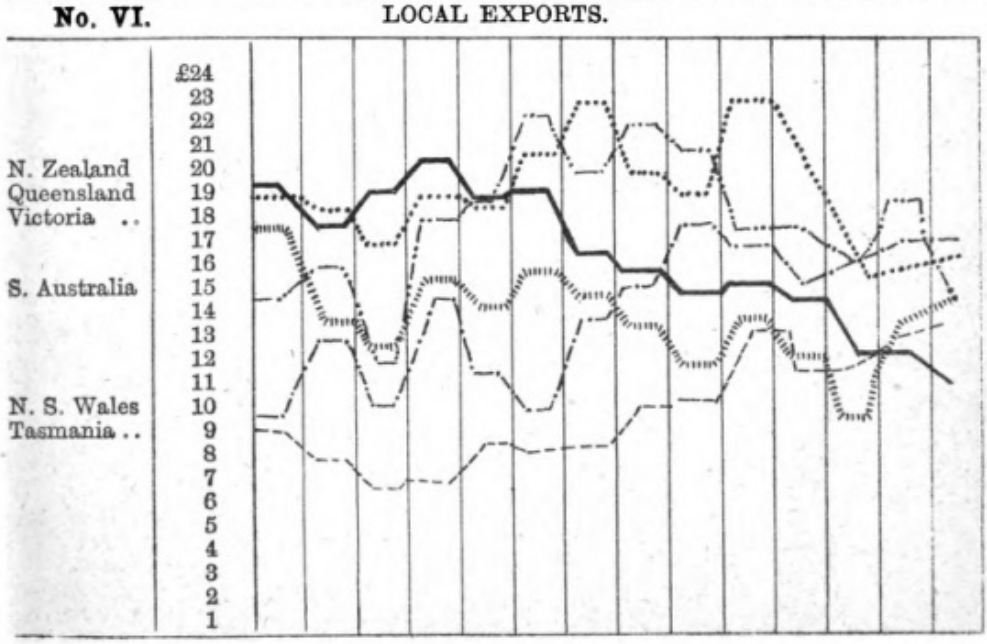


Digitized by Google
Original from HARVARD UNIVERSITY

No. V. IMPORTS AND EXPORTS.

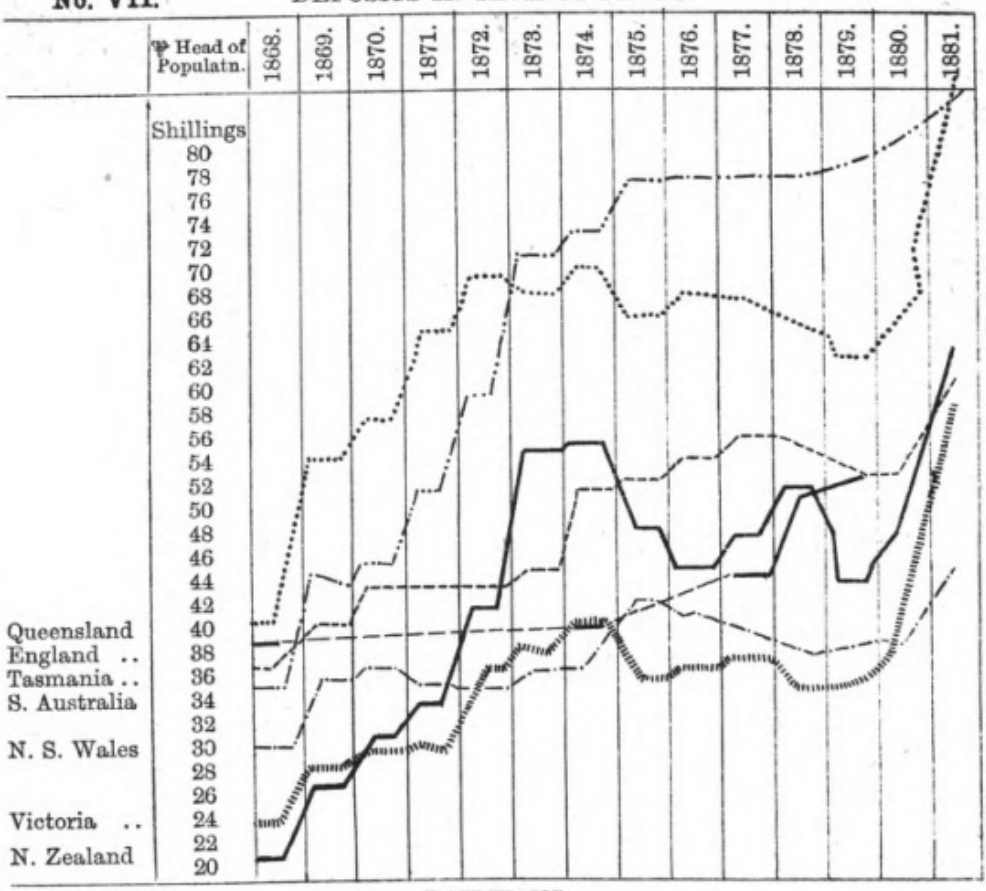


No. VI. LOCAL EXPORTS.

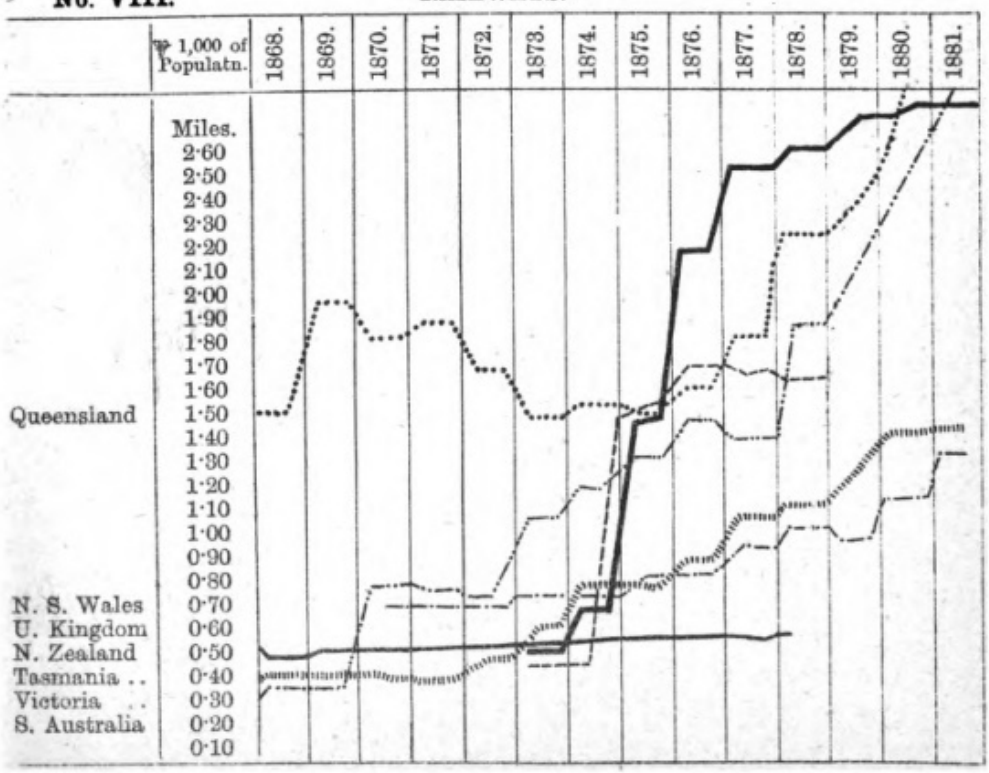


Digitized by Google
Original from
HARVARD UNIVERSITY

No. VII. DEPOSITS IN SAVINGS BANKS.

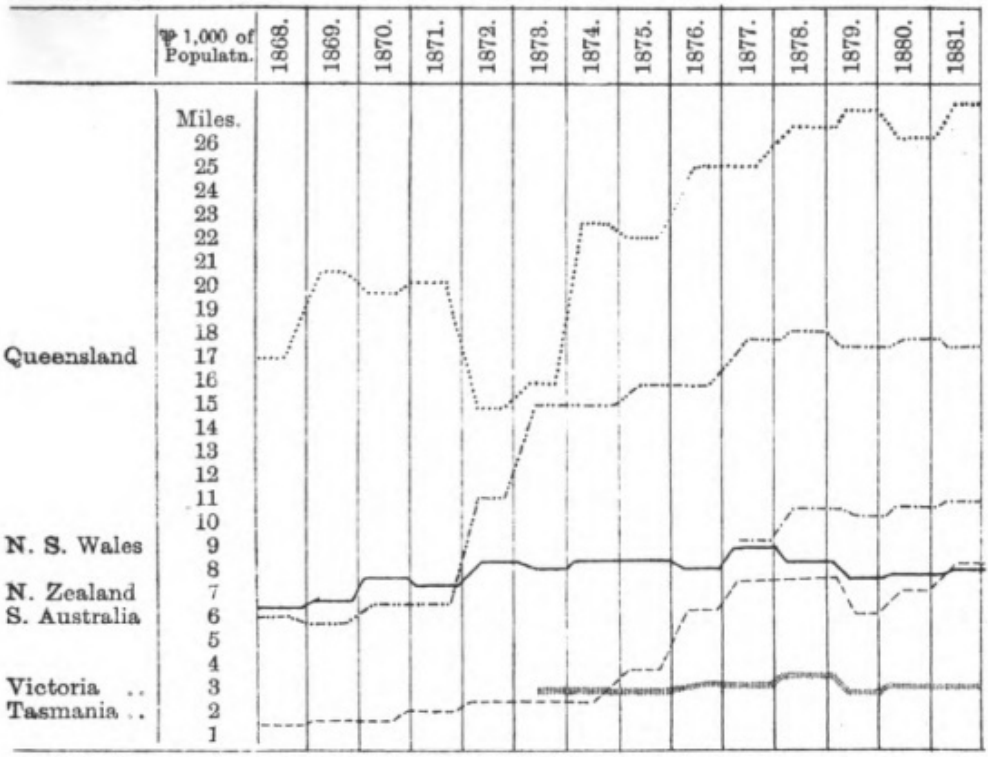


No. VIII. RAILWAYS.

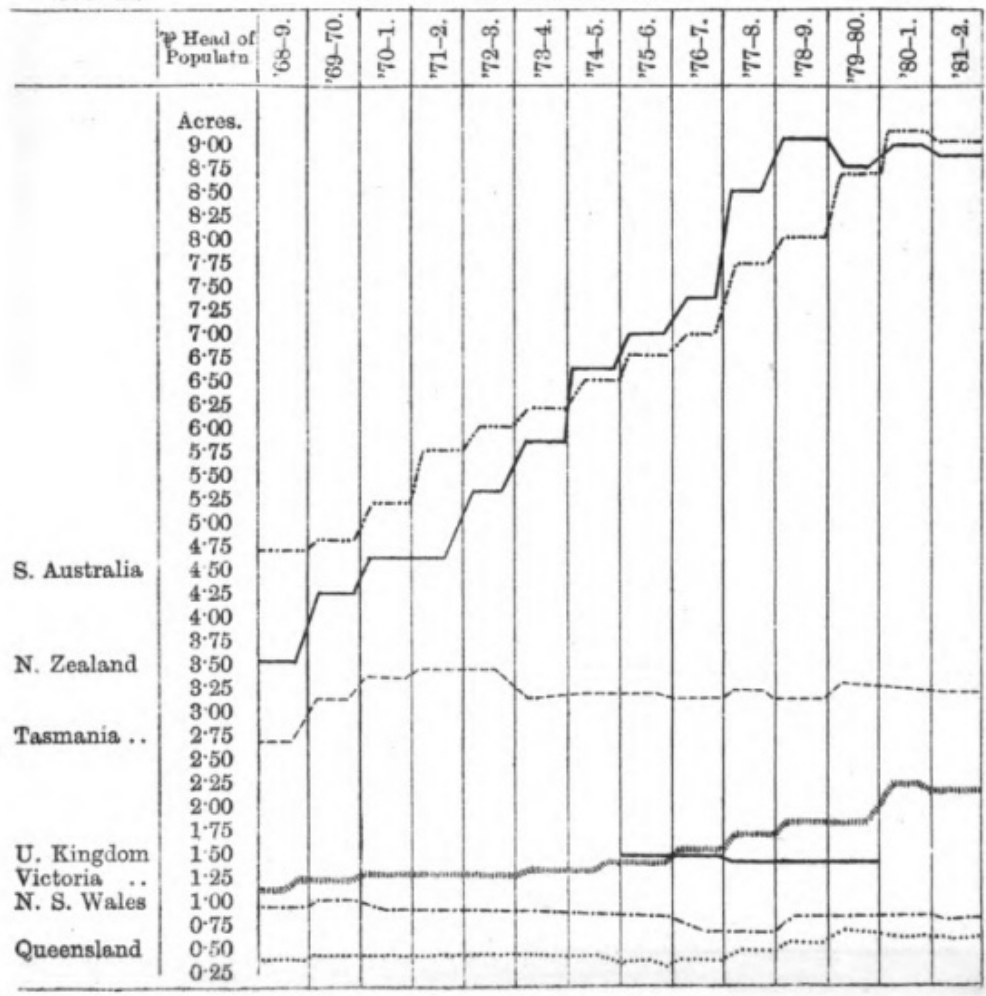


Digitized by Google
Original from
HARVARD UNIVERSITY

No. IX. **TELEGRAPHS.**

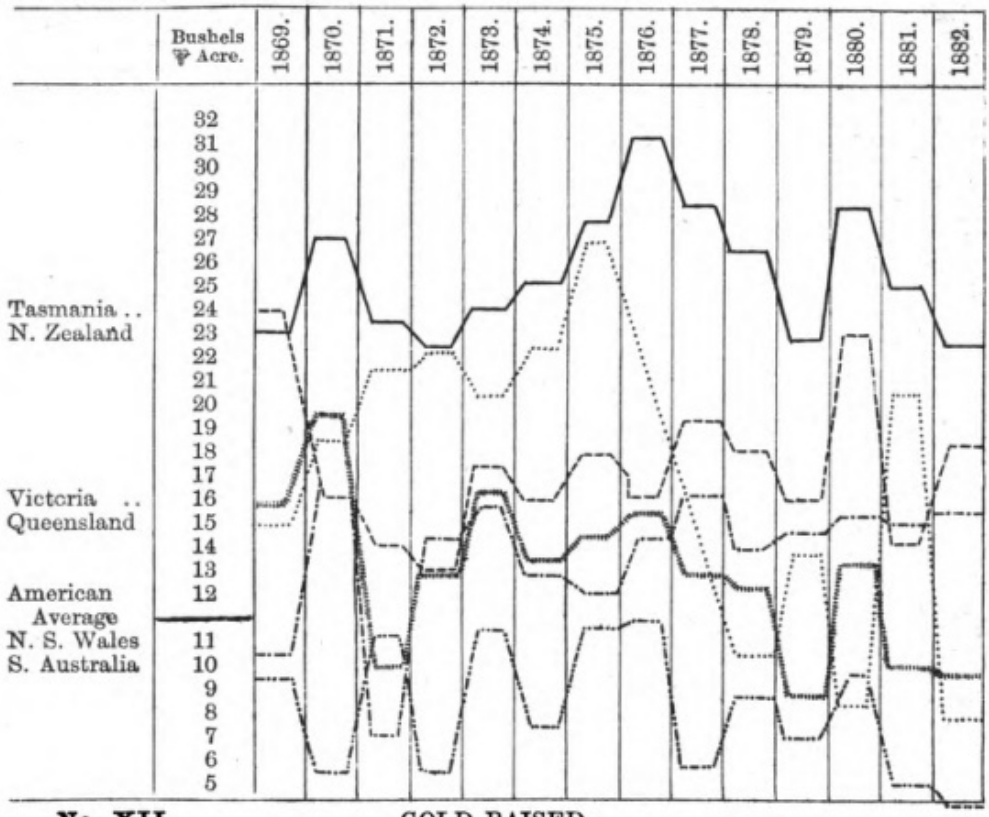


No. X. **LAND IN CULTIVATION.**

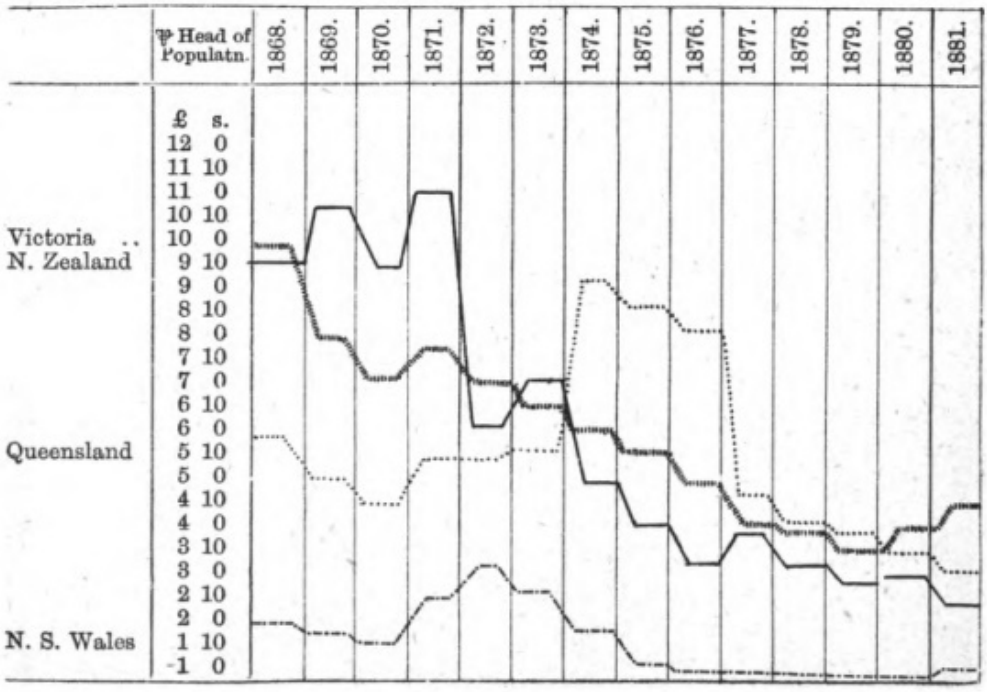


Digitized by Google
Original from
HARVARD UNIVERSITY

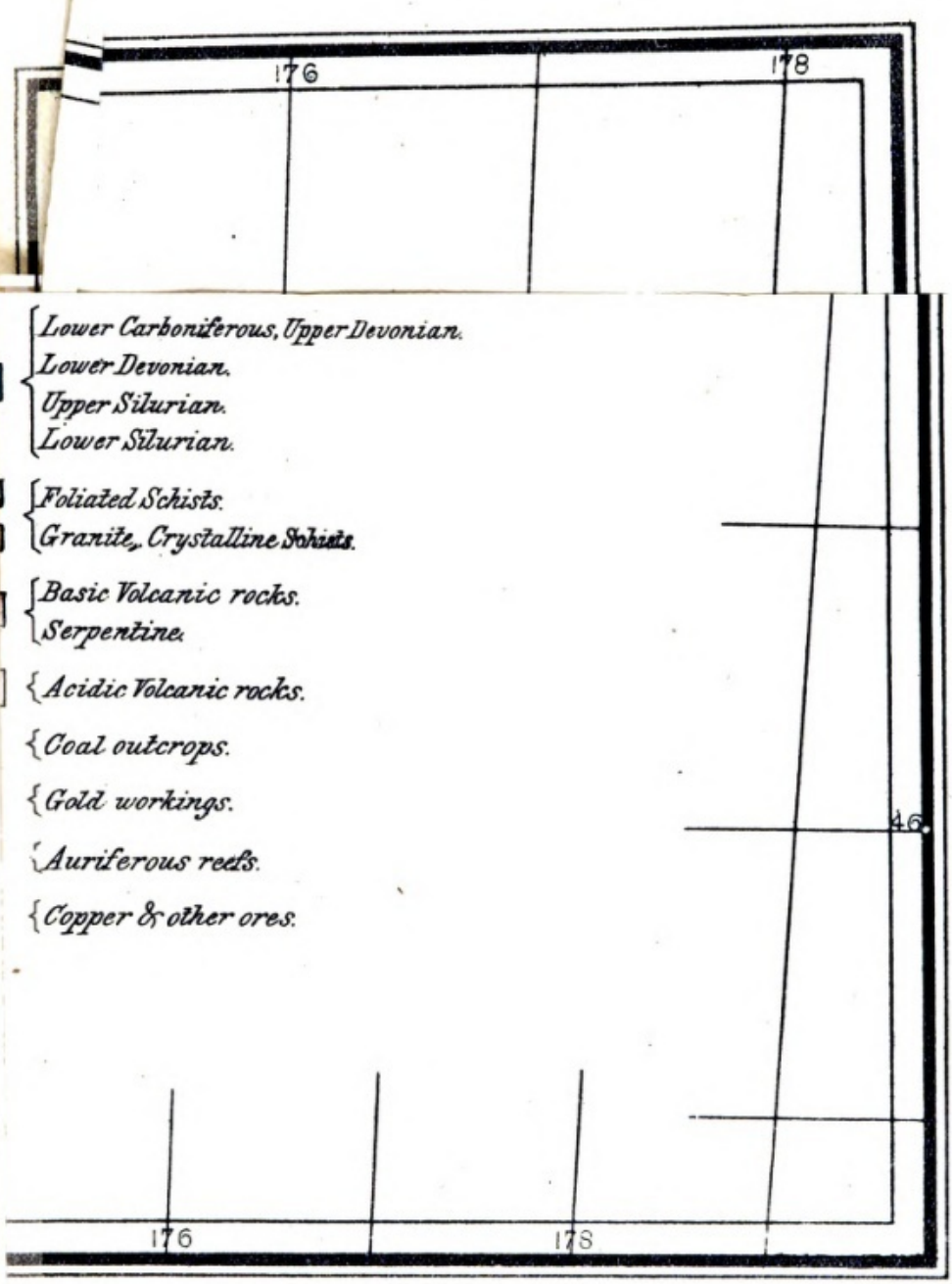
No. XI. AVERAGE YIELD OF WHEAT.



No. XII. GOLD RAISED.



Digitized by Google
Original from HARVARD UNIVERSITY



Digitized by Google
Original from
HARVARD UNIVERSITY

Digitized by Google

Original from
HARVARD UNIVERSITY

Digitized by Google
Original from
HARVARD UNIVERSITY

Digitized by Google
Original from
HARVARD UNIVERSITY

Digitized by Google
Original from
HARVARD UNIVERSITY

Digitized by Google
Original from
HARVARD UNIVERSITY