61ST CONGRESS, 2d Session } HOUSE OF REPRESENTATIVES { DOCUMENT No. 144

REPORT OF

Director of the Mint

Upon the Production of the Precious Metals in the United States

DURING THE CALENDAR YEAR

1908

WASHINGTON
GOVERNMENT PRINTING OFFICE
1910

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

TREASURY DEPARTMENT,

Document No. 2570.

Director of the Mint.

2

JUL 12 1911
D. OF D.

CONTENTS.

LETTER OF TRANSMITTAL.

TREASURY DEPARTMENT,
OFFICE OF DIRECTOR OF THE MINT,
Washington, January 10, 1910.

SIR: I have the honor to transmit herewith the report on the production of gold and silver in the United States and the world for the calendar year 1908, together with such information as to their distribution, coinage, and consumption as this Bureau has been able to gather. The returns for the United States have been secured through officials of the Mint Service and the United States Geological Survey. The aggregate of precious metals reported have been traced from production to market. The figures are therefore conservative, but are believed to be correct. The statistics for foreign countries are obtained from official sources wherever governmental calculations are made, and where such returns can not be had the best obtainable estimates are given and the authority stated.

Respectfully,

A. PIATT ANDREW,
Director of the Mint.

The SECRETARY OF THE TREASURY.

PART I.

PRODUCTION, EMPLOYMENT, AND MOVEMENT OF GOLD AND SILVER IN THE UNITED STATES, AND SURVEY OF THE WORLD'S PRODUCTION OF GOLD AND SILVER IN 1908.

REPORT ON THE PRODUCTION OF THE PRECIOUS METALS IN THE UNITED STATES DURING THE CALENDAR YEAR 1908.

The examination and analysis of reports from private refineries and the records of the mints and assay offices show that the mines of the United States in 1908 produced 4,574,340 fine ounces of gold of the value of $94,560,000, and the production of silver was 52,440,800 fine ounces with the commercial value (at the average price of silver for the year $0.5349) of $28,050,600. The yield of gold as compared with that for the year 1907 shows an increase of $4,124,300 and a decrease in the silver product of 4,073,900 fine ounces. Of the 23 States and Territories producing gold 9 show an increase of production, while 14 show a decrease. Of the 26 States and Territories producing silver 13 show an increase and 13 a decrease.

SUMMARY OF THE PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES DURING THE CALENDAR YEAR 1908.

Alaska.—This Territory produced in 1908 gold of the value of $19,858,800, as against $18,489,400 in 1907. There was a decrease in the output of the Nome district, but this was overcome by an increase in the Fairbanks and other districts to such an extent as to show an increase over the total product of this Territory for 1907 of $1,369,400.

Arizona.—The value of the gold derived from the mines of Arizona during the calendar year 1908 was $2,500,000, a loss as compared with 1907 of $164,000. The yield of silver in 1908 amounted to 2,900,000 fine ounces, having a commercial value of $1,551,200.

California.—The value of the gold product of the mines of California is placed at $19,329,700. The yield of silver was 1,703,700 fine ounces of the commercial value of $911,300. As compared with the figures for 1907 there was an increase of $2,476,200 in the gold output. The silver product increased by 113,700 fine ounces.

Colorado.—The gold product for 1908 in the State of Colorado was $22,871,000. The silver product was 10,150,200 fine ounces of the commercial value of $5,429,400. As compared with the product for 1907 there was an increase in the gold of $1,973,400, while the silver product as compared with that of 1907 showed a decline of 1,345,200 fine ounces.

Idaho.—In 1908 the value of the gold product of the mines of this State was $1,443,500. The silver output was 7,558,300 fine ounces of the commercial value of $4,042,900. There was an increase in the gold output of $187,600, and a decrease in the silver product of 330,100 fine ounces.

Montana.—In this State there was a decrease in the product of gold in 1908 as compared with 1907. The value of the gold for 1908 was $3,160,000, while for 1907 it was $3,472,600, showing a decrease of $312,600 in 1908. The yield of silver for 1908 was 10,356,200 fine ounces, while for 1907 the silver yield aggregated 11,129,600 fine ounces, showing a decrease in 1908 of 773,400 fine ounces.

Nevada.—Compared with 1907 there was a loss in the State of Nevada in the production of gold. In 1907 the gold product was $15,411,000, while in 1908 it was $11,689,400, showing a decrease of $3,721,600. The yield of silver by the mines of Nevada for the year 1908 was 9,508,500 fine ounces, showing a gain in 1908 of 1,228,000 fine ounces.

New Mexico.—The gold product of New Mexico for 1908 was $306,300, as against $330,000 in 1907, showing a decrease of $23,700. The silver output by the mines of New Mexico for 1908 was 400,900 fine ounces, as against 599,500 in 1907, showing a loss of 198,600 fine ounces.

Oregon.—There was a decrease in the product of gold by the mines of this State for 1908 as compared with 1907 of $316,300, the product of 1907 having been $1,222,200, as against $905,900 for 1908. A number of the largest quartz mines of this State were not operated to any extent during the calendar year 1908.

South Dakota.—In 1908 South Dakota's output of gold was $7,742,200 and for 1907 $4,138,200, showing an increase in 1908 of $3,604,000. The silver product of this State in 1908 was 197,300 fine ounces, as against 106,600 fine ounces for 1907, showing an increase of 90,700 fine ounces in 1908.

South Appalachian States.—This region produced only a small amount of the precious metals in 1908. The yield of gold was 12,379 ounces of the value of $255,900.

Philippine Islands.—In 1907 the gold yield of the Philippine Islands was $64,700 and in 1908 the product was $284,500, showing an increase of $219,800.

The approximate distribution of gold and silver by producing States and Territories for the calendar year 1908 is shown in the following table:

PRODUCT OF GOLD IN THE SEVERAL STATES AND TERRITORIES IN 1907 AND 1908, WITH THE INCREASE AND DECREASE OF EACH IN THE LATTER YEAR.

State or Territory.	Value.		Increase.	Decrease.
	1907.	1908.		
Alabama	$27,400	$41,200	$13,800	
Alaska	18,489,400	19,858,800	1,369,400	
Arizona	2,664,000	2,500,000		$164,000
California	16,853,500	19,329,700	2,476,200	
Colorado	20,897,600	22,871,000	1,973,400	
Georgia	64,800	56,200		8,600
Idaho	1,255,900	1,443,500	187,600	
Montana	3,472,600	3,160,000		312,600
Nevada	15,411,000	11,689,400		3,721,600
New Hampshire		3,700	3,700	
New Mexico	330,000	306,300		23,700
North Carolina	78,700	97,500	18,800	
Oregon	1,222,200	905,900		316,300
Philippine Islands	64,700	284,500	219,800	
Porto Rico	1,200	600		600
South Carolina	58,100	53,700		4,400
South Dakota	4,138,200	7,742,200	3,604,000	
Tennessee	3,800	3,700		100
Texas	1,000	500		500
Utah	5,121,600	3,946,700		1,174,900
Virginia	8,300	3,600		4,700
Washington	262,300	253,700		8,600
Wyoming	9,400	7,600		1,800
Total	90,435,700	94,560,000	9,866,700	5,742,400
Net increase			4,124,300	

PRODUCT OF SILVER IN THE SEVERAL STATES AND TERRITORIES IN 1907 AND 1908, WITH THE INCREASE AND DECREASE OF EACH IN THE LATTER YEAR.

State or Territory.	Weight.		Increase.	Decrease.
	1907.	1908.		
	Fine ounces.	*Fine ounces.*	*Fine ounces.*	*Fine ounces.*
Alabama	600	400		200
Alaska	179,300	204,600	25,300	
Arizona	2,903,100	2,900,000		3,100
California	1,590,000	1,703,700	113,700	
Colorado	11,495,400	10,150,200		1,345,200
Georgia	700	200		500
Idaho	7,888,400	7,558,300		330,100
Illinois	2,900	2,000		900
Michigan	331,300	294,100		37,200
Missouri	25,300	49,400	24,100	
Montana	11,129,600	10,356,200		773,400
Nevada	8,280,500	9,508,500	1,228,000	
New Hampshire		6,300	6,300	
New Mexico	599,500	400,900		198,600
North Carolina	25,200	1,300		23,900
Oregon	96,000	56,100		39,900
Philippine Islands	100	1,300	1,200	
South Carolina	100	200	100	
South Dakota	106,600	197,300	90,700	
Tennessee	58,300	60,900	2,600	
Texas	305,300	447,000	141,700	
Utah	11,406,900	8,451,300		2,955,600
Vermont	3,800			3,800
Virginia	200	300	100	
Washington	84,000	86,800	2,800	
Wyoming	1,600	3,500	1,900	
Total	56,514,700	52,440,800	1,638,500	5,712,400
Net decrease				4,073,900

APPROXIMATE GOLD PRODUCT OF THE UNITED STATES DURING THE CALENDAR YEAR 1908.

Item.	Gold.
	Fine ounces.
Domestic product in fine bars reported by private refineries	2,152,383
Unrefined gold of domestic production deposited at the mints and assay offices	2,401,967
Domestic gold contained in ores, copper matte, etc., exported for reduction	19,990
Total domestic product for 1908	4,574,340

APPROXIMATE DISPOSITION OF THE GOLD PRODUCT OF THE UNITED STATES DURING THE CALENDAR YEAR 1908.

Item.		Gold.
		Fine ounces.
Product of private refineries deposited at United States mints and assay offices		3,235,208
Product of private refineries exported as per custom-house returns		22,573
Product of private refineries sold for use in the arts		12,600
Domestic gold in ores, copper matte, etc., exported for reduction (custom-house returns)		19,990
Deposits of unrefined bullion at United States mints and assay offices		2,401,967
Total		5,692,338
Deduct:	*Fine ounces.*	
Bullion reported by domestic private refineries as contained in their product but derived from foreign ores	892,138	
Bullion reported by domestic private refineries as from old material	200,884	
Difference in balances of domestic private refineries January 1 and December 31, 1908	26,017	
		1,119,039
Total disposition of domestic product		4,573,299

Approximate Silver Product of the United States During the Calendar Year 1908.

Item.	Silver.
	Fine ounces.
Domestic product of fine bars reported by private refineries	51,395,694
Unrefined silver of domestic production deposited at the mints and assay offices	997,649
Domestic silver contained in ores, copper matte, etc., exported for reduction	47,433
Total domestic product for 1908	52,440,776

Approximate Disposition of the Silver Product of the United States During the Calendar Year 1908.

Item.		Silver.
		Fine ounces.
Product of private refineries deposited at United States mints and assay offices		9,290,669
Product of private refineries exported as per custom-house returns		93,588,000
Product of private refineries sold for use in the arts		15,161,517
Domestic silver in ores, copper matte, etc., exported for reduction (custom-house returns)		47,433
Deposits of unrefined bullion at United States mints and assay offices		997,649
Total		119,085,268
Deduct:	*Fine ounces.*	
Bullion reported by domestic private refineries as contained in their product but derived from foreign ores	65,107,221	
Bullion reported by domestic private refineries as from old material	1,036,411	
Differences in balances of domestic private refineries January 1 and December 31, 1908	382,938	
		66,526,570
Total disposition of domestic product		52,558,698

Approximate Distribution by Producing States and Territories of the Product of Gold and Silver in the United States for the Calendar Year 1908.

[As estimated by the Director of the Mint.]

State or Territory.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Commercial value.
Alabama	1,993	$41,200	400	$200
Alaska	960,669	19,858,800	204,600	109,400
Arizona	120,937	2,500,000	2,900,000	1,551,200
California	935,074	19,329,700	1,703,700	911,300
Colorado	1,106,385	22,871,000	10,150,200	5,429,400
Georgia	2,719	56,200	200	100
Idaho	69,829	1,443,500	7,558,300	4,042,900
Illinois	.....	.....	2,000	1,100
Michigan	.....	.....	294,100	157,300
Missouri	.....	.....	49,400	26,400
Montana	152,865	3,160,000	10,356,200	5,539,500
Nevada	565,475	11,689,400	9,508,500	5,086,100
New Hampshire	179	3,700	6,300	3,400
New Mexico	14,817	306,300	400,900	214,500
North Carolina	4,716	97,500	1,300	700
Oregon	43,823	905,900	56,100	30,000
Philippine Islands	13,763	284,500	1,300	700
Porto Rico	29	600	.....	.....
South Carolina	2,598	53,700	200	100
South Dakota	374,529	7,742,200	197,300	105,500
Tennessee	179	3,700	60,900	32,600
Texas	24	500	447,000	239,100
Utah	190,922	3,946,700	8,451,300	4,520,600
Virginia	174	3,600	300	200
Washington	12,273	253,700	86,800	46,400
Wyoming	368	7,600	3,500	1,900
Total	4,574,340	94,560,000	52,440,800	28,050,600

DISTRIBUTION OF THE GOLD AND SILVER PRODUCT OF THE UNITED STATES, AS REPORTED BY THE MINE OWNERS, FOR THE CALENDAR YEAR 1908, AS TO SOURCE OF PRODUCTION.

[Figures furnished by the United States Geological Survey.]

State or Territory.	Gold.		Silver.		
	Deep mines.	Placer.	Dry or siliceous ores. [a]	Lead ores.	Copper ores.
	Fine ounces.	*Fine ounces.*	*Fine ounces.*	*Fine ounces.*	*Fine ounces.*
Alabama	1,948	46	282	.....	.....
Alaska	164,708	768,582	102,070	.....	33,602
Arizona	116,150	1,497	899,330	131,854	1,777,266
California	509,407	398,183	554,668	61,229	1,031,381
Colorado	1,069,847	8,946	5,555,710	3,156,517	193,206
Georgia	2,177	542	200	.....	.....
Illinois	.....	.....	.....	2,051	.....
Idaho	56,009	13,818	920,781	5,917,939	631,261
Massachusetts, New Hampshire, Pennsylvania	211	.....	.....	.....	6,270
Michigan	.....	.....	.....	.....	241,055
Missouri	.....	.....	.....	49,131	.....
Montana	121,307	26,606	1,719,486	361,762	8,274,951
Nevada	545,824	3,858	8,955,667	523,476	29,321
New Mexico	13,330	1,122	364,488	15,788	24,768
North Carolina	3,867	849	1,260	.....	.....
Oregon	28,661	13,187	43,315	.....	287
South Carolina	2,560	39	75	.....	151
South Dakota	369,945	481	245,262	3,500	.....
Tennessee	149	30	.....	.....	57,696
Texas	.....	.....	435,163	9,173	.....
Utah	178,615	440	163,348	5,667,310	2,620,680
Virginia	87	32	24	119	93
Washington	10,776	942	60,186	9,426	19,211
Wyoming	345	40	8	.....	3,990
Total	3,195,923	1,239,240	20,021,323	15,909,275	14,945,189

[a] Includes 159,285 ounces of silver from placers.

DISTRIBUTION OF THE SILVER PRODUCT OF THE UNITED STATES AS TO THE SOURCES OF PRODUCTION.

Source.	1891.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
Quartz mills	49.2	24.7	28.0	27.4	27.8	29.4	29.9	26.2	24.9	29.6	36.5	39.3
Lead bullion	40.6	56.2	51.1	50.8	46.7	48.5	45.6	46.8	44.8	30.8	36.0	31.3
Copper bullion	10.2	19.1	20.9	21.8	25.5	22.1	24.5	27.0	30.3	9.6	27.5	29.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The production of gold and silver from the mines of the United States since 1792 is shown in the following table.

The commercial value of the silver product is reckoned at the average yearly market price of silver on the New York market.

PRODUCT OF GOLD AND SILVER IN UNITED STATES FROM 1792 TO 1844 AND ANNUALLY SINCE.

[The estimate for 1792–1873 is by R. W. Raymond, commissioner, and since by Director of the Mint.]

Calendar year.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Commercial value.
1792 to July 31, 1834	677,250	$14,000,000	Insignificant.	.....
July 31, 1834, to Dec. 31, 1844	362,812	7,500,000	193,400	$253,400
1845	48,762	1,008,000	38,700	50,200
1846	55,341	1,140,000	38,700	50,300
1847	43,005	889,000	38,700	50,600
Total	1,187,170	24,537,000	309,500	404,500
1848	483,750	10,000,000	38,700	50,500
1849	1,935,000	40,000,000	38,700	50,700
1850	2,418,750	50,000,000	38,700	50,900
1851	2,660,625	55,000,000	38,700	51,700
1852	2,902,500	60,000,000	38,700	51,300
1853	3,144,375	65,000,000	38,700	52,200
1854	2,902,500	60,000,000	38,700	52,200
1855	2,660,625	55,000,000	38,700	52,000
1856	2,660,625	55,000,000	38,700	52,000
1857	2,660,625	55,000,000	38,700	52,400
1858	2,418,750	50,000,000	38,700	52,000
1859	2,418,750	50,000,000	77,300	105,100
1860	2,225,250	46,000,000	116,000	156,800
1861	2,080,125	43,000,000	1,546,900	2,062,000
1862	1,896,300	39,200,000	3,480,500	4,684,800
1863	1,935,000	40,000,000	6,574,200	8,842,300
1864	2,230,087	46,100,000	8,507,800	11,443,000
1865	2,574,759	53,225,000	8,701,200	11,642,200
1866	2,588,062	53,500,000	7,734,400	10,356,400
1867	2,502,196	51,725,000	10,441,400	13,866,200
1868	2,322,000	48,000,000	9,281,200	12,306,900
1869	2,394,562	49,500,000	9,281,200	12,297,600
1870	2,418,750	50,000,000	12,375,000	16,434,000
1871	2,104,312	43,500,000	17,789,100	23,588,300
1872	1,741,500	36,000,000	22,236,300	29,396,400
Total	58,279,778	1,204,750,000	118,568,200	157,749,900
1873	1,741,500	36,000,000	27,650,400	35,881,600
1874	1,620,122	33,490,900	28,868,200	36,917,500
1875	1,619,009	33,467,900	24,539,300	30,485,900
1876	1,931,575	39,929,200	29,996,200	34,919,800
1877	2,268,662	46,897,400	30,777,800	36,991,500
1878	2,477,109	51,206,400	35,022,300	40,401,000
1879	1,881,787	38,900,000	31,565,500	35,477,100
1880	1,741,500	36,000,000	30,318,700	34,717,000
1881	1,678,612	34,700,000	33,257,800	37,657,500
1882	1,572,187	32,500,000	36,196,900	41,105,900
1883	1,451,250	30,000,000	35,732,800	39,618,400
1884	1,489,950	30,800,000	37,743,800	41,921,300
1885	1,538,373	31,801,000	39,909,400	42,503,500
1886	1,686,788	34,869,000	39,694,000	39,482,400
1887	1,603,049	33,136,000	41,721,600	40,887,200
1888	1,604,478	33,167,500	45,792,700	43,045,100
1889	1,594,775	32,967,000	50,094,500	46,838,400
1890	1,588,877	32,845,000	54,516,300	57,242,100
1891	1,604,840	33,175,000	58,330,000	57,630,000
1892	1,597,098	33,015,000	63,500,000	55,662,500
1893	1,739,323	35,955,000	60,000,000	46,800,000
1894	1,910,813	39,500,000	49,500,000	31,422,100
1895	2,254,760	46,610,000	55,727,000	36,445,500
1896	2,568,132	53,088,000	58,834,800	39,654,600
1897	2,774,935	57,363,000	53,860,000	32,316,000
1898	3,118,398	64,463,000	54,438,000	32,118,400
1899	3,437,210	71,053,400	54,764,500	32,858,700
1900	3,829,897	79,171,000	57,647,000	35,741,100
1901	3,805,500	78,666,700	55,214,000	33,128,400
1902	3,870,000	80,000,000	55,500,000	29,415,000
1903	3,560,000	73,591,700	54,300,000	29,322,000
1904	3,892,480	80,464,700	57,682,800	33,456,000
1905	4,265,742	88,180,700	56,101,600	34,222,000
1906	4,565,333	94,373,800	56,517,900	38,256,400
1907	4,374,827	90,435,700	56,514,700	37,299,700
1908	4,574,340	94,560,000	52,440,800	28,050,600
Total	88,833,231	1,836,344,000	1,664,271,300	1,379,892,200
Grand total	148,300,179	3,065,631,000	1,783,149,000	1,538,046,600

DEPOSITS OF GOLD.

The aggregate of the deposits of gold bullion and coin at the various offices connected with the service during the calendar year 1908 was 7,100,803 fine ounces of the value of $146,786,628. The redeposits, in addition to the above, were 4,151,956 fine ounces of the value of $85,828,539.

Domestic gold bullion deposited contained 5,637,175 fine ounces of the value of $116,530,749. Light weight domestic gold coin purchased over the counter, and domestic gold coin transferred from the Treasury for recoinage contained 257,426 fine ounces of the value of $5,321,477.

Foreign gold coin and foreign gold bullion deposited contained 962,944 fine ounces of the value of $19,905,829, as follows:

	Gold coin.		Refined bullion.		Crude bullion.	
	Fine ounces.	Coining value.	Fine ounces.	Coining value.	Fine ounces.	Coining value.
British Columbia			11,852	$245,010	50,088	$1,035,414
Northwest Territory					92,461	1,911,348
Ontario and Quebec					3,956	81,779
Nova Scotia			278	5,740	11,018	227,766
Mexico	1,583	$32,729	169,920	3,512,554	66,974	1,384,481
West Indies					1,589	32,845
Central America	3,674	75,941			68,457	1,415,126
South America	143	2,965	60	1,241	102,928	2,127,705
Great Britain	144,520	2,987,484	183,748	3,798,400	13,993	289,265
France	9,307	192,401	3,302	68,263		
Germany	6,397	132,232				
Russia	4,021	83,131				
Sweden	863	17,841				
China, Korea, and Africa					5	102
Spain	5,316	109,894				
Unclassified	6,437	133,058			54	1,114
Total	182,261	3,767,676	369,160	7,631,208	411,523	8,506,945

Old jewelry deposited, surplus bullion and grains collected during the year contained 1,576 fine ounces of gold of the value of $32,578.

DEPOSITS AND PURCHASES OF SILVER.

Silver is coined in the United States on government account only. Deposits of silver bullion are received by the mints and assay offices, to be returned to the depositor in fine or unparted bars with the weight and fineness stamped thereon. These deposits are confined almost exclusively to the assay office at New York, and the bars, when returned to the depositor, are sold for use in the arts or exported.

The purchases and deposits of silver bullion at the mints and assay offices of the United States during the calendar year 1908 were as follows:

Items.	Standard ounces.
Silver purchased	9,714,877.95
Silver parted from gold deposits and purchased	3,306,232.75
Uncurrent domestic coin for recoinage	782,604.01
For return in fine bars	4,143,375.54
For Philippine coinage	13,137,897.65
For San Salvador coinage	557,148.53
Total	31,642,136.43

Foreign silver coin and bullion deposited contained 2,874,215 fine ounces, as follows:

Source.	Silver coin.		Refined bullion.		Crude bullion.	
	Fine ounces.	Coining value.	Fine ounces.	Coining value.	Fine ounces.	Coining value.
British Columbia					10,501	$13,576
Northwest Territory					22,128	28,610
Ontario and Quebec			232,623	$300,765	7,152	9,247
Nova Scotia					1,091	1,411
Mexico	56,096	$72,528	369,236	477,397	2,071,890	2,678,807
West Indies	17,318	22,392			167	216
Central America	4	6			43,182	55,832
South America	110	142			36,517	47,214
China	91	117				
Spain	510	659				
Hawaii	31	40				
Unclassified	5,563	7,192			5	7
Total	79,723	103,076	601,859	778,162	2,192,633	2,834,920

Old jewelry deposited, surplus bullion, and grains collected during the year contained 552,219 fine ounces of silver.

PURCHASES OF SILVER FOR SUBSIDIARY COINAGE.

The silver required for the coinage of subsidiary coin was purchased under section 3526 of the Revised Statutes of the United States.

The following table shows the amount and cost of silver bullion purchased for the subsidiary silver coinage during the calendar year 1908:

Stock.	Standard ounces.	Cost.
Silver bullion purchased under section 3526, Revised Statutes, at Treasury Department	9,225,088.17	$4,495,517.54
Silver bullion purchased under section 3526, Revised Statutes, at mints	440,841.37	213,240.61
Assay coins purchased	3,786.67	2,204,70
Mutilated coin purchased	2,169.64	1,030.04
Surplus bullion purchased	22,711.28	11,833.72
United States coin transferred for recoinage	782,604.01	973,690.84
Partings, charges, and fractions purchased	3,326,513.57	1,664,507.74
Total	13,803,714.71	7,362,025.19

BALANCES OF SILVER BULLION.

The balances of silver bullion on hand December 31, 1908, at the New York assay office and the mints of the United States for subsidiary silver coinage, for the Philippine Islands and Government of San Salvador, were as follows:

Items.	Standard ounces.	Cost.
For subsidiary silver coinage	9,755,619.75	$5,060,735.39
Silver bullion for Philippine coinage	2,878,332.22	2,477,350.19
Silver bullion for the Government of San Salvador	557,148.53	250,716.84
Total	13,191,100.50	7,788,802.42

DEPOSITS OF GOLD AND SILVER SINCE 1880.

The following table shows the amount of gold and silver (excluding redeposits) received at the mints and assay offices, by calendar years, since 1880:

Calendar year.	Gold.	Silver (coining value).	Total.
1880	$100,278,703	$35,103,825	$135,382,528
1881	98,763,426	30,326,848	129,090,274
1882	41,921,263	35,161,254	77,082,517
1883	51,089,456	36,978,184	88,067,640
1884	50,518,179	36,670,731	87,188,910
1885	44,714,052	35,836,725	80,550,777
1886	66,422,088	39,086,070	105,508,158
1887	74,724,077	46,381,333	121,105,410
1888	41,496,410	41,323,973	82,820,383
1889	42,599,206	41,977,265	84,576,471
1890	48,767,964	55,198,037	103,966,001
1891	60,849,552	70,994,120	131,843,672
1892	45,406,646	84,591,898	129,998,544
1893	69,419,223	62,465,005	131,884,228
1894	49,704,902	14,120,605	63,825,507
1895	69,433,579	13,843,636	83,277,215
1896	91,743,670	10,873,160	102,616,830
1897	87,924,232	12,707,128	100,631,360
1898	182,996,602	15,841,222	198,837,824
1899	129,798,782	13,481,927	143,280,709
1900	158,060,258	16,005,626	174,065,884
1901	136,858,186	7,486,293	144,344,479
1902	127,142,337	8,585,751	135,728,088
1903	139,475,047	28,898,656	168,373,703
1904	169,580,717	21,101,057	190,681,774
1905	139,769,034	16,409,547	156,178,581
1906	186,748,794	18,927,533	205,676,327
1907	205,133,821	42,288,635	247,422,456
1908	146,786,628	33,865,296	180,651,924

COINAGE OF THE UNITED STATES.

The domestic coinage manufactured during the calendar year 1908 was as follows:

Description.	Pieces.	Value.
Gold	8,739,439	$131,638,632.50
Subsidiary silver	51,787,463	12,391,777.25
Minor	56,129,164	1,468,738.72
Total	116,656,066	145,499,148.47

The following table exhibits the number of fine ounces and value of gold and silver coinage of the United States, by calendar years, since 1873:

Calendar year.	Gold.		Silver.		
	Fine ounces.	Value.	Fine ounces consumed.	Dollars coined.	Subsidiary coined.
1873	2,758,475	$57,022,748	3,004,803	$1,521,600	$2,503,147.60
1874	1,705,441	35,254,630	5,271,258	4,910,000	1,941,776.70
1875	1,594,050	32,951,940	11,504,961	6,279,600	9,068,293.00
1876	2,253,281	46,579,453	18,122,152	6,192,150	18,311,157.50
1877	2,128,493	43,999,864	21,378,389	13,092,710	15,300,335.50
1878	2,408,400	49,786,052	22,029,173	26,755,450	1,763,400.00
1879	1,890,499	39,080,080	21,323,113	27,561,641	8,135.00
1880	3,014,163	62,308,279	21,200,641	27,399,342	12,351.75
1881	4,685,162	96,850,890	21,609,422	27,928,935	11,228.75
1882	3,187,317	65,887,685	21,615,563	27,575,197	397,935.00
1883	1,414,581	29,241,990	22,581,870	28,471,018	775,950.45
1884	1,160,601	23,991,756	22,050,011	28,136,875	397,991.15
1885	1,343,519	27,773,012	22,387,196	28,397,767	264,409.20
1886	1,400,240	28,945,542	24,783,882	31,423,886	662,823.90
1887	1,159,664	23,972,383	27,139,034	33,611,710	1,579,371.40
1888	1,518,046	31,380,808	25,491,439	31,990,833	1,034,773.45
1889	1,035,899	21,413,931	27,412,169	34,651,811	844,872.15
1890	990,100	20,467,182	30,262,932	38,043,004	1,159,904.20
1891	1,413,614	29,222,005	21,086,062	23,562,735	3,956,121.60
1892	1,682,832	34,787,223	9,461,298	6,333,245	6,307,833.00
1893	2,757,231	56,997,020	6,440,604	1,455,792	7,347,005.30
1894	3,848,045	79,546,160	6,810,196	3,093,972	6,106,378.85
1895	2,883,941	59,616,358	4,164,996	862,880	4,835,130.25
1896	2,276,192	47,052,060	17,697,736	19,876,762	3,213,137.05
1897	3,677,878	76,028,485	14,006,626	12,651,731	5,835,566.30
1898	3,772,561	77,985,757	17,384,482	14,426,735	8,607,298.45
1899	5,386,277	111,344,220	19,612,343	15,182,846	10,878,673.90
1900	4,802,328	99,272,942	27,543,406	25,010,912	11,334,409.45
1901	4,921,439	101,735,188	23,437,523	22,566,813	8,271,647.75
1902	2,282,571	47,184,932	22,630,799	18,160,777	11,867,390.20
1903	2,113,212	43,683,970	14,894,507	10,343,755	9,530,685.00
1904	11,290,843	233,402,428	11,794,995	8,812,650	6,882,959.95
1905	2,401,260	49,638,441	4,580,542	.....	6,332,180.90
1906	3,811,614	78,793,045	7,704,730	.....	10,651,087.85
1907	6,381,025	131,907,490	9,532,950	.....	13,178,435.75
1908	6,368,019	131,638,633	8,963,902	.....	12,391,777.25
Total	107,718,813	2,226,745,582	616,915,705	606,285,134	203,565,575.50

COINAGE FOR THE PHILIPPINE GOVERNMENT.

The Philippine government returned for recoinage pesos and fractional coins weighing 11,824,108.16 fine ounces, equivalent to 15,159,113 pesos, or in fractional coins, 15,177,355 pesos at the old weight and fineness, and will coin 22,986,213 pesos, or 24,518,627 pesos in fractional coins at the new weight and fineness.

There were coined from new bullion, as follows:

Denomination.	Pieces.	Value.	Silver consumed.
		Pesos.	*Fine ounces.*
Pesos, silver	93,445	93,445.00	48,068.11
50-centavos, silver	605,501	302,750.50	146,001.43
20-centavos, silver	705,501	141,100.20	68,045.57
10-centavos, silver	1,744,412	174,441.20	84,124.26
Total	3,148,859	711,736.90	346,239.37

There was a further coinage of Philippine coins recoined, as follows:

Denomination.	Pieces.	Value.	Silver consumed.
		Pesos.	*Fine ounces.*
Pesos, silver	20,862,000	20,862,000.00	10,731,412.80
50-centavos, silver	996,000	498,000.00	240,160.50
20-centavos, silver	830,000	166,000.00	80,053.50
10-centavos, silver	1,620,000	162,000.00	78,124.50
Total	24,308,000	21,688,000.00	11,129,751.30

COINAGE FOR CALENDAR YEAR 1908.

Denomination.	Pieces.	Value.	Silver consumed.
		Pesos.	*Fine ounces.*
Pesos, silver	20,955,445	20,955,445.00	10,779,480.91
50-centavos, silver	1,601,501	800,750.50	386,161.93
20-centavos, silver	1,535,501	307,100.20	148,099.07
10-centavos, silver	3,364,412	336,441.20	162,248.76
Total silver	27,456,859	22,399,736.90	11,475,990.67
5-centavos, nickel	500	25.00	.....
1-centavos, bronze	2,187,500	21,875.00	.....
½-centavos, bronze	500	2.50	.....
Total coinage	29,645,359	22,421,639.40	11,475,990.67

TOTAL PHILIPPINE COINAGE TO DECEMBER 31, 1908.

Denomination.	Coined from new bullion, act of June 23, 1906.		Coined from Philippine coins received for recoinage, act of June 23, 1906.		Total.	
	Pieces.	Fine ounces.	Pieces.	Fine ounces.	Pieces.	Fine ounces.
Pesos	93,445	48,068.11	31,140,000	16,018,416.00	31,233,445	16,066,484.11
50-centavo pieces	2,814,126	678,556.13	2,100,000	506,362.50	4,914,126	1,184,918.63
20-centavo pieces	3,216,152	310,197.86	2,735,000	263,790.75	5,951,152	573,988.61
10-centavo pieces	5,765,193	278,026.42	4,030,000	194,346.75	9,795,193	472,373.17
Total silver	11,888,916	1,314,848.52	40,005,000	16,982,916.00	51,893,916	18,297,764.52
5-centavo pieces, nickel	500	.....	.....	.....	500	.....
1-centavo pieces, bronze	2,187,500	.....	.....	.....	2,187,500	.....
½-centavo pieces, bronze	500	.....	.....	.....	500	.....
Total minor	2,188,500	.....	.....	.....	2,188,500	.....
Total coinage	14,077,416	1,314,848.52	40,005,000	16,982,916.00	54,082,416	18,297,764.52

MOVEMENT OF GOLD FROM THE PORT OF NEW YORK.

The superintendent of the United States assay office at New York has prepared the following tables, giving exports of gold through the port of New York during the calendar year ended December 31, 1908:

STATEMENT OF UNITED STATES GOLD COIN AND GOLD BULLION EXPORTED FROM THE PORT OF NEW YORK TO EUROPE DURING THE CALENDAR YEAR 1908.

Date.	Country.	Amount.	Rate of exchange.
February	England	$272	.....
April 17	do	1,000,529	4.872
April 20	France	1,529,399	4.8725
April 22	do	5,013,136	4.8735
April 27	do	1,519,883	4.873
April 29	England	1,015,000	4.871
Do	France	1,513,220	4.871
May 13	do	5,780,837	4.8715
May 14	do	1,012,000	4.8715
May 18	Germany	4,094,000	4.871
Do	France	3,041,166	4.871
May 19	Germany	500,000	4.8715
May 20	do	1,494,000	4.8725
Do	France	2,693,624	4.8725
May 25	Germany	5,397,000	4.871
May 27	France	1,000,000	4.8725
June 1	Germany	1,252,000	4.872
June 5	do	536,000	4.87
June 8	do	1,600,000	4.869
June 15	do	593,000	4.87
June 17	do	3,250,000	4.871
June 23	England	4,000	4.87
June 29	Germany	301,343	4.8695
July 15	France	1,040,000	4.8715
July 31	England	325	4.869
October 20	do	4,243	4.865
October 27	do	7,275	4.8655
November 4	do	3,820	4.86
November 16	do	3,915	4.859
December 2	France	1,504,025	4.8675
December 11	do	4,000,500	4.869
December 22	do	699,010	4.871
Total		51,403,522	.....

RECAPITULATION OF GOLD EXPORTS TO EUROPE.

Description.	France.	England.	Germany.
United States coins	$1,055,000	$4,325	$9,350,000
United States assay office bars	29,291,800	2,015,529	9,667,343
Bullion in ore	.....	272	.....
Gold in silver bullion	.....	19,253	.....
Total	30,346,800	2,039,379	19,017,343

Grand total of exports to Europe		$51,403,522
During the same period there were shipped to West Indies, Mexico, Central and South America, Cuba, etc., the following, viz:		
United States coin	$2,758,101	
Foreign coins	794,250	
Total gold exports to other ports		3,552,351
Grand total of gold exports		54,955,873

The imports during the same period were as follows:

From Europe:		
United States coins	$151,474	
Foreign coins	2,672,490	
Bullion	3,801,912	
Gold in ore and base bullion	80,296	
Total gold imports from Europe		$6,706,172
From other ports (West Indies, Mexico, Central and South America, and Cuba):		
United States coins	6,391,582	
Foreign coins	717,321	
Bullion	5,565,173	
In ore and base bullion	998,382	
Total gold imports from other ports		13,672,458
Grand total of gold imports		20,378,630

During the same period there was exported to England copper matte containing 13.65 ounces fine gold, and 212.295 ounces fine silver.

IMPORTS AND EXPORTS OF THE PRECIOUS METALS IN THE PRINCIPAL COUNTRIES OF THE WORLD, 1908.

GOLD.

Country.	Imports.	Exports.	Excess of imports over exports.	Excess of exports over imports.
United States	$50,276,293	$81,215,456	.....	$30,939,163
Africa [a]	111,360	160,346,810	.....	160,235,450
Austria-Hungary	14,187,494	12,152,494	$2,035,000	.....
Bolivia	.....	23,057	.....	23,057
Brazil	30,559	2,198,315	.....	2,167,756
Canada	9,635,930	16,359,958	.....	6,724,028
Colombia	.....	789,241	.....	789,241
Costa Rica	.....	612,924	.....	612,924
Denmark	2,412,000	1,152,400	1,259,600	.....
Ecuador	931,150	1,762,653	.....	831,503
Egypt	20,652,951	23,087,680	.....	2,434,729
France	195,656,066	3,998,188	191,657,878	.....
Germany	90,662,005	14,042,652	76,619,353	.....
Great Britain	228,809,194	243,174,620	.....	14,365,426
Guiana (British)	4,810,192	1,289,946	3,520,246	.....
Guiana (Dutch)	115,308	785,866	.....	670,558
Honduras	.....	303,545	.....	303,545
India (British)	34,648,263	3,169,551	31,478,712	.....
Japan	8,422,984	1,820,883	6,602,101	.....
Mexico	.....	15,911,491	.....	15,911,491
Netherlands	5,266,485	173,809	5,092,676	.....
Norway	942,404	256,136	686,268	.....
Portugal	16,076,352	1,458,016	14,618,336	.....
Russia	8,193,434	7,739,587	453,847	.....
San Salvador	.....	691,424	.....	691,424
Santo Domingo	265,377	.....	265,377	.....
Siam	2,042,822	20	2,042,802	.....
Spain	132,823	652,448	.....	519,625
Straits Settlements	5,824,433	5,178,283	646,150	.....
Sweden	2,470,779	.....	2,470,779	.....
Switzerland	13,731,762	4,842,909	8,888,853	.....
Venezuela	139,349	232,570	.....	93,221

[a] Annual statement of the trade of the United Kingdom with foreign countries and with British possessions.

IMPORTS AND EXPORTS OF THE PRECIOUS METALS IN THE PRINCIPAL COUNTRIES OF THE WORLD, 1908—Continued.

SILVER.

Country.	Imports.	Exports.	Excess of imports over exports.	Excess of exports over imports.
United States	$42,224,130	$51,837,671	.....	$9,613,541
Africa [a]	913,379	894,658	$18,721	.....
Austria-Hungary	2,078,413	963,876	1,114,537	.....
Bolivia	.....	3,137,176	.....	3,137,176
Brazil	720,717	828	719,889	.....
Canada	333,534	13,116,953	.....	12,783,419
Costa Rica	.....	81,288	.....	81,288
Ecuador	.....	433	.....	433
Egypt	685,322	18,867	666,455	.....
France	33,601,107	33,947,349	.....	346,242
Germany	6,493,662	6,387,811	105,851	.....
Great Britain	60,712,357	64,646,041	.....	3,933,684
Guiana (British)	223,983	187,200	36,783	.....
Guiana (Dutch)	2,533	670	1,863	.....
Honduras	.....	523,373	.....	523,373
India (British)	48,484,088	7,046,658	41,437,430	.....
Japan	321,187	59,332	261,855	.....
Mexico	.....	46,363,143	.....	46,363,143
Netherlands	641,259	3,647,343	.....	3,006,084
Norway	303,684	114,034	189,650	.....
Portugal	299,290	275,150	24,140	.....
Russia	6,329,676	1,994,973	4,334,703	.....
San Salvador	2,315,280	498,063	1,817,217	.....
Santo Domingo	94,311	.....	94,311	.....
Siam	2,079,671	278,984	1,800,687	.....
Spain	1,395,213	3,367,207	.....	1,971,994
Straits Settlements	14,869,615	7,150,926	7,718,689	.....
Sweden	93,757	.....	93,757	.....
Switzerland	6,628,786	2,067,596	4,561,190	.....
Venezuela	.....	6,846	.....	6,846

[a] Annual statement of the trade of the United Kingdom with foreign countries and with British possessions.

THE COURSE OF SILVER IN 1908.

The price of silver in the London market during the calendar year 1908 fluctuated between 22d. and 27d. for silver 925 M British Standard, the average for the year being 24 13/32d. At the highest price, 27d., the equivalent in United States money was $0.59187 per ounce fine; at the lowest price, $0.42226, and at the average price, $0.53490. The following review of the London silver market for 1908 is from the circular letter of Messrs. Pixley and Abell, bullion brokers, issued January 1, 1909.

Silver.—The heavy fall in silver which took place toward the close of 1907 was followed during the opening months of this year by a reaction, due chiefly to large purchases for the Indian bazaars, and during January the quotation rose to 27d., the highest of the year, an advance of 2 1/8d. from the closing price of 1907. This steadiness continued until the beginning of April, when weakness again set in, and from that time the tendency of the market, with the exception of a temporary advance in June, was downward until December 2, when 22d., the lowest quotation of the year, was touched. From this point the market steadily improved until the end of the year, when the closing quotations were 23 3/16d. for spot and 23 1/8d. for forward silver. Important purchases for China and some buying for India, where the position has of late become more satisfactory, account for this sharp advance during the last few weeks. The average price for the whole year is 24 13/32d.

Shipments to the Indian bazaars have throughout the year been on an unusually large scale. The net imports, chiefly from this country, into India will probably amount to 70,000,000 ounces, against 44,500,000 in 1907 and 32,750,000 in 1906. This demand may to a great extent be attributed to a desire on the part of the natives, attracted by the low prices, to convert their hoards of rupees into bar silver, and this action has doubtless been partially responsible for the increase of rupees in the Indian treasury. There were an unusual number of marriages during the early part of 1908, as in July commenced a period which will extend until October, 1909, and which is considered by the Hindoos to be unpropitious for matrimony, and this fact doubtless stimulated purchases during the earlier months. The cheapness of silver has also probably conduced to the purchase of this metal instead of gold, of which only about £3,100,000 in bars has been sent to India this year against £5,700,000 in 1907, the difference representing in silver some 25,000,000 ounces.

Indian speculators have during the last six months operated largely both on this market and that in Bombay. Though these speculative accounts have not yet been liquidated, the immediate result has been to transfer large amounts of silver from this market to Bombay, where, in spite of some substantial purchases for China, the stocks are still heavy, amounting, it is estimated, to nearly £400,000, while in addition there are £840,000 now in transit.

The Indian government has made no purchases this year. Their holdings of rupees have largely increased, and amounted at the beginning of this month, when the highest point was reached, to about 29 crores in the paper currency reserve and to 18½ crores in the gold standard reserve. Since then, owing to the opening of the export season, the paper currency reserve has fallen to just under 28 crores (£18,500,000) and the gold standard reserve to 18 crores (£12,000,000). At the commencement of this year the government's holdings were 21 crores (£14,000,000) in the paper currency reserve and 6 crores (£4,000,000) in that of the gold standard. Under these conditions the prospects of further purchases during the coming year are rather remote.[a]

Though China has at times been a seller, and has shipped about £220,000 in sycee to London for sale, yet she has on the whole been a considerable buyer. The low exchanges ruling in China have greatly stimulated the export trade and adversely affected the import trade, so that the banks have been forced to buy silver as cover for or as a hedge against their exchange operations. Part of these purchases has been shipped to China, but a large amount is still under the control of the China banks. Whether this will be resold or shipped to China remains to be seen. In addition to her purchases here, China has bought fair amounts in Bombay and has as well received regular shipments amounting to about £1,100,000 from San Francisco. An important feature in the future will be the effect of the prohibition of the import of opium into China, should this result from the recent efforts to suppress the use of this drug. Unless the import of other commodities should greatly increase, it would seem

[a] To coin 1 crore of rupees requires 3,437,500 fine ounces of silver. As 15 rupees equal £1, 1 crore of rupees equal £666,666⅔.

probable that China will be a still more important buyer of silver than heretofore.

In Shanghai the stock of sycee is unusually heavy, amounting to about 19,000,000 taels, while in addition there are 10,000,000 Mexican dollars.

A convention was signed in November by the members of the Latin Union whereby it has been arranged to increase the circulation of subsidiary coins from 12 to 16 francs per head of the population. This convention comes into force on April 1 next, and the increase is to be made at the rate of 60 centimes per head per annum. There are also provisions to allow Italy and Greece, where the circulation is now below 60 centimes per head, to bring the circulation up to that amount. As a large part of the silver required will be provided by recoining 5-franc pieces, or coins of similar value, the amount of new silver required will be unimportant. Excepting 5,000 kilos bought during December, the Paris mint has made no purchase by tender this year. Silver, however, was bought for French account during the earlier part of the year, and this presumably was required for colonial coinage. Switzerland has been a moderate buyer at times, while Portugal bought £250,000 in October.

In Germany a bill has passed the Reichstag for the purpose of increasing the silver currency of the country by 5 marks per head during the next five years. This is estimated to require about 1,250,000 kilos of silver; but so far we understand no purchases have been made.

During November the Mexican Government offered to buy 5,000 kilos monthly for currency purposes.

The low average price of silver which has ruled during the last fifteen months has no doubt caused some diminution of production. Where ores are mined principally for copper, lead, or other metals, and silver is but a by-product, low prices for silver can have had little effect, but many of the poorer mines, especially those which depend mainly upon the production of silver, have certainly reduced their output. Against these reductions must be set the increased production from the cobalt district of Canada, but it is probable that, when reliable figures are available, the world's production will show some decrease.

With silver at a low level—almost down to that of 1902–3, when $21\frac{11}{16}$d. was the lowest quotation touched for spot silver—it becomes interesting to review the present situation and consider the prospects for the future. Though the Indian government is unlikely to be a buyer for some time to come, and though China has unusually large holdings of silver, the larger offtake by the Indian bazaars and the possible falling off in production will in all probability suffice to prevent any further material decline. Much, however, will depend upon whether China resells any of the silver under her control here or whether fresh purchases are made on her behalf.

HIGHEST, LOWEST, AND AVERAGE PRICE OF SILVER AND VALUE OF A FINE OUNCE, EACH MONTH DURING THE CALENDAR YEAR 1908.

Month.	Highest.	Lowest.	Average price per ounce, British standard, 0.925.	Equivalent value of a fine ounce with exchange at par ($4.8665).	Average monthly price at New York of exchange on London.	Equivalent value of a fine ounce, based on average monthly price and average rate of exchange.	Average monthly New York price of fine bar silver.
	Pence.	*Pence.*	*Pence.*				
January	27	25 3/8	25.7283	$0.56399	$4.8620	$0.56347	$0.56274
February	25 5/8	25 1/2	25.8650	.56699	4.8651	.56682	.56630
March	25 15/16	25 1/2	25.5697	.56051	4.8621	.56001	.55990
April	25 1/2	24 15/16	25.1328	.55094	4.8695	.55123	.55129
May	24 13/16	24 1/16	24.3389	.53353	4.8711	.53404	.53427
June	25 3/8	24 1/2	24.7600	.54276	4.8697	.54312	.54278
July	24 7/8	24 3/16	24.5138	.53737	4.8696	.53771	.53796
August	24 13/16	23 5/8	23.8943	.52379	4.8634	.52345	.52302
September	24 1/16	23 9/16	23.8725	.52331	4.8639	.52301	.52360
October	23 15/16	23 1/16	23.7199	.51996	4.8646	.51976	.52050
November	23 9/16	22 3/16	22.9275	.50259	4.8608	.50212	.50320
December	23 3/16	22	22.4925	.49306	4.8689	.49330	.49399
Average			24.4012	.53490	4.8659	.53483	.53496

EXPORTS OF SILVER TO THE EAST.

The exports of silver from London to India, China, and the Straits since 1881 have been as follows:

Calendar year.	India.	China.	Straits.	Total.
1881	$12,375,612	$3,898,860	$3,577,729	$19,852,201
1882	18,604,945	1,584,318	7,354,255	27,543,518
1883	18,040,140	4,212,574	11,189,631	33,442,345
1884	26,073,909	5,018,714	8,136,097	39,228,720
1885	30,913,667	3,160,315	3,108,146	37,182,128
1886	21,159,591	1,769,425	2,892,064	25,821,080
1887	19,798,328	1,427,179	2,766,946	23,992,453
1888	21,162,116	1,153,002	3,219,321	25,534,439
1889	28,392,786	2,731,861	8,181,141	39,305,788
1890	35,673,177	1,284,498	4,441,197	41,398,872
1891	21,717,992	1,177,620	10,754,800	33,650,412
1892	35,180,897	719,668	18,622,825	54,523,390
1893	34,319,877	11,635,650	7,847,295	53,802,822
1894	24,391,351	13,279,564	6,002,565	43,673,480
1895	17,638,610	8,042,003	3,668,772	29,349,385
1896	23,874,942	3,602,597	4,025,257	31,502,796
1897	28,250,305	2,721,522	3,597,331	34,569,158
1898	20,984,625	3,721,656	1,971,443	26,677,724
1899	25,597,912	6,929,117	1,396,223	33,923,252
1900	37,916,065	11,252,496	3,922,477	53,091,038
1901	36,987,395	4,101,764	3,150,630	44,239,789
1902	30,987,195	991,793	5,363,710	37,342,698
1903	36,125,636	1,508,907	3,999,674	41,634,217
1904	46,366,153	2,495,502	385,758	49,247,413
1905	36,754,830	4,315,841	186,382	41,257,053
1906	73,997,060	2,096,002	8,516	76,101,578
1907	51,935,064	2,420,354	3,448,645	57,804,063
1908	45,133,819	3,608,023	802,413	49,544,255

VALUE OF NET IMPORTS OF SILVER INTO INDIA SINCE 1835.

The net imports in value of silver into India, average exchange rate of India rupee in London, and amount of council bills sold, by fiscal years ended March 31, is shown by the following table:

Year.	Net imports of silver.	Average rate of Indian rupee.	Amount of council bills sold.	Year.	Net imports of silver.	Average rate of Indian rupee.	Amount of council bills sold.
		Pence.				*Pence.*	
1835-36	[a] 16,118,960	.....	$9,953,224	1872-73	$3,298,985	22¾	$67,834,606
1836-37	$6,176,311	22¾	9,938,522	1873-74	11,311,401	22.351	64,654,752
1837-38	9,173,294	23	8,303,149	1874-75	20,916,698	22.221	52,760,715
1838-39	12,671,392	23⅜	11,419,685	1875-76	6,826,414	21.645	60,294,052
1839-40	7,864,683	23½	7,005,448	1876-77	29,911,149	20.491	61,784,106
1840-41	6,679,118	23½	5,715,461	1877-78	61,869,640	20.790	49,319,325
1841-42	5,887,052	22⅝	12,600,746	1878-79	15,910,390	19.761	67,880,692
1842-43	14,068,739	23½	5,827,332	1879-80	31,852,848	19.961	74,271,598
1843-44	17,237,334	23	13,634,624	1880-81	15,751,280	19.956	74,163,888
1844-45	8,719,684	21⅝	12,248,742	1881-82	21,699,764	19.895	89,604,086
1845-46	4,112,529	21⅜	14,919,273	1882-83	29,614,971	19,525	73,584,015
1846-47	6,332,979	22⅝	15,071,750	1883-84	25,372,923	19,536	85,649,451
1847-48	2,204,565	22	7,503,189	1884-85	28,367,364	19.308	66,957,731
1848-49	1,344,618	21⅛	9,193,767	1885-86	42,960,530	18.254	50,089,386
1849-50	5,810,633	22½	14,283,752	1886-87	25,306,454	17.441	59,061,202
1850-51	10,410,803	24¼	15,750,223	1887-88	31,623,459	16.899	74,742,515
1851-52	14,016,886	24⅛	13,516,816	1888-89	30,709,917	16.379	69,410,203
1852-53	22,293,629	23⅞	16,152,235	1889-90	36,741,437	16.566	75,306,635
1853-54	11,279,345	24½	18,738,775	1890-91	51,993,287	18.089	77,713,304
1854-55	138,797	23⅜	17,860,191	1891-92	30,611,949	16.733	78,320,740
1855-56	40,085,623	24⅛	7,222,081	1892-93	39,083,615	14.984	80,454,024
1856-57	56,413,954	25⅛	13,722,119	1893-94	40,466,665	14.546	46,378,884
1857-58	61,012,039	24⅝	3,059,077	1894-95	16,812,318	13.100	82,268,679
1858-59	[a] 77,283,420	[b]	124,451	1895-96	18,206,409	13.641	85,278,507
1859-60	[a] 111,475,630	[b]	22,843	1896-97	17,163,165	14.454	76,028,915
1860-61	[a] 53,280,090	[b]	3,879	1897-98	26,447,429	15.393	44,271,918
1861-62	$43,988,930	23⅞	5,809,277	1898-99	16,442,585	15.979	91,064,157
1862-63	60,757,238	23⅞	32,321,230	1899-1900	11,653,240	16.068	92,495,079
1863-64	61,950,883	23⅞	43,698,839	1900-1901	30,792,023	15.973	65,501,810
1864-65	48,793,010	23⅞	33,040,970	1901-2	23,318,450	15.988	89,444,377
1865-66	89,904,731	23¾	33,900,604	1902-3	22,569,699	16.0018	90,029,987
1866-67 [c]	32,474,026	23	24,661,422	1903-4	44,294,125	16.0491	116,111,293
1867-68	26,230,510	23⅛	20,134,097	1904-5	43,024,637	16.045	118,866,929
1868-69	40,330,842	23⅛	18,033,989	1905-6	51,010,716	16.048	135,972,219
1869-70	34,500,818	23¼	33,968,764	1906-7	77,881,906	16.0926	144,042,151
1870-71	4,273,507	22⅞	41,090,337	1907-8	.....	16.0291	73,640,175
1871-72	30,574,254	23⅞	50,175,265				

[a] Rupees.

[b] From 1858-59 to 1860-61, inclusive, the home treasury was opened at all times for the sale of bills on India at rates altered from time to time by advertisement. Consequent on the mutiny it was necessary to refrain from drawing on India and exchange was raised to a prohibitory rate.

[c] Eleven months.

GOLD AND SILVER IMPORTED INTO AND EXPORTED FROM BRITISH INDIA IN EACH FISCAL YEAR ENDING MARCH 31, FROM 1873–74 (BRITISH STANDARD OUNCES.)

[From Financial and Commercial Statistics of British India.]

Period.	Gold.			Silver.		
	Imported.	Exported.	Net imports.	Imported.	Exported.	Net imports.
	Ounces.	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*
1873–74	.....	.....	331,554	.....	.....	8,747,151
1874–75	.....	.....	446,964	.....	.....	16,269,590
1875–76	.....	.....	355,985	.....	.....	5,451,074
1876–77	.....	.....	62,696	.....	.....	25,229,986
1877–78	.....	.....	102,628	.....	.....	51,436,354
1878–79	.....	.....	177,101	.....	.....	13,916,146
1879–80	.....	.....	374,227	.....	.....	27,581,194
1880–81	.....	.....	777,533	.....	.....	13,642,358
1881–82	.....	.....	1,028,240	.....	.....	18,852,031
1882–83	.....	.....	1,048,810	.....	.....	26,216,055
1883–84	.....	.....	1,138,584	.....	.....	22,448,221
1884–85	.....	.....	973,053	.....	.....	25,393,863
1885–86	.....	.....	544,437	.....	.....	40,677,913
1886–87	.....	.....	393,174	.....	.....	25,078,814
1887–88	569,684	41,646	528,038	37,877,141	5,994,542	32,782,599
1888–89	512,287	50,710	461,577	37,844,665	5,408,636	32,436,029
1889–90	850,232	76,848	773,384	43,940,659	5,296,885	38,643,774
1890–91	1,175,875	161,646	1,014,229	56,190,870	4,661,785	51,529,085
1891–92	709,102	285,454	423,648	38,177,580	5,829,142	32,348,438
1892–93	272,442	726,925	−454,483	54,180,144	8,656,632	45,523,512
1893–94	474,635	378,399	96,236	60,328,296	5,999,323	54,328,973
1894–95	236,873	926,843	−689,970	32,638,069	5,598,047	27,040,022
1895–96	695,055	372,432	322,623	34,082,810	7,064,731	27,018,079
1896–97	657,238	347,873	309,365	37,520,322	11,591,234	25,929,088
1897–98	1,129,149	397,114	732,035	68,535,612	24,250,995	44,284,617
1898–99	1,432,461	410,461	1,022,000	49,226,780	26,061,355	23,165,425
1899–1900	1,914,037	353,225	1,560,812	50,663,542	32,017,260	18,646,282
1900–1901	1,987,738	1,881,060	106,678	64,746,549	15,311,385	49,435,164
1901–2	1,372,249	1,097,743	274,506	66,726,972	27,721,780	39,005,192
1902–3	2,187,384	770,766	1,416,618	75,569,185	32,294,876	42,274,309
1903–4	3,330,466	1,764,229	1,566,237	104,324,765	25,142,629	79,182,136
1904–5	3,605,017	2,088,025	1,516,992	98,118,908	23,769,313	74,349,595
1905–6	2,396,420	2,461,892	−65,472	88,853,079	4,535,314	84,317,765
1906–7	3,019,161	642,010	2,377,151	125,878,008	7,679,151	118,198,857
1907–8	3,380,405	599,065	2,781,340	106,291,860	8,442,915	97,848,945
1908–9	1,334,107	708,769	625,338	85,039,761	11,309,088	73,730,673

NOTE.—The quantities in the column "net imports" for both gold and silver for the years 1873–74 to 1886–87 are estimated only, deduced from the declared values of the trade for those years by the following process:

For gold, the rupee value of the monthly net imports was converted into sterling at the average rate of exchange in each month, and this sterling value was then divided by the English mint price of gold (£3 17s. 10½d.). For silver the average price of 107 rupees per 100 tolas, or 285.33 rupees per 100 ounces, was taken as the basis of the value of the annual imports.

IMPORTS AND EXPORTS OF BULLION INTO AND FROM LONDON.

The imports and exports of bullion from various countries during the calendar year 1908 were as follows:

Country.	Imports.		Exports.	
	Gold.	Silver.	Gold.	Silver.
Austria			$6,706,037	$60,880
Belgium	$1,253,888	$673,236	79,324	633,618
France	1,099,157	1,901,823	127,561,111	3,550,900
Germany	13,959,881	1,311,225	19,133,209	2,428,807
Holland	1,801,218	219,903	1,734,197	29,491
Sweden and Denmark			1,824,938	145,995
Russia			14,273,445	1,775,250
Spain, Portugal, etc	1,831,697	285,294	98,624	728,335
Gibraltar	158,288	11,378	316,323	18,030
Malta	151,621	97,257		
Egypt	2,983,062	57,459	8,370,380	458,200
Ceylon	2,057,902	1,318,821		57,366
Bombay, Madras, Calcutta	11,718,936		18,232,245	42,947,018
Singapore, Penang	1,259,348	227,100	8,828	2,846,163
Hongkong, Shanghai	12,264			4,001,723
West Coast of Africa	5,532,033	843,632	48,796	907,933
British South Africa	154,821,682	55,025	97,856	5,684
United States	574,977	40,421,032	3,662,270	976,210
Mexico, South America, etc. (except Brazil), West Indies	3,881,647	1,027,815	32,144,843	1,016,325
Brazil	2,158,950	316	1,368,109	707,613
British North America		1,170,549		122
Australia	13,442,373	172,070		796,889
New Zealand	4,467,637	413,083		
Other countries	1,399,610	48,787	7,514,085	553,487
Total	224,566,171	50,255,805	243,174,620	64,646,039

STOCK OF MONEY IN THE UNITED STATES.

On December 31, 1908, the stock of domestic coin in the United States was $2,266,695,667, as shown by the following official table:

Items.	Gold.	Silver.	Total.
Estimated stock of coin December 31, 1907	$1,449,752,196	$707,997,205	$2,157,749,401
Net imports United States coin, calendar year 1908		2,313,930	2,313,930
United States coin returned in transports from the Philippine Islands, not recorded at the custom-house, calendar year 1908		30,998	[a] 30,998
Coinage, calendar year 1908	131,638,633	12,391,777	144,030,410
Total	1,581,390,829	722,733,910	2,304,124,739
Less:			
United States coin melted for recoinage (face value), calendar year 1908	5,360,887	1,046,417	6,407,304
United States coin estimated to have been used in the arts, calendar year 1908	3,500,000	100,000	3,600,000
Net exports United States coin, calendar year 1908	27,421,768		27,421,768
Total	36,282,655	1,146,417	37,429,072
Estimated stock of coin in the United States December 31, 1908	1,545,108,174	721,587,493	2,266,695,667

[a] Of this amount $10,000 were in 1-dollar pieces.

NOTE.—The number of standard silver dollars coined to December 31, 1908, was 570,272,610, which, added to the Hawaiian dollar coinage, 500,000, plus the number imported from the Philippine Islands, 150,000, and the number returned in government transports, 483,730, equals 571,406,340. Since July 1, 1898, the number of standard silver dollars exported in transports has been 2,495,000; and since 1883 the number melted has been 186,710 (see Report of the Director of the Mint, 1908, p. 16), and the number of Hawaiian dollars melted to December 31, 1908, has been 454,818, a total disposition of 3,136,528, leaving in the United States on December 31, 1908, 568,269,812 standard silver dollars, and 153,317,681 dollars in subsidiary silver coins.

The value of the gold and silver bullion held by the government institutions on December 31, 1908, was as follows:

GOLD AND SILVER BULLION IN THE MINTS AND ASSAY OFFICES ON DECEMBER 31, 1908.

Bullion.	Value.
Gold	$111,041,339
Silver (cost)	7,788,802
Total	118,830,141

The total metallic stock in the United States was as follows:

METALLIC STOCK IN THE UNITED STATES ON DECEMBER 31, 1908.

Bullion and coin.	Value.
Gold	$1,656,149,513
Silver	729,376,295
Total	2,385,525,808

The total metallic stock in the United States on December 31, 1907, was as follows:

METALLIC STOCK ON DECEMBER 31, 1907.

Bullion and coin.	Value.
Gold	$1,612,689,332
Silver	714,968,494
Total	2,327,657,826

The above shows that there was an increase in the stock during calendar year 1908 of $57,867,982.

The location of the stock of metallic and paper money in the United States December 31, 1908, was as follows:

Money.	In Treasury.	Outside of Treasury.	Total.
Metallic:			
Gold bullion	$111,041,339	.....	$111,041,339
Silver bullion	7,788,802	.....	7,788,802
Gold coin	924,316,981	$620,791,193	1,545,108,174
Silver dollars	495,957,130	72,312,682	568,269,812
Subsidiary silver coin	18,551,231	134,766,450	153,317,681
Total metallic	1,557,655,483	827,870,325	2,385,525,808
Paper:			
Legal-tender notes (old issue)	10,855,442	335,825,574	346,681,016
Legal-tender notes (act of July 14, 1890)	8,280	4,587,720	4,596,000
National-bank notes	25,717,767	651,350,398	677,068,165
Total notes	36,581,489	991,763,692	1,028,345,181
Gold certificates	57,729,060	800,583,809	.....
Silver certificates	21,332,274	469,883,726	.....
Total certificates	79,061,334	1,270,467,535	.....
Grand total	.....	3,090,101,552	3,413,870,989

GOLD AND SILVER USED IN INDUSTRIAL ARTS IN THE UNITED STATES DURING THE CALENDAR YEAR 1908.

Among the purveyors of gold and silver bars for use in the industrial arts, the United States mint at Philadelphia and the United States assay office at New York hold the foremost places. Consequently the larger portion of the material consumed in the arts is brought under government notice and is a matter of public record.

The following table gives the value of the gold and the quantity of the silver bars issued by the government institutions and private refineries during the calendar year 1908:

GOLD AND SILVER BARS ISSUED BY THE GOVERNMENT INSTITUTIONS AND MANUFACTURED BY PRIVATE REFINERIES FOR USE IN THE INDUSTRIAL ARTS DURING THE CALENDAR YEAR 1908.

Material used.	Gold.		Total.	Silver.		Total.
	Government institutions.	Private refineries.		Government institutions.	Private refineries.	
				Fine ounces.	*Fine ounces.*	*Fine ounces.*
Domestic bullion	$8,147,514.90	$260,456.00	$8,407,970.90	681,295.08	15,161,517.00	15,842,812.08
Foreign material	2,846,767.12	207.00	2,846,974.12	1,829,103.63	2,661,838.00	4,490,941.63
United States coin	197.17	334,713.00	334,910.17	.....	1,938.00	1,938.00
Old jewelry, etc	14,686,845.78	2,034,300.00	16,721,145.78	324,364.21	3,115,366.00	3,439,730.21
Total	25,681,324.97	2,629,676.00	28,311,000.97	2,834,762.92	20,940,659.00	23,775,421.92

Estimating that the total amount of gold coin used in the arts during the calendar year has been $3,500,000, and silver coin $100,000, equivalent to 77,344 fine ounces, the total industrial consumption would be as follows:

Material used.	Gold.	Silver.
		Fine ounces.
Domestic bullion	$8,407,970.90	15,842,812.08
Foreign material	2,846,974.12	4,490,941.63
United States coin	3,500,000.00	77,344.00
Old material	16,721,145.78	3,439,730.21
Total	31,476,090.80	23,850,827.92

The following table gives the amounts and the classification of gold and silver used in the industrial arts in the United States since 1880:

GOLD AND SILVER BARS FURNISHED FOR USE IN MANUFACTURES AND THE ARTS, AND CLASSIFICATION OF THE MATERIAL USED, BY CALENDAR YEARS, SINCE 1880.

GOLD.

Calendar year.	New material.				Old material.	Grand total.
	United States coin.	Domestic bullion.	Foreign bullion and coin.	Total new material.		
1880	$3,300,000	$6,000,000	$1,267,600	$10,567,600	$395,000	$10,962,600
1881	2,700,000	7,000,000	1,547,800	11,247,800	522,900	11,770,700
1882	2,500,000	7,000,000	671,500	10,171,500	696,500	10,868,000
1883	4,875,000	7,840,000	194,500	12,909,500	1,549,300	14,458,800
1884	5,000,000	6,000,000	385,500	11,385,500	3,114,500	14,500,000
1885	3,500,000	6,736,927	178,913	10,415,840	1,408,902	11,824,742
1886	3,500,000	7,003,480	638,003	11,141,483	1,928,046	13,069,529
1887	3,500,000	9,090,342	384,122	12,974,464	1,835,882	14,810,346
1888	3,500,000	9,893,057	718,809	14,111,866	2,402,976	16,514,842
1889	3,500,000	9,686,827	291,258	13,478,085	3,218,971	16,697,056
1890	3,500,000	10,717,472	362,062	14,579,534	3,076,426	17,655,960
1891	3,500,000	10,697,679	628,525	14,826,204	4,860,712	19,686,916
1892	3,500,000	10,588,703	771,686	14,860,389	4,468,685	19,329,074
1893	1,500,000	8,354,482	804,254	10,658,736	2,777,165	13,435,901
1894	1,500,000	6,430,073	543,585	8,473,658	2,184,946	10,658,604
1895	1,500,000	8,481,789	471,027	10,452,816	2,976,269	13,429,085
1896	1,500,000	7,209,787	316,804	9,026,591	2,369,343	11,395,934
1897	1,500,000	7,184,822	613,981	9,298,803	2,571,428	11,870,231
1898	1,500,000	9,463,262	437,641	11,400,903	2,164,976	13,565,879
1899	1,500,000	13,267,287	344,906	15,112,193	2,734,985	17,847,178
1900	1,500,000	14,582,627	584,903	16,667,530	3,480,612	20,148,142
1901	1,500,000	16,296,688	685,642	18,482,330	3,386,626	21,868,956
1902	1,500,000	18,653,625	851,673	21,005,298	4,677,549	25,682,847
1903	3,500,000	19,944,365	953,597	24,397,962	4,665,589	29,063,551
1904	3,500,000	12,298,459	7,131,577	22,930,036	5,725,927	28,655,963
1905	3,500,000	20,559,910	3,562,069	27,621,979	5,586,636	33,208,615
1906	3,500,000	18,667,804	10,452,037	32,619,841	6,506,922	39,126,763
1907	3,500,000	15,546,924	14,502,571	33,549,495	7,177,575	40,727,070
1908	3,500,000	8,407,971	2,846,974	14,754,945	16,721,146	31,476,091
Total	82,375,000	313,604,362	53,143,519	449,122,881	105,186,494	554,309,375

SILVER (FINE OUNCES).

1880	464,063	3,867,188	273,023	4,604,274	112,148	4,716,422
1881	154,687	4,563,281	286,945	5,004,913	137,672	5,142,585
1882	154,687	4,906,920	340,544	5,402,151	164,665	5,566,816
1883	154,687	3,576,143	119,883	3,850,713	434,595	4,285,308
1884	154,687	3,480,469	502,734	4,137,890	131,484	4,269,374
1885	154,687	3,511,310	48,501	3,714,498	357,472	4,071,970
1886	154,687	2,804,635	638,562	3,597,884	312,589	3,910,473
1887	154,687	3,173,208	506,595	3,834,490	371,719	4,206,209
1888	154,687	5,010,218	597,082	5,761,987	504,318	6,266,305
1889	154,687	5,644,495	508,920	6,308,102	472,582	6,780,684
1890	154,687	5,525,155	963,254	6,643,096	495,077	7,138,173
1891	154,687	5,637,642	971,516	6,763,845	663,707	7,427,552
1892	154,687	5,572,006	966,643	6,693,336	500,706	7,194,042
1893	77,344	5,082,054	1,346,326	6,505,724	945,787	7,451,511
1894	77,344	6,635,685	759,824	7,472,853	944,504	8,417,357
1895	77,344	7,599,323	752,942	8,429,609	1,065,902	9,495,511
1896	77,344	6,160,777	821,387	7,059,508	832,860	7,892,368
1897	77,344	7,116,009	616,579	7,809,932	853,457	8,663,389
1898	77,344	9,417,981	489,160	9,984,485	734,233	10,718,718
1899	77,344	8,388,658	529,137	8,995,139	1,583,678	10,578,817
1900	77,344	10,423,485	940,450	11,441,279	1,776,006	13,217,285
1901	77,344	11,809,418	1,038,409	12,925,171	1,208,523	14,133,694
1902	77,344	15,236,711	1,289,623	16,603,678	2,741,331	19,345,009
1903	77,344	15,016,256	954,930	16,048,530	3,919,726	19,968,256
1904	77,344	16,629,834	1,218,122	17,925,300	2,554,687	20,479,987
1905	77,344	16,580,307	2,754,003	19,411,654	4,289,023	23,700,677
1906	77,344	15,231,628	2,734,187	18,043,159	3,810,105	21,853,264
1907	77,344	17,431,691	4,628,208	22,137,243	2,232,541	24,369,784
1908	77,344	15,842,812	4,490,942	20,411,098	3,439,730	23,850,828
Total	3,557,811	241,875,299	32,088,431	277,521,541	37,590,827	315,112,368

EXCHANGE OF FINE GOLD BARS FOR GOLD COIN AND GOLD BULLION

The value of the fine gold bars furnished to the trade in exchange for gold coin and bullion, monthly, by the United States mint at Philadelphia and assay office at New York for the calendar year 1908 was as follows:

Month.	Exchanged for gold coin.			Exchanged for gold bullion.		
	Philadelphia.	New York.	Total.	Philadelphia.	New York.	Total.
January	$599,712.36	$1,186,232.51	$1,785,944.87	$37,099.95	$274,054.62	$311,154.57
February	428,033.66	935,597.65	1,363,631.31	21,853.43	133,962.61	155,816.04
March	475,790.59	1,041,578.99	1,517,369.58	20,462.53	783,644.83	804,107.36
April	356,806.87	12,661,317.72	13,018,124.59	28,708.44	192,063.30	220,771.74
May	398,374.04	21,876,751.91	22,275,125.95	19,915.81	185,648.44	205,564.25
June	416,668.73	2,695,259.38	3,111,928.11	18,934.30	47,691.51	66,625.81
July	475,796.21	2,112,273.44	2,588,069.65	26,600.69	292,865.08	319,465.77
August	431,948.16	1,546,461.69	1,978,409.85	12,869.29	253,812.14	266,681.43
September	628,666.06	1,983,208.11	2,611,874.17	27,409.85	278,425.46	305,835.31
October	718,725.12	2,247,508.60	2,966,233.72	22,944.74	293,822.94	316,767.68
November	683,094.56	1,795,375.58	2,478,470.14	15,191.21	255,216.10	270,407.31
December	317,110.90	7,722,469.48	8,039,580.38	23,438.95	326,243.63	349,682.58
Total	5,930,727.26	57,804,035.06	63,734,762.32	275,429.19	3,317,450.66	3,592,879.85

Of the total value of bars ($63,734,762.32) exchanged for coin, $40,973,663.35 were exported and $22,761,098.97 were used in the industrial arts.

THE WORLD'S INDUSTRIAL CONSUMPTION.

Since 1893 this bureau has endeavored to obtain, through the United States representatives abroad, official estimates from the various countries of the world of the consumption of precious metals in the arts and industries.

The results of these inquiries, though at times incomplete, are considered sufficiently full and accurate to encourage renewed efforts.

The interrogatories sent out by this bureau for 1908 were as follows:

"What was the weight of fine gold used in the industrial arts during the calendar year 1908? What amount of this was new gold, what amount old gold, and what amount coins?

"What was the weight of fine silver used in the industrial arts during the calendar year 1908? What amount of this was new silver, what amount old silver, and what amount coins?"

The following verbatim replies from countries heard from as to their consumption of precious metals in the arts during 1908 are submitted, together with such other matter relative to the question as was assumed to be of value:

Africa.—"It is understood that a certain amount of current coinage has been utilized in the industrial arts in this country, of which there are no returns."

Australasia.—New Zealand: "Not ascertainable, but insignificant." South Australia: "No record kept by manufacturers." Tasmania: "No means of ascertaining quantities, but probably insignificant." Victoria: "The weight of fine gold and silver used in the industrial arts in the State of Victoria during 1908 is not ascertainable." Western Australia: "Gold, about £5,000; about 80 per cent of which was coin and the balance old gold, manufactured gold, etc." "Silver, about £500 (the mint sold 1,258.10 ounces of fine silver during the year to local manufacturers)."

Austria-Hungary.—Austria: "The domestic consumption of the precious metals in the industries can be inferred from the gold and silver submitted for stamping, which during 1908 was as follows:

GOLD.

Classification.	Gross weight.	Fine weight.
	Kilos.	*Kilos.*
Domestic gold ware, 0.58154 fine	7,267.171	4,226.151
Domestic plated ware (the gold is reckoned at 2.5 per cent of the total weight of 182.835 kilos)		4.571
Domestic fine gold used for fire-gilded pure 12-carat and 6-carat and for galvano-gilded wire		24.885
Total		4,255.607

"In regard to other uses of fine gold in the industries in the year 1908 (especially in the galvanic gilding) there are no data at hand.

"In the last three years the consumption of gold was as follows:

	Kilos fine.
1905	687.549
1906	583.963
1907	552.998

"According to the average of the three years, as stated above, the consumption of gold in industries other than before specified would amount to 608.170 kilograms of fine gold in 1908.

SILVER.

Classification.	Gross weight.	Fine weight.
	Kilos.	*Kilos.*
Domestic silverware, 0.797015 fine	60,146.680	47,937.806
Silver wire:		
(*a*) Pure		1,789.766
(*b*) Half pure		18.823
(*c*) Quarter pure		1.119
Total		49,747.514

"In relation to the consumption of silver in the industries other than those above mentioned no data are yet at hand. In the last three years the consumption of silver in these industries has been as follows:

	Kilos fine.
1905	8,815.148
1906	10,688.920
1907	12,647.065

"According to the average consumption of these three years, that of 1908 should figure up to 10,717.044 kilograms of fine silver. Besides, the silver employed as alloy in gold wares, being on the average 10 per cent of the full weight, would amount to 726.717 kilograms of fine silver, as estimated.

"According to past experience in the consumption of the precious metals in the industries, old material formed 27 per cent of the total in gold and 15 per cent in silver.

The results for 1908 may therefore be represented as follows:

Gold:	Kilos fine.
New material	3,550.557
Old material	1,313.220

"The gold thus used consisted of—

	Per cent.
Coins	63.0
Alloyed gold	23.0
Gold scrap	4.33
Fine gold	9.67
Silver:	Kilos fine.
New material	52,012.584
Old material	9,178.691

"The silver thus used consisted of—

	Per cent.
Coins	0.99
Alloyed silver	13.08
Silver scrap	2.64
Fine silver	83.29

"The 3,550.557 kilograms of gold 'new material' is equivalent to $2,359,700 in United States currency, and the 52,012.584 kilograms of silver 'new material' represents 1,672,204 ounces of fine silver."

As no returns have been received from Hungary, the figures for 1907 are repeated for 1908, viz: Gold, $1,081,059, and silver, 306,939 ounces, fine; a total consumption of $3,440,759 for gold, and 1,979,143 fine ounces for silver.

Great Britain.—"No information available."

Dr. T. K. Rose, chemist and assayer of the royal mint in London, reports that the gold and silver wares presented for assay and stamping from July 1, 1907, to June 30, 1908, at Birmingham, Sheffield, and Chester amounted to 520,712 ounces for gold, and 5,802,855 ounces for silver. Heretofore this bureau has accepted this material at British standard; the report for this year states that "the amount of fine gold contained in these wares was 268,273 ounces;" assuming that 25 per cent of this amount was from old material, the value of the new material is $4,159,300. Deducting 25 per cent for old material of the silver and assuming that it is 0.925 fine (British standard), gives 4,025,730 ounces, fine.

These are the actual figures showing the amounts contained in wares presented to government institutions for assaying and stamping, but must not be considered as the total amounts consumed in the arts during the calendar year 1908. As no later information has been received regarding the 1908 consumption, the latest estimate we have received (1905) is repeated, viz: Gold, $14,500,000, and silver, 7,500,000 ounces, fine.

Brazil.—"No statistics."

China.—Shanghai: "No statistics are available showing the weight of metals used in the industrial arts, and the figures given are merely approximate. The weight of fine gold used in Shanghai during 1908 was about 30,000 ounces, of which 10,000 ounces was new gold and 20,000 ounces old gold. The amount of gold coin was practically nil. The weight of silver used was about 200,000 ounces, of which about 70,000 ounces were new silver and 130,000 ounces old silver. Silver coins are not used to any extent, being employed in making trinkets and souvenirs." Foochow: "New gold, 78 catties; old gold, 312 catties; total, 390 catties. Amount of coins, none. (In Foochow there are 6 goldsmiths' establishments, in each of which an average amount of 65 catties of gold is used a year.) New silver, 200 catties, old silver, 1,925 catties; total, 3,125 catties. Amount of coins, none." (There are about 300 silversmiths' shops, each using $6\frac{1}{4}$ catties, on average, a year, and 20 jewelry stores, each using $62\frac{1}{2}$

catties, on average, a year.) Mukden: "The weight of fine gold used in the industrial arts in Mukden during 1908 was 3,887.33 ounces, Troy. This was all, as far as known, new gold, no old gold or coins being thus employed. The weight of fine silver used in the industrial arts during 1908 was 169,746 ounces, Troy. This was all, as far as is known, new silver, no coins being used."

In accordance with the above information, the value of the gold, new material, used in the arts in China during 1908 was $318,435, and the weight of the silver used was 243,635 ounces, fine.

Costa Rica.—"No data as to gold and silver used in arts. Quantity negligible."

Denmark.—"Impossible to give answer."

Dominican Republic.—"Amount inappreciable."

Ecuador.—"The weight of fine gold used in the industrial arts was estimated to be 500 ounces, of which 200 ounces was old gold and 300 ounces was coin. The weight of silver used in the industrial arts was estimated to be 4,000 ounces, which was all coin."

Egypt.—"The Government has no statistics as to the weight or value of the gold or silver employed in Egyptian industries."

France.—"The amount of gold used may be estimated at 29,320 kilograms, fine gold. The weight of gold objects stamped at the mint (Bureau du Controle), was 15,000 kilograms (950 and 800 thousandths). Silver, 325,600 kilograms. Objects stamped at the mint and other bureaux de control, 145,600 kilograms (950–800 thousandths)."

It has been the custom in this bureau to deduct 25 per cent of the gold and 15 per cent of the silver reported by France as having been consumed in the arts and industries, for the amount of old material so used; following this custom, the new material consumed in the arts during 1908 amounted to 21,990 kilograms of gold, valued at $14,614,600, and 276,760 kilograms, or 8,897,800 ounces, fine, of silver.

Germany.—"No official data have been collected on the amount of gold and silver consumed for industrial purposes during the calendar year 1908."

As no official information has been received relative to the amount of gold and silver used in industrial consumption in Germany during 1908, the estimate for 1905 (the latest received) is repeated, viz: Gold, $11,000,000, and silver, 6,500,000 ounces.

Greece.—"Unknown."

Guiana (British).—"There is no record kept of the weight of fine gold and fine silver used in the industrial arts; the amount, however, is supposed to be very small."

Guiana (Dutch).—"No statistics are kept."

Haiti.—"There are no statistics showing the amount of fine gold or fine silver used in the arts. Other than in photography there seems to be no industrial use of gold or silver."

Hongkong (British).—"Very small amount by individual Chinese jewelers worked into ornaments. Quite an amount of Japanese gold yen coins were worked into gold leaf by the Chinese. Silver, some Chinese jewelry and plate. Estimated, Hongkong dollars, 100,000."

Honduras.—"No data obtainable as to gold used in arts; probably none. Silver used in arts, no data; amount insignificant."

India (British).—"I have not been able to obtain data on which to base intelligent answers to these questions. The only answer sup-

plied by the Government is: 'There are no data from which to make an estimate, except that it may be said that all the uncoined gold imported is manufactured into plate and ornaments. All gold produced in the Indian mines is exported to London for assay.' The imports of uncoined gold in 1907–8 amounted in value to about $35,796,235. So it may be said that that much gold was used in the industrial arts, or is held in stock for that purpose. There is no way of telling how much of gold coins were melted and thus used. The quantity of silver in sterling value employed in industry is officially stated to be about $23,000,000. Silver for rupee coinage is imported direct by the Government. No silver is produced from mines in India."

The amounts given above were used during the fiscal year 1908, and were printed in our report for last year; as no further information has been received for the fiscal year 1909, the figures for 1908 are accepted and used for that period, viz: $35,796,200 for gold, and 34,848,500 fine ounces for silver.

Italy.—In the absence of any official figures from Italy regarding the amount of gold and silver consumed in the arts and industries during 1908, the amounts received for 1907 are repeated, viz: Gold, $3,000,000; silver, 2,000,000 ounces, fine.

Japan.—"The weight of fine gold and fine silver used in industrial arts during the calendar year 1908 is unknown."

Madagascar.—"There were 14.18726 kilograms (31⅓ pounds) of fine gold used in industrial arts in Madagascar during the calendar year 1908. 12.84526 kilograms (28⅙ pounds) was of new gold, and 1.34218 kilograms (2$\frac{9}{10}$ pounds) was of old gold and coin. There was no silver used in industrial arts in Madagascar during the calendar year 1908." The value of the 12.84+ kilograms of new material (gold) given above is $8,500.

Morocco.—"None."

Netherlands.—"The quantity of gold used in industrial arts may be estimated at 873 kilograms of fine gold, and that of silver at 14,094 kilograms of fine silver. Whether this was obtained from new gold, old gold, or coins can not be stated."

The value of the weight of gold given above is $580,200, and the weight of the silver represents 453,122 fine ounces.

This bureau has in past years estimated the industrial consumption of the Netherlands and Belgium together, but as Belgium made no returns for 1908 the estimate for 1905 (the latest at hand) is accepted and repeated, viz: Gold, $1,500,000; silver, 1,000,000 ounces, fine.

Norway.—"As to the weight and value of any gold and silver employed for industrial purposes, information is not available."

Persia.—"Probably some English and Turkish gold coins."

Portugal.—"No answer obtainable."

Russia.—"Gold: There were presented for stamping objects of gold of Russian manufacture weighing 416 poods 37 pounds 7 zolotniks; of foreign manufacture weighing 62 poods 41 zolotniks. Besides, in the manufacture of medals, etc., the St. Petersburg mint used 25 poods 27 pounds 46 zolotniks 54 dolis of fine gold.

"Silver: There were presented for stamping objects of silver of Russian manufacture weighing 7,501 poods 19 pounds 29 zolotniks; of foreign manufacture, 277 poods 1 pound 7 zolotniks. In the making of medals, etc., the St. Petersburg mint used 54 poods 24 pounds 89 zolotniks 66 dolis of fine silver."

The gold objects stamped at the mint represent 219,572 ounces, and the amount used in the manufacture of metals, 13,528 ounces, making a total of 233,100 ounces, fine, of the value of $4,818,600.

The silver objects stamped at the mint represent 3,950,619 ounces, and the amount of silver used in the manufacture of medals was 28,767 ounces, making a total of 3,979,386 ounces.

San Salvador.—"The amount of fine gold used in the arts was equivalent in value to approximately $35,000; the gold used was exclusively coins melted over. The amount of fine silver used in the arts was equivalent in value to approximately $5,000; of this a very small quantity was old silver, the balance Colombian, Chilean, and Bolivian coins, not in circulation in Salvador."

Siam.—"No statistics."

Spain.—"Not known."

Straits Settlements.—"No information available; statistics do not show."

Sweden.—"At least 700 kilograms of fine gold and 8,000 kilograms of fine silver were used in Sweden during 1908 for industrial purposes."

The weight of the gold as given above is equivalent to $465,200 in United States currency, and the weight of the silver represents 257,200 ounces, fine.

Switzerland.—"The weight of fine gold used in 1908 by the Swiss industry was about 10,200 kilograms. For lack of information it is impossible to specify here the quantity of new gold, old gold, and of gold coins used for industrial purposes. Yet it may be possible that a considerable quantity of new gold coins of full weight have been melted. As regards the fine silver used in 1908 by our industry, its total weight was about 69,000 kilograms. In view of the low value of silver, it is to be presumed that silver in bullion, or scraps, was melted for industrial purposes."

The value of the gold (10,200 kilograms) is $6,778,920, and the kilograms for silver represent 2,218,300 ounces, fine.

Other countries.—The estimate for 1905, viz: Gold $3,000,000 and silver 2,000,000 fine ounces, is assumed to be the amounts used for industrial purposes in the countries other than those above mentioned in 1908.

The world.—Although the data for an estimate upon the world's consumption of the precious metals in the arts and industries are confessedly incomplete and unsatisfactory, we venture upon the strength of the foregoing information to submit the following estimate:

Country.	Gold.	Silver.
		Fine ounces.
United States	$14,754,900	20,411,100
Great Britain	14,500,000	7,500,000
France	14,614,600	8,897,800
Germany	11,000,000	6,500,000
Switzerland	6,778,900	2,218,300
Italy	3,000,000	2,000,000
Russia	4,818,600	3,979,400
Austria-Hungary	3,440,700	1,979,100
Netherlands and Belgium	1,500,000	1,000,000
Sweden	465,200	257,200
China	318,400	243,600
Madagascar	8,500	.....
Other countries	3,000,000	2,000,000
Total	78,199,800	56,986,500
British India	35,796,200	34,848,500
Grand total	113,996,000	91,835,000

THE WORLD'S PRODUCTION OF GOLD AND SILVER IN 1908.

GOLD.

The world's production of gold for 1908 was 21,378,480 ounces, fine, valued at $441,932,200, while the production for 1907 was 19,860,620 ounces, fine, valued at $410,555,300, showing an increased product in 1908 of 1,517,860 fine ounces of the value of $31,376,900.

SILVER.

The silver product of the world for 1908 was 203,186,370 ounces, fine, while that of 1907 was 185,014,623 ounces, fine, an increase in 1908 of 18,171,747 fine ounces.

The table following shows the increase and decrease in production for each country in 1908 compared with 1907:

INCREASE AND DECREASE DURING 1908 AS COMPARED WITH 1907.

Country.	Gold.		Silver.	
	Increase in 1908.	Decrease in 1908.	Increase in 1908.	Decrease in 1908.
	Fine ounces.	*Fine ounces.*	*Fine ounces.*	*Fine ounces.*
United States	199,513			4,073,900
Canada	70,595		9,326,433	
Mexico	178,511		12,516,824	
Africa	703,202		482,164	
Australasia		113,701		774,000
Russia	66,173			
Austria-Hungary		755	26,224	
Germany		86		116,542
Norway			24,659	
Sweden		201	5,967	
Italy	337			62,995
Spain			78,639	
Turkey		108		59,380
Great Britain		642		1,961
Argentina	2,816		101,930	
Bolivia and Chile		44,561	583,759	
Colombia	8,306		326,320	
Ecuador	4,022		20,186	
Brazil	8,509			
Venezuela	102		104,626	
Guiana, British	5,017			
Guiana, Dutch	1,110			
Uruguay	1,923			
Central America	44,069			432,087
Japan	5,557		727,904	
China	200,624			
Korea	42,410			
Siam	7,812			
India, British	10,395			
East Indies (British)		7,755		
East Indies (Dutch)	29,004		187,510	
Total	1,590,007	167,809	24,513,145	5,520,865
Net increase	1,422,198		18,992,280	

The following table shows, by calendar years, the production and value of gold and silver in the world since 1860:

PRODUCT OF GOLD AND SILVER IN THE WORLD SINCE 1860.

[The annual production of 1860 to 1872 is obtained from 5-year period estimates, compiled by Dr. Adolph Soetbeer. Since 1872 the estimates are those of the Bureau of the Mint.]

Calendar year.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Commercial value.
1860	6,486,262	$134,083,000	29,095,428	$39,337,000
1861	5,949,582	122,989,000	35,401,972	46,191,000
1862	5,949,582	122,989,000	35,401,972	47,651,000
1863	5,949,582	122,989,000	35,401,972	47,616,000
1864	5,949,582	122,989,000	35,401,972	47,616,000
1865	5,949,582	122,989,000	35,401,972	47,368,000
1866	6,270,086	129,614,000	43,051,583	57,646,000
1867	6,270,086	129,614,000	43,051,583	57,173,000
1868	6,270,086	129,614,000	43,051,583	57,086,000
1869	6,270,086	129,614,000	43,051,583	57,043,000
1870	6,270,086	129,614,000	43,051,583	57,173,000
1871	5,591,014	115,577,000	63,317,014	83,958,000
1872	5,591,014	115,577,000	63,317,014	83,705,000
Total	78,766,630	1,628,252,000	547,997,231	729,563,000
1873	4,653,675	96,200,000	63,267,187	82,120,800
1874	4,390,031	90,750,000	55,300,781	70,674,400
1875	4,716,563	97,500,000	62,261,719	77,578,100
1876	5,016,488	103,700,000	67,753,125	78,322,600
1877	5,512,196	113,947,200	62,679,916	75,278,600
1878	5,761,114	119 092 800	73 385 451	84 540 000
1879	5,262,174	108,778,800	74,383,495	83,532,700
1880	5,148,880	106,436,800	74,795,273	85,640,600
1881	4,983,742	103,023,100	79,020,872	89,925,700
1882	4,934,086	101,996,600	86,472,091	98,232,300
1883	4,614,588	95,392,000	89,175,023	98,984,300
1884	4,921,169	101,729,600	81,567,801	90,785,000
1885	5,245,572	108,435,600	91,609,959	97,518,800
1886	5,135,679	106,163,900	93,297,290	92,793,500
1887	5,116,861	105,774,900	96,123,586	94,031,000
1888	5,330,775	110,196,900	108,827,606	102,185,900
1889	5,973,790	123,489,200	120,213,611	112,414,100
1890	5,749,306	118,848,700	126,095,062	131,937,000
1891	6,320,194	130,650,000	137,170,919	135,500,200
1892	7,094,266	146,651,500	153,151,762	133,404,400
1893	7,618,811	157,494,800	165,472,621	129,119,900
1894	8,764,362	181,175,600	164,610,394	104,493,000
1895	9,615,190	198,763,600	167,500,960	109,545,600
1896	9,783,914	202,251,600	157,061,370	105,859,300
1897	11,420,068	236,073,700	160,421,082	96,252,700
1898	13,877,806	286,879,700	169,055,253	99,742,600
1899	14,837,775	306,724,100	168,337,453	101,002,600
1900	12,315,135	254,576,300	173,591,364	107,626,400
1901	12,625,527	260,992,900	173,011,283	103,806,700
1902	14,354,680	296,737,600	162,763,483	86,264,700
1903	15,852,620	327,702,700	167,689,322	90,552,200
1904	16,804,372	347,377,200	164,195,266	95,233,300
1905	18,396,451	380,288,700	172,317,688	105,113,700
1906	19,471,080	402,503,000	165,054,497	111,721,100
1907	19,956,283	412,532,900	184,194,090	121,568,100
1908	21,378,481	441,932,200	203,186,370	108,684,400
Total	332,953,704	6,882,764,200	4,515,015,025	3,591,986,300
Grand total	411,720,334	8,511,016,200	5,063,012,256	4,321,549,300

WORLD'S COINAGE, 1906, 1907, AND 1908.

In the Appendix will be found a table, revised from the latest information received, exhibiting the coinages of the various countries of the world during the calendar years 1906, 1907, and 1908.

COINAGE OF NATIONS.

Calendar year.	Gold.	Silver.
1906	$366,326,788	$155,590,466
1907	411,803,902	221,652,826
1908	327,018,200	194,692,737

While the above figures represent, as accurately as the bureau has been able to ascertain, the total value of the gold and silver coinage of the world during the calendar years 1906, 1907, and 1908, they do not accurately represent the value of the coinage from new material alone, but include the value of the recoinage of foreign and domestic coins and that derived from old material, plate, jewelry, etc., melted and used in coinage. Many foreign governments in their reports to the bureau failed to separate the values of the coinage derived from these various sources.

The following table, exhibits, by calendar years, the fine ounces and value of the gold and silver coinage of the world since 1873:

COINAGE OF GOLD AND SILVER OF THE MINTS OF THE WORLD FOR THE CALENDAR YEARS SINCE 1873.

Calendar year.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Coining value.
1873	12,462,890	$257,630,802	101,741,421	$131,544,464
1874	6,568,279	135,778,387	79,610,875	102,931,232
1875	9,480,892	195,987,428	92,747,118	119,915,467
1876	10,309,645	213,119,278	97,899,525	126,577,164
1877	9,753,196	201,616,466	88,449,796	114,359,332
1878	9,113,202	188,386,611	124,671,870	161,191,913
1879	4,390,167	90,752,811	81,124,555	104,888,313
1880	7,242,951	149,725,081	65,442,074	84,611,974
1881	7,111,864	147,015,275	83,539,051	108,010,086
1882	4,822,851	99,697,170	85,685,996	110,785,934
1883	5,071,882	104,845,114	84,541,904	109,306,705
1884	4,810,061	99,432,795	74,120,127	95,832,084
1885	4,632,273	95,757,582	98,044,475	126,764,574
1886	4,578,310	94,642,070	96,566,844	124,854,101
1887	6,046,510	124,992,465	126,388,502	163,411,397
1888	6,522,346	134,828,855	104,354,000	134,922,344
1889	8,170,611	168,901,519	107,788,256	139,362,595
1890	7,219,725	149,244,965	117,789,228	152,293,144
1891	5,782,463	119,534,122	106,962,049	138,294,367
1892	8,343,387	172,473,124	120,282,947	155,517,347
1893	11,243,342	232,420,517	106,697,783	137,952,690
1894	11,025,680	227,921,032	87,472,523	113,095,788
1895	11,178,855	231,087,438	98,128,832	126,873,642
1896	9,476,639	195,899,517	123,394,239	159,540,027
1897	21,174,850	437,722,992	129,775,082	167,790,006
1898	19,131,244	395,477,905	115,461,020	149,282,936
1899	22,548,101	466,110,614	128,566,167	166,226,964
1900	17,170,053	354,936,497	143,362,948	185,358,156
1901	12,001,537	248,093,787	107,439,666	138,911,891
1902	10,662,098	220,405,125	149,826,725	193,715,362
1903	11,634,166	240,499,547	161,159,508	211,795,829
1904	22,031,285	455,427,085	136,518,406	176,508,646
1905	11,898,037	245,954,257	134,062,314	173,333,093
1906	17,721,058	366,326,788	120,339,501	155,590,466
1907	19,921,014	411,803,902	171,434,608	221,652,826
1908	15,819,505	327,018,200	150,582,664	194,692,737
Total	387,070,969	8,001,467,123	4,001,972,599	5,177,695,596

PART II.

THE COLLECTION OF THE STATISTICS OF THE PRODUCTION OF GOLD AND SILVER IN THE UNITED STATES IS NOW MADE BY THE BUREAU OF THE MINT IN CONJUNCTION WITH THE GEOLOGICAL SURVEY. THE FOLLOWING REVIEW OF THE MINING OF GOLD AND SILVER IN THE DIFFERENT PRODUCING STATES AND TERRITORIES HAS BEEN PREPARED BY THE AGENTS OF THE GEOLOGICAL SURVEY LOCATED IN THE RESPECTIVE STATES AND TERRITORIES.

ALASKA.

The gold production of Alaska in 1908 was chiefly from three districts, which in order of their importance are: Fairbanks, Seward Peninsula, and southeastern Alaska. More than three-fourths of the gold came from the placers of Fairbanks and Seward Peninsula. The lode mines of southeastern Alaska produced most of the balance. The copper mines of the Ketchikan and Prince William Sound districts contributed small amounts. The yield from the placer camps was not materially influenced by the general business depression of the year, but it was seriously affected by the prolonged drought in all the important districts. The production from auriferous lodes made a considerable advance, while that from the copper mines decreased, on account of the decline in price of copper.

The 1908 production from southeastern Alaska gold mines increased over that of 1907, but decrease is shown by comparison with the production of 1906. The increase is from the Juneau district, where work was marked by extensive developments. Seven properties were in operation in the district.

Little interest was shown in the gold mines and prospects of the Ketchikan district, and except the gold contained in copper ores the production of this metal was very small. Gold production is reported from Chichagoff Island, in the Sitka district. There was but little placer mining in southeastern Alaska.

In the Copper River district placer mining in the Nizina and Chistochina basins was continued during 1908. The Copper River Railway was extended during the season to Abercrombie Rapids, where connection is made with steamboats navigating the river above. Gold-bearing lodes have been found on the Nabesna White River region, but are undeveloped.

In the Cook Inlet-Susitna region the new Valdez placer district and the Yentna district produced considerable amounts. There was little activity in the Sunrise district, and in the Willow Creek district interest centered in the discovery of gold-bearing quartz veins, which were developed in a small way. Important for this district was the establishment of steamboat service on the Susitna and the building of a trail from Turnagain Arm to Kenai Lake, where connection is made with the Alaska Central Railway.

Yukon basin.—The increased output of gold for the Yukon basin must be credited entirely to the Fairbanks district, as in all the other districts except the Koyukuk the low water during the summer led to decrease in production. Outside of the Fairbanks district the most significant features of the mining industry were successful operation of dredges in the Fortymile district, the discovery of some new gold-bearing creeks in the Hot Spring region, the finding of auriferous gravels in the Beaver Creek basin, and in the exploration of some deep gravels carrying high gold tenor in the Koyukuk district.

In the Fairbanks field the production surpassed that of previous years. Some promising auriferous lodes were found. The Circle dis-

trict was helped by the construction of a wagon road to the Birch Creek diggings and the installation of a wireless station. Prospecting in the Chena region, which is known to be auriferous, has not verified the 1907 reports of rich discoveries. The Salcha and Tenderfoot basins were productive. The Rampart Hot Springs district continued productive, though seriously hampered by drought. In the Bonnifield-Kantishna region there was but little work done, though the discovery of an auriferous quartz vein and the erection of a small stamp mill are significant. In the Chandlar district there was nothing of importance except the reported discovery of an auriferous quartz vein.

There was much activity in the Koyukuk. In the lower Yukon and Kuskokwim regions the Innoko continued encouraging to prospectors, but there was no large production. New placer finds were made on Ruby Creek and Gold Mount, near the Yukon, and on the Tuluksuk, a tributary of the lower Kuskokwim.

Norton Sound continued to have but one scene of productive placer mining—Bonanza Creek.

Gold mining on Seward Peninsula was much less active during 1908 than in 1907. The cause of this decline lay not only in the very dry season, but also in the exhaustion of the placers of the third beach line at Nome. Dredge mining was active on the Solomon River. The district's only established lode mine was not operated. In the Council and Kougarok districts there was little work done, but in the Fairhaven district there was much more activity.

In the Kobuk district placer mining continued in a small way.

ARIZONA.

Arizona continues to hold first place in the United States as a copper producer. Although conditions at the close of 1907 would hardly have warranted an encouraging prophecy for 1908, the Territory increased its copper output by nearly 31,000,000 pounds. It also surpassed Montana's output by about 34,000,000 pounds. As, however, the difference between the average price of copper per pound in 1907 and 1908 was nearly 7 cents, the value of the output of 1908 was less than that of 1907 by more than $13,000,000. There were decreases in production of gold and lead, while that of zinc, silver, and copper increased. There were 8 smelting establishments within the Territory which aided in making the enlarged copper product: The Copper Queen and Calumet and Arizona, in Cochise County; the Old Dominion, in Gila County; the Arizona Copper Company, Detroit, and Shannon, in Graham County; the Imperial, in Pima County; and the United Verde, in Yavapai County. Nearly half the ore mined was smelted, about two-fifths was concentrated, and the remainder was treated in gold and silver mills. There were no lead furnaces operated in 1907 and the lead ore mined, which represented less than one-sixth of 1 per cent of the total, was shipped to plants at El Paso, Needles, and San Francisco. Siliceous ore amounted to only about 10 per cent, so that copper ore represented nearly 90 per cent of the total ore. Gold is derived almost entirely from siliceous ore and copper ore, the former supplying over 60 per cent. Most of the silver is found with the copper ore, with about 4 per cent in lead and the remainder in siliceous ore. The largest producers

of gold in 1908 were the United Verde in Yavapai County, the King of Arizona in Yuma County, the Congress mine in Yavapai County, and the Tom Reed in Mohave County. The most important silver producers were the Copper Queen in Cochise County, the United Verde and the Commonwealth and Tombstone mines in Cochise County.

The results of the 1907 panic were particularly hard on the small operator, and consequently there was a large decrease in the number of producing mines. Many of these were affected by the closing of the Humboldt smelter in Yavapai County. The plants at Duquesne and Mowry were also inactive. On the other hand, the larger companies were improving their plants, and the copper plant at Sasco in Pima County was operated. At Ray, in Pinal County, and Globe, in Gila County, and at the new camp of Courtland, in Cochise County, large deposits of low-grade ore were being developed. Gold and silver mills were in course of construction on the Tom Reed and Victor in Mohave County, North Star in Yuma County, and the property of the United Gold Mines Company in Yavapai County. Concentration plants were being added at the Imperial mine in Pima County and the Minnesota-Arizona Copper Company's property in Pinal County. It was reported at the end of 1908 that the new owners of the lead smelter at Benson were making contracts for ore.

Cochise County supplied a greater amount of ore and metals than in 1907, but the values of the silver, copper, lead, and zinc were so lessened that the total value of the county's output decreased over $5,000,000. The county was first in the production of all metals but gold. It supplied more than one-fifth of the Territory's gold output, more than half the silver, nearly half the lead, and about 45 per cent of the copper. The large mines at Bisbee and the smelters at Douglas were unusually active after improving the equipment. While the copper mines in the Warren district were making record productions, the mines at Pearce and in the Tombstone district were supplying greater amounts of gold-silver ore.

Coconino County marketed some copper ore, but by no means as much as in 1907 when the high price of copper made the shipping of low-grade ore possible.

Production in Gila County was not greatly different from that of 1907, but the resulting value fell short by over $2,000,000. Both the Old Dominion mine and smelter were active throughout the year, and these, together with the Arizona Commercial, Superior and Boston, United Globe, Warrior, and Globe Consolidated, were the largest producers. The Miami property has developed an extensive deposit of low-grade copper ore. The company intends erecting a large concentration mill for its treatment.

The value of the Graham County output was decreased by more than $2,000,000. This, however, was due to the prices of the metals, particularly copper, since the county marketed more silver, copper, and lead than in 1907. The copper increase amounted to more than 14,000,000 pounds. The output was almost entirely a copper ore, most of which was concentrated and smelted at the Detroit, Shannon, and Arizona Copper Company's plants.

With the exception of a little gold from the Cave Creek and San Domingo districts in Maricopa County, there was only one other mine producing gold during 1908.

Mohave County had a rather dull year and showed decreased production of all metals but zinc. The value of the output decreased almost $500,000. Most of the production came, as usual, from the San Francisco and Wallapai districts. The largest producer in 1907 was the Gold Road mine, but in 1908 production was restricted by the treatment of a large tonnage of tailings.

By far the largest producer was the Tom Reed Gold Mines Company, which operated a new 10-stamp mill and a 40-ton cyanide plant. The Victor was next in gold production, but both these mines were hampered by litigation, for which the district is becoming prominent. In the Wallapai district there were many producers, but only two were of note, one of which marketed considerable zinc ore.

In Pima County more ore, copper, and silver were taken out, but less gold and lead. The Imperial produced nearly 7,000,000 pounds of copper, all of which was treated at the Sasco smelter without concentration. The company has now completed a 300-ton concentration plant. The concentrator at the El Tiro mine was enlarged to treat 100 tons per day.

A decrease in all metals but zinc was recorded in Pinal County. There was, however, important work done in the Bunker Hill, Casa Grande, Mineral Creek, Mineral Hill, and Old Hat districts. The Ray Consolidated Copper Company made tests on copper ore from an extensive low-grade deposit preparatory to constructing a concentration mill of 2,000 tons daily capacity.

Aside from small shipments from a number of properties, Santa Cruz County did little toward the Territory's production. Decreases were shown in all metals.

Yavapai County's output was not up to the usual amount, largely on account of the idleness of the Humboldt smelter, combined with low prices. The large gold producers were active, and the United Verde kept up its wonderful record.

In Yuma County's production the most notable fact was the increase in gold. A 400-ton smelting plant was being erected on the Clara Consolidated Company's property during the year. The districts in the northern part of this county are being prospected with good results since the operation of the Arizona and California Railroad.

CALIFORNIA.

According to mine reports from the State of California there are between 1,000 and 1,100 producing mines in that State, slightly more than half being placers of different kinds—hydraulic, drift, dredge, surface, river bed, etc. There are also about 1,500 more mining properties on which development work is being carried on. The number of deep mines is about 500, and they produced in 1908 over 2,500,000 tons of ore. Of this upward of 2,000,000 tons are siliceous ores carrying gold and associated silver. Over 500,000 tons of copper ore were also treated, which also carried gold and silver. The output of ore in California is increasing each year, but the average value per ton in 1908 was not so high as in 1907. Most of the California siliceous ore is treated at gold and silver mills, a comparatively small proportion being smelted. The gold yield from hydraulic and drift mines is not so large as formerly, but the output

from surface placers seems to be again on the increase, and that from dredgers is steadily and largely gaining each year.

The gold production of California may be said to average annually between $17,000,000 and $20,000,000. In 1908 it was between $2,000,000 and $2,500,000 more than in 1907. This was mainly due to improved conditions in the dredging industry, which was somewhat crippled by damage through freshets in the latter year. The deep mines of the State are producing gold at the ratio of 10 to 8 as compared with the placers, and by far the largest proportion of the silver is also derived from the deep mines. In the placer mining industry the dredges are now producing annually nearly $5,000,000 more each year than all the hydraulic, drift, and surface placers combined. Since 1905 the output of gold from the dredging industry has each year exceeded that of the other forms of placer mining combined. Of the 7 counties of California producing over $1,000,000 each annually 3 are counties where dredge mining predominates as a mining industry, the others being quartz-mining counties.

The leading gold-producing county of the State is Butte, where the largest number of dredges is at work. The largest production of gold from quartz mining is from Nevada County. The principal source of gold from hydraulic mining is Trinity County; that from drift mines is Placer County; and that from surface sluicing is Siskiyou County. The largest producer of silver is Shasta County, where several copper-smelting plants are in operation, and where siliceous ore carrying gold and silver is used as a flux with the copper ores. From the reduction of the copper ores about $500,000 in gold are annually recovered and upward of 1,000,000 ounces of silver. The silver coming from lead ores at the present time is of small quantity. Some silver is won in milling gold ores, and some is also derived from the placers. The silver-lead mines are not nearly so productive of late years as they formerly were.

As evidence of the increased activity in deep mining, it may be stated that virtually 500,000 tons more ore were treated at mills and smelting works in 1908 than in 1907. About 2,500,000 tons of ore are now being handled annually in California. Many of the counties of the State are showing increased activity in quartz mining. This is notably the case in some of the older mining counties which are isolated from railroad facilities and where the mining industry has been to a certain extent dormant for some years. Discoveries of exceptionally rich ore in some of the old and partly abandoned mines have attracted the attention of mining investors, particularly those from Nevada, and numbers of those old properties have been reopened with very satisfactory results. This has led to additional prospecting and considerable investment of capital. Development work is rapidly progressing, with the expectation of adding many mines to the lists of producers of the State.

The old famous mother lode counties of California—Amador, Calaveras, El Dorado, Mariposa, and Tuolumne—yielded nearly 1,200,000 tons of the 2,500,000 tons from the deep mines of the State. These mother lode mines are noted for the continuity and great width of the veins, but the grade of ore is low in comparison with that of those counties where the veins are narrower.

In some of the counties, notably that of Sierra, very exceptional high-grade ore has been produced from the groups of quartz veins in the vicinity of Alleghany. These mines have long been idle and partly developed until lately, when discoveries of rich ore were made. This has stimulated prospecting in that and the neighboring county of Plumas, not only in quartz mines, but in gravel mines as well. There is a larger number of productive quartz mines in San Bernardino than in any other county of the State, but their combined output does not nearly equal those of several other counties.

A notable feature in quartz mining is the large increase of electric power plants, furnishing power not only to large but to small mining districts. This has cheapened working costs materially. The enlargement of the smelting industry has also had a beneficial effect in giving miners markets for their ores and permitting them to profitably operate their mines without the expense of individual reduction plants.

As stated above, the most marked feature in connection with gold mining in California is the gradual and rapid increase in importance of the gold dredging branch of the industry. There are about seventy gold mining dredges now in operation in 8 counties of the State, some of them capable of handling 250,000 cubic yards of auriferous gravel monthly, at a lower cost than hydraulic mining can be carried on. The ground in which these dredges work is of such character that it could not be handled at a profit by any other form of mining. There is no "fall" for hydraulic mining, and it is of too low grade to pay by drifting and sluicing. For this reason it remained unproductive until dredges were employed upon it.

The larger dredging fields are at points in the Feather, Yuba, and American rivers, where those streams, passing through gravel mining sections, run from the mountains and foothills into the valleys. These productive fields are at Oroville, Folsom, and near Marysville. There are other isolated areas in northern California where dredges are operated. These machines do not, as a general rule, operate in the river beds proper, but in bottom lands adjacent to the streams. These dredging machines are now taking out gold to the value of over $500,000 monthly, mostly from what was formerly unused and valueless land. In some instances old orchards or vineyards are dug up for the gold in the soil.

Hydraulic mining in California is in a decadent state generally, though it still flourishes in Trinity and Siskiyou counties, where there are no federal restrictions requiring impounding of the débris, as in the central counties. Drift mining does not seem to progress to any great extent, though there are signs of a revival in this industry in the counties of Sierra and Plumas. Surface placer mining, by sluicing and kindred methods, shows an augmented output within the past few years, though most persons suppose this to be an industry of the past in California.

Generally speaking, the gold and silver mining industry of California may be said to be in a fairly flourishing condition. More capital is being invested than formerly and numbers of new and old mines are being opened. For these reasons it is not at all likely that there will be any material reduction in annual yield for a long time to come. Indeed, the reverse may be expected. The very deep mines

are paying now better than they did on the surface, and costs are being everywhere reduced, while the placer fields are increasing their annual yield through the medium of the gold dredging industry.

COLORADO.

Both placer and gold-bearing lode mines of Colorado increased their yield in 1908 as compared with that of 1907. The increase in the production of gold was nearly $2,000,000. There was also an increase in the yield of copper as a side production in the marketing of gold-bearing ores. The quantity of silver, lead, and zinc produced shows a decided decrease, and the value of these metals shows a greater decrease, because of the lower average metal prices for the year. The value of the copper yield was also under that of 1907.

The feature of the operations of the precious-metal mines in this State in 1908 was a further extension of the leasing system in the camps of Cripple Creek, Central City, Idaho Springs, Silverton, and Telluride. Because of the low metal prices during the latter half of 1907 and throughout 1908 the operations of the silver-lead-zinc camps were greatly curtailed. Many of the largest mines, which depend on good prices for these metals, closed in 1907 and remained closed during 1908. The miners from the base-metal camps turned their attention to the gold camps and took up leases which would not have been acceptable in times of high base-metal prices, or devoted their time to prospecting.

The tonnage of siliceous or dry ores amounted to 82 per cent of all the ore mined and yielded 94 per cent of the gold production and 62 per cent of the silver yield. There was an increase in the tonnage of siliceous or dry ores and also in the tonnage of copper-lead ores (carrying gold and silver), but there were marked decreases in the tonnage of lead and zinc ores.

As regards milling, 60 per cent of the tonnage was treated in gold and silver mills, which includes stamp mills with plate amalgamation with or without concentration, and cyanide and chlorination mills, and 67 per cent, or two-thirds, of the gold yield of the State was marketed as bullion. Including concentration and separation mills, 76 per cent of the tonnage was treated in mills, and the yield in both bullion and concentrates amounted to 77 per cent of the state gold yield and 35 per cent of the silver. The remaining crude ore mined was shipped to smelters. However, the smelters treated, besides the crude ore, concentrates in tonnage representing 9 per cent of the original crude ore mined.

Cripple Creek district, Teller County, furnished 56 per cent of the gold yield in 1908. There was an abundance of skilled labor in the camp in 1908, many coming not only from other camps in Colorado, but also from other Western States. There was a great demand for leases on both well-developed properties and on the big dumps of the camp. Both lessees and company operators were active in making experiments as to treating the low-grade and dump ore by cyanide treatment, and the result was the building and remodeling of several local plants, many of which were decidedly successful, both from a metallurgical and a financial standpoint. The Portland Gold Mining Company's 10-stamp experimental mill demonstrated to the com-

pany's metallurgists "that the raw ores of Cripple Creek can be successfully treated without roasting, thus saving 76 cents per ton for roasting, and also $1 per ton freight, now paid for transporting the ore to Colorado City." The rates for transportation and treatment given by the three custom mills at Colorado City were never more advantageous at any time in the history of the camp. The Golden Cycle mill (which had burned in August, 1907) was in commission again with an enlarged capacity. The plants of the United States Reduction and Refining Company were operated continuously throughout 1908. The capacity of the Colorado City mill of the Portland Gold Mining Company was also increased. The use of 3 large tanks at this mill "for the purpose of extracting the values contained in the sluice water brought about very satisfactory results."

Continuous work was performed in driving the Roosevelt deep drainage tunnel, and 4,872 feet of the 15,500 feet to be driven was completed.

The reports from the large companies in the Cripple Creek district show generally a very prosperous year. Considerable prospecting was done by these companies, both in running drifts and in sinking, in many cases working against heavy influxes of water. As a rule, however, mining was confined to the workings above the water level, most of the companies preferring to wait until the completion of the drainage tunnel, which should be accomplished by the 1st of July, 1910. The outlying mines should be reached by the 1st of January, 1910.

Almost one-quarter of the gold output of the State was from the three principal San Juan counties—Ouray, San Juan, and San Miguel—though the decrease in Ouray and San Miguel counties in gold yield was $500,000. Both Ouray and San Miguel counties produced over $2,000,000 in gold, and San Juan County almost $1,000,000. Within the boundaries of Ouray County is the largest producing mine in Colorado—the Camp Bird. The value of the metallic production in San Juan County shows a large decrease in production of silver, copper, and lead. The rank of this county is second to Lake County in production of copper and lead. San Miguel showed an increase in the quantity of all the metals produced except gold. In 1908 San Miguel County ranked second to Teller in tonnage mined and in the value of gold produced. In silver yield San Miguel was second, with Lake County first and Pitkin County third. In total value of metals produced San Miguel County stood third of all the counties, with Teller first and Lake County second.

The production of Leadville (Lake County) fell off greatly, except in the value of the gold and in the quantity of the copper yield. Several of the largest properties were closed the entire year, but two of the largest resumed operations in December, 1908. The zinc production, which was 77 per cent of the entire output in the State, also fell off greatly. This county was first in the production of four metals—silver, copper, lead, and zinc—and in the production of gold it stood fourth. The Ibex Mining Company (Little Johnny mine), the Yak Mining, Milling and Tunnel Company, and the Iron Silver Mining Company were the chief producers in the Leadville camp. The Yak tunnel's main artery reached a point 3 miles from the portal by the 1st of January, 1909, and the branches into the adjacent territory of Iron and Breece Hills made several more miles of workings for drainage and transportation.

In Clear Creek County the operating companies around Idaho Springs were occupied in connecting their shafts with the Newhouse tunnel. This tunnel starts at Idaho Springs at an elevation of 7,543 feet and cuts under the Clear Creek-Gilpin ridge, which has an altitude of about 9,000 feet. In 1907 it had been driven 17,000 feet from the portal. Many companies completed their laterals to the tunnel in the early part of the year, and a gradually increased tonnage found its way out to the railroad and mills. There was an increase in the number of leases taken in the Idaho Springs district. The low prices for silver and the base metals were seriously felt in the Upper Clear Creek districts, around Georgetown and Silver Plume. There was an increased gold yield from this county.

The yield in Gilpin County showed an increase in gold production, which was offset by a decrease in the production of silver, lead, and copper. There was an increased tonnage sold, ore treated, and, with few exceptions, the sampling works and the stamp mills were worked to their full capacity. Several new strikes were made, and many old properties were reopened. Of greatest importance to the future of Gilpin County was the ratification of contracts with the mine operators and the Newhouse Tunnel Company, in December, 1908. The tunnel had been driven, in 1907, to the shaft of the Great Mammoth mine, and 5,000 feet remained to be completed before the Eureka shaft—the objective point of the tunnel—was reached. This tunnel will drain the Quartz Hill properties, long idle and filled with water, at depths of from 1,500 to 1,700 feet, which, in the majority of mines, will allow the deepening of the shafts from 400 to 700 feet.

The low prices for silver, lead, and zinc were very seriously felt in Aspen, Pitkin County, in 1908. The value of the total yield from this county was less than one-half of the 1907 production. From second place in the production of silver, lead, and zinc, the county took third place in 1908 in production of silver and lead, and sixth place in the yield of zinc.

Mineral County produced in 1908 a total metallic output of 46 per cent of that of 1907. The lead decrease was great. Some of the largest mines were idle, waiting for better metal prices.

In Summit County two new dredges, making three in all, operated from June, 1908, to the close of the year, and their output materially increased the gold production of this county. The production of zinc, though small in comparison, was second to that of Lake County.

Park County deep mines showed a decrease in gold, silver, and lead yield, but an increase in copper and zinc. The placer output was slightly increased.

Both placer and deep mines in Chaffee County yielded, in 1908, less than one-half the 1907 production. Copper, the chief metal of the county, in 1907, fell off heavily, because of greatly lessened activity in the Monarch and Turret districts. Increased shipments of lead ore from the Monarch camp resulted in an increase in lead production for the county.

The falling off in value of yield in Eagle County was slightly greater than the county zinc loss. Several mines in the Battle Mountain district, carrying gold and copper, made an increase in the output of those metals, which was offset by a decrease in the tonnage of lead ores mined.

Gunnison County entered the list in 1908 with several new shippers of gold ore, with an increase in the yield of that metal, and a larger yield in 1909 is promised. There was an increase in the quantity of the yield of silver, lead, and zinc, and a small decrease in copper. The Gold Brick and Tomichi districts were the chief districts in the county in 1908.

There was a decrease in production of all the metals in Hinsdale County, with the exception of copper. All the ore in the county was shipped direct to smelters. The mills of the county, of which there are several of good capacity, were idle.

La Plata County shows a heavy decrease in output in 1908 as compared with that of 1907.

The opening of old and new properties in the early months of 1909 and better metal prices would indicate a larger yield in all the metals for Colorado in 1909.

IDAHO.

During 1908 there was an increase over the previous year in the production of gold in Idaho, due to successful operations at Elk City in Idaho County, Atlanta in Elmore County, Sunbeam in Custer County, and Silver City in Owyhee County. Depression and low metal prices after the panic of 1907, however, resulted in decreases in all the other metals and greatly affected the mining of silver-lead ore and zinc ore in the Coeur d'Alene district of Shoshone County and the Mineral Hill district in Blaine County. There was therefore a decrease of almost 30 per cent in the total value of the State's output. Most of the gold was derived from siliceous ore, about one-fifth from placers, more than one-tenth from copper ore, and a slight amount from lead ore. Four-tenths of the silver, however, is taken from lead ore, while siliceous ore and copper ore each supply about one-tenth of the silver output. The tonnage of ore mined remained approximately the same, but the value per ton decreased nearly 30 per cent. Most of the output was lead ore, while the remainder, amounting to about 14 per cent, was equally divided between copper ore and siliceous ore. The placer-gold production was not as large as usual, substantial decreases occurring in Boise and Nez Perce counties. There was about the same amount produced by dredges, but the production of gold by hydraulicking and sluicing was considerably less. Two new dredges were installed, one in Custer and one in Boise County.

The smelter at Mackay in Custer, which in the past has treated the largest tonnage of ore, was idle in 1908. This accounts for the decrease in copper in Idaho. The smelter of the Lost Packer Mining Company operated for three months, producing rich matte, which was refined in Baltimore. It is unfortunate that the location of this plant prevents its operation during the entire year. In Bonner County, at Ponderay, the Idaho Smelting and Refining Company operated the lead plant for two months, treating ores from Washington and Montana, as well as those from Bonner and Shoshone counties. The Lemhi Smelting Company started work on a 100-ton lead plant in Lemhi County to do away with the expensive hauling of ore from the Spring Mountain and Texas districts.

The most important advances in railroad construction were those which will affect the Coeur d'Alene region in Shoshone County. The Chicago, Milwaukee and St. Paul Railroad did vigorous work from

Taft, Mont., to St. Joe, Idaho. This road will eventually afford another outlet for the lead and copper ores in the southern and eastern part of this most productive region of the State. The Northside, or Murray, district will profit by the operation of the Idaho Northern Railroad from Enaville, on the Oregon Railroad and Navigation Company's line, up the North Fork of the Coeur d'Alene River to Murray. Progress in both shipping and development should result in the near future. In the western part of the State, in the Seven Devils district of Washington County, interest was manifested in development work on account of construction work on the road from Huntington, Oreg., to Lewiston, Idaho. Over 50 miles of the line have been completed. In the eastern part of the State, in Lemhi County, the Armstead and Gilmore Railroad Company will eventually connect Salmon and Gilmore with Armstead, Mont. Surveying has been done and construction work will be commenced in 1908. This road will not only awaken interest in the gold properties near Salmon, but in the silver-lead districts about Gilmore.

There were only 5 of the 22 counties in Idaho which recorded an increase in total value of the output, and Elmore and Idaho counties were the only ones which made striking gains. Although Ada County receives at Boise most of the gold from the State, it contributes little to the yearly output. In 1908 less was produced than during the previous year. Neither Bannock nor Bear Lake counties shipped any ore.

Bingham County contributed, as usual, some fine gold from Snake River and points near Gray, Idaho.

Blaine County considerably decreased its output, but did interesting work in the construction of mills and power plants.

The county produced ore from a large number of mines, but only five were shippers of any importance.

Boise County slightly increased the production of gold from deep mines, but greatly decreased the gold from placers. The two important districts are Boise Basin and West View. In the Boise Basin district, the Boston-Idaho Gold Dredging Company installed a large dredge, which was moved from California.

Bonner County, stimulated by the operation of the Ponderay smelter, turned out more than the usual amount of rich silver ore and copper ore from camps around Lake Pend d'Oreille.

Canyon and Cassia counties gave little toward the state production. The former supplied some placer gold and the latter shipped some copper-lead ore. Aside from the idleness of the smelter at Mackay and the activity of the Lost Packer smelter at Ivers, the one mine affected the county production more than any other property.

Elmore County increased its gold production. In the Neal district considerable work in development, equipment, and production was done. Fremont County's production was comparatively unimportant.

Idaho County materially increased its gold production even though some of the old producers were idle. . The Orogrande district had a revival and the Elk City district produced sufficient gold to more than compensate for decreases in other localities.

Kootenai, Latah, Lincoln, Oneida, and Twin Falls counties supplied placer gold, but less than in previous years.

Lemhi County suffered decreased productions in all metals. The largest gold producers were the Bohannon Bar placers at Baker, the

Mullan Dredge, and the Kittie Burton mine at Ulysses. The Spring Mountain district made small shipments from several new properties.

Nez Perce County sent a little less gold to the refineries than in 1907. The deep mines were unproductive, but the Idaho Company operated its dredge and will install another.

Owyhee County increased its gold and silver output.

Shoshone County, which yielded the majority of the State's output, showed a decrease in total value of more than $5,000,000. Copper was the only metal which recorded a greater production than in 1907. The Snowstorm shipped an unusually large amount of copper ore, and three of the large lead-ore producers, the Hercules, Standard-Mammoth, and Bunker Hill and Sullivan, were operated the entire year. The Bunker Hill and Sullivan M. and C. Company will add a 1,000-ton concentrator, thus doubling the capacity of the mill.

Washington County shipped a small amount of copper ore, which will doubtless be increased when the railroad reaches the Seven Devils country.

MONTANA.

As Montana is above all a copper producer, it is interesting to note that although the State produced more copper by over 31,000,000 pounds than it did in 1907 it received nearly $11,000,000 less for the output. There were increases in ore mined and in silver, copper, lead, and zinc production, but they were not sufficient to offset the decreases in metal prices and a decrease in gold. Four-fifths of the value of the entire output was of copper. Nearly all the remaining value was in gold and silver, amounting to over $8,000,000. The majority of the silver, copper, and zinc was taken from Silver Bow County mines, Fergus and Madison counties were prominent as gold producers, and Jefferson and Lewis and Clark counties turned out more lead than any others. There was a large increase in production of zinc, which came entirely from Silver Bow County. Over 4,000,000 tons of ore were mined and sold or treated, three-fourths of which was concentrated, one-fifth shipped crude to smelters, and the remainder treated in gold and silver mills. The smelters, therefore, reduced more than a million and a half tons of concentrates and crude ore. There were five smelting establishments in operation in 1908, two at Butte, one at Anaconda, one at Great Falls, and one at East Helena. All but the Great Falls plant do a custom business. There was more ore treated in 1908 than in 1907, but the value per ton decreased more than $3. Nearly 90 per cent of the metal output of the State in value is copper ore, derived almost entirely from Silver Bow County. Over 9 per cent is siliceous ore containing about $7 in gold and silver per ton. The remaining small amounts are lead, zinc, and copper-lead ore. In 1908 there were increases in the various kinds of ore mined, except lead ore.

Gold represented more than 7 per cent of the total value of the state output, or more than $3,000,000. Nearly one-fifth of this amount is derived from placers, principally in Madison County, while Fergus County surpasses all others in the production of gold from deep mines. Nearly 42 per cent of Montana's gold was won from gold and silver mills, nearly 24 per cent from crude ore smelted, and over 16 per cent from concentrates. In regard to its source, the gold was derived as follows: Placers, 18 per cent; siliceous ore, nearly 58

per cent; copper ore, nearly 22 per cent; lead ore, less than 2 per cent; and zinc ore, less than 1 per cent. Gold from copper ore and placers increased, while that from other sources was less than in 1907.

Montana's output of silver in 1908 was over 750,000 ounces less than for the previous year. Copper ore supplied 81 per cent, siliceous ore 16 per cent, and lead ore less than 3 per cent of the silver. Silver increased from siliceous and copper ore, but decreased from lead ore and zinc ore.

As most of the copper is produced by a small number of mines around Butte, it is comparatively easy to judge of the general conditions of the copper-mining industry. In the early part of the year, for more than three months, the smelters were closed on account of the low metal prices and afterwards on account of floods. When, however, copper reached a higher price as the year advanced, some of the large plants even exceeded what was considered their normal capacity. The Washoe plant treated more than 10,000 tons per day during the latter part of the year, the Great Falls plant 4,000 tons, and the Pittsmont 300 tons. This last company added a 250-ton blast furnace in 1908. A stack 506 feet high was completed at the Great Falls plant.

During 1908 the Chicago, Milwaukee and St. Paul Railroad was doing construction work in Missoula County, and the Armstead and Gilmore Railroad started grading on the line that will connect Armstead with Salmon and Gilmore, Idaho.

Beaverhead County suffered decreases in silver and lead, but not in copper and gold. There were more producers than in the past, but a smaller product. The Indian Queen in Utopia district and the Argyle in Vipond district were the leading producers.

Broadwater County considerably increased its metal output, although less ore was mined in 1908. Twenty-nine operators contributed over $250,000 from the Backer, Beaver Creek, Cedar Plains, and Park districts. The Eclipse-Argo in the first, and the Keating Gold Mining Company near Radersburg, were large producers.

Carbon, Flathead, and Ravalli counties supplied only small amounts of placer gold.

Decided decreases in all metals but copper were recorded in Cascade County in 1908. Most of the product came from the Montana district and was also valuable for its silver content.

Chouteau County reduced its gold production, although there was more ore treated. A large part of the product is treated at the Ruby Gulch mill, where the gold is won by cyanide and the ore mined through "glory holes."

Deer Lodge County also suffered decreases in all metals but copper. The product is largely a siliceous ore from the Georgetown district.

Fergus County materially increased its gold output in 1908 on account of the operation of gold and silver mines in North Moccasin and Warm Springs districts. The Barnes King Development Company treated, during part of the year, 200 tons of ore per day by the cyanide method. The ore averages $4 per ton. The Kendall and North Moccasin mined and treated a similar ore. In the Warm Springs district the Gold Reef mill was operated by lessees.

Granite County mined ore and produced more gold, copper, and lead, but less silver than in the previous year. Nearly 20,000 tons of ore, of which the gold and silver value was $17 per ton, were sold or

treated, the majority being crude smelting ore. Most of the gold came from siliceous ore, but more than one-seventh was derived from placers. Flint Creek district, Red Lion district, and South Boulder districts were the principal producers.

Jefferson County mined more ore, but greatly decreased its gold output. However, the value of all metals was over $800,000. The producing districts were the Amazon, Boulder, Cataract, Colorado, Elkhorn, Lump Gulch, and Whitehall.

Although Lewis and Clark County had an output valued at more than $300,000, this was a decrease of over 100 per cent from the 1907 product. Most of the ore was treated at gold and silver mills, although considerable lead ore was smelted. The Ottawa district turned out gold, silver, and lead. In the Greenhorn district a new cyanide mill was completed for the Umatilla property. The Unionville district was a large gold producer. The Vaughn district was a placer producer.

Madison County stood fourth in the value of its output in 1908, which was over $600,000. The gold output was largely increased, and many new operators entered the producing list. Over 70 per cent of the gold is derived from placers, and most of the remainder came from siliceous ore, which contained three-fourths of the silver. Most of the placer gold of the State is produced in Alder Gulch, where three electric dredges are operated. Thirteen districts produced ore, which usually contained gold, silver, and lead.

Meagher County had a small production of placer gold and copper and lead ore.

Missoula County supplied placer gold from Cedar Creek and Iron Mountain districts, but decreased the usual output.

Little was done in Park County.

In Powell County considerable lead, some copper ore, and siliceous ores were shipped and placer gold worth nearly $50,000 was produced. There were decreases, however, in all metals but copper.

Sanders County treated a small amount of siliceous ore.

Silver Bow, the most important county of the State, produced metals aggregating in value over 90 per cent of the State total value. The only county that surpassed Silver Bow in gold production was Fergus. There was a large increase in copper, but the difference in metal prices brought the total values far below those of 1907. There were 100 producers in 1908, and nearly 4,000,000 tons of ore were mined. The greater part was copper ore, and most of it was concentrated. The June floods seriously handicapped the operation of the Boston and Montana plant, and fires slightly curtailed the output of the Anaconda and Never Sweat. At the end of the year ore was being taken out at the rate of about 16,000 tons per day.

NEVADA.

The mine returns of the State of Nevada for 1908 show a reduced gold yield of about $3,700,000 as compared with that of 1907; but the silver output was over 1,000,000 ounces more than in 1907, though the increase in value was not in proportion to that of quantity, owing to the lower average price prevailing in 1908.

The placer gold output of the State is comparatively small, most of this metal coming from deep mine operations. The largest source

of gold is siliceous ore. The number of tons of siliceous ore treated in 1908 was about one-third greater than in 1907, but the average value per ton in gold and silver was $16.58 in 1908, whereas the average value was $25 in 1907. This was due to the fact that much low-grade ore was treated in 1908, while in 1907 the miners were mainly shipping their higher grades of ore, leaving the lower grade to be treated at local reduction works later on, when those should be built. Many such reduction plants were in operation in 1908, so that by avoiding railroad charges the miners were enabled to mill their lower-grade ores.

There were in 1908 400 productive deep mines in Nevada and about 28 placers. Some of the deep mines are worked for copper and lead, but most of them are for gold and silver. A small quantity of gold and silver is derived from copper ores, and more comes from lead and copper-lead ores.

Esmeralda County is the source of the largest production of gold in the State, nearly 43 per cent of the gold output coming from Goldfield district, in that county. Nye County is next in order of gold production, large amounts being derived from Tonopah, Bullfrog, Manhattan, and Round Mountain districts. In silver Nye County is the largest producer, over four-fifths of the entire yield of the State coming from that county, where the largest silver mines are at present in operation.

A feature of interest to be noted is the yield of gold and silver in greater quantities from districts which have recently become productive, and the output of several new districts which became producers for the first time in 1908. Among the older districts Tonopah shows largely increased values in both gold and silver, but particularly in gold, but a very decided decrease is shown in Goldfield district during the same period.

Some 18 mining districts in the State each produced over $100,000 in 1908, while Tonopah showed a yield of over $5,500,000. Silver Peak district shows very marked gains, as does Bullfrog district. The Comstock mines evince a revival of production in satisfactory gains for the year. Ferguson, Round Mountain, Manhattan, Pioche and Seven Troughs districts all show marked increases in output for the year as compared with their production in 1907. Among new productive districts in the year are Rawhide, Lucky Boy, Lone Mountain, Gold Circle, Berlin, Bellehelen, Johnnie, Hornsilver, Lodi Valley, and Ward.

Nye County is the most productive in the State, its output having been over $7,000,000 in 1908, which is about $2,000,000 more than in 1907. There are about 100 productive mines in the county, but a large proportion of the total output is from the mines in Tonopah district. A very large percentage of the silver of the State is from this county.

Esmeralda County is the leading gold-producing county of the State, though it shows a very materially decreased output in 1908 as compared with that of 1907.

A very encouraging feature connected with the mining conditions in Nevada is the increasing elimination of speculative activity in favor of legitimate operations. When, a few years ago, owing to the rich discoveries in Goldfield, Tonopah, and other southern Nevada districts, there was a rush of miners, prospectors, promoters, and

speculators to these and other new districts, hundreds of companies were floated on properties on which little or no actual mining work was ever done. Millions of shares of stock were disposed of and all sorts of visionary plans were made. It was difficult, if not impossible, without direct examination, to determine whether these companies represented legitimate mining operations or "wild-cat" ones. Time has left the legitimate mines and almost entirely eliminated the speculative operations. The stock in these latter companies finally became worthless and the number of mining companies was largely reduced, many going out of business altogether. These speculative ventures injured legitimate mining, inasmuch as it became difficult to sell treasury stock, the proceeds of the sales of which was intended for actual development work on promising claims. Numbers of mines in the development stage have therefore been compelled to cease operations until a more opportune time.

It is to be noted that the decision on the part of the mining companies, large and small, to erect their own reduction works on their properties has created quite a revolution in methods. As soon as railroads were built to, or near by, the more prominent camps, the miners shipped their better grade ores to the smelters, but the lower or average value ores were not reduced. High freight and smelter charges reduced profits materially, while under this system only the richer ores were advantageously shipped. In 1908 numbers of local reduction plants were put into operation, completely changing the mining situation in many camps. The lower grades of ore then became of value, and were mixed with the richer ones. The tonnage treated became much greater, but the average values extracted were naturally much lower. Thus, for example, the average value of ore treated in Esmeralda County in 1907 was $66.13 per ton, while in 1908 this average value was $29.27 per ton. In Goldfield district the average value of the ore treated (mainly at smelters) in 1907 was $83.61 per ton, while in 1908 it was $55.55 per ton. In Tonopah district in 1908 the average value recovered from the ores was $19.86 per ton, gold and silver, while in 1907 it was $22.03 per ton, though there was much more ore reduced in 1908 than in 1907. A large amount of development work was in progress in the various camps in 1908, and many of the mines thus operated are expected to become producers in 1909.

NEW MEXICO.

The metallic production from the mines of New Mexico for 1908 differs in the yield of the base metals, as compared with that of 1907. The output of copper, which, with zinc, has been the source of the largest revenue from the mines of the Territory since 1905, fell off heavily because of the greatly lessened activity in Grant and Santa Fe counties and the idleness of a smelter in each of these counties. The operations of 2 zinc companies in Socorro County and the shipping of a larger tonnage of zinc ore from Grant County made a very creditable increase in production of this metal for 1908 over the very small yield of 1907, though the production of 1908 was small in comparison with that of 1904, 1905, and 1906. The yield of gold was somewhat smaller than in 1907, but the production of siliceous and lead ores declined. Gold from placers increased, and a larger amount of gold was won from the greatly lessened tonnage of copper ores. The increase in gold from copper ores may be explained by

the fact that the copper ore of Grant County, the tonnage of which fell off heavily in 1908, carries less gold than the Otero County copper ore, of which there was an increase in 1908.

The decrease in value of copper produced overtopped the combined increases in value of silver, lead, and zinc, by $500,000.

There was an increase in the number of both deep and placer mines. Most of the new shipments, however, were from small prospects.

In Dona Ana County the chief metal in value of output was lead, with silver second and copper third. The output was all from the Organ district, near the towns of Organ and Kent. The Stephenson-Bennett Consolidated was the chief operator in the district.

Grant County again held second place in the rank of the precious metal producing counties. In point of tonnage Grant County was first, and in the production of copper stood far in the lead, with 82 per cent of the year's yield to its credit. This, despite the fact that the decrease in copper yield was almost 3,000,000 pounds, as compared with 1907. The Central district, embracing the towns of Fierro, Bayard, Hanover, and Santa Rita, maintained its position in 1908 as the most productive district in Grant County, and the Santa Rita Mining Company, at Santa Rita, the largest producer of copper in New Mexico, held its place with a better record than in 1907. The Comanche smelter at Silver City was idle in 1908—which explains the copper decline.

In October, 1908, a new gold strike was made on the western slope of the Little Hatchet Mountains, in Grant County, about 12 miles southwest of Hachita station (on the El Paso and Southwestern Railway). This camp was called Sylvanite. Tedradymite, a telluride of bismuth, has been reported to occur in the ore of this camp. The usual rush was made to the camp, and within ten days after the first discovery nearly 1,000 people had reached the place. During 1908 a little over 100 tons of gold ore were shipped.

Socorro County was third in county rank in 1908. In point of gold and zinc production Socorro County stood first, with a heavy lead in both metals. The zinc output, though an increase over the yield of 1907, was almost 14,000,000 pounds under the production of 1906. The county yielded 46 per cent of the total gold production for the Territory. The gold ores come from the Mogollon (Cooney) district, in the southwest corner of the county, and the zinc ore from the central-western district around Magdalena and Kelly.

Otero County ranked fourth in total production, and third in the yield of gold. There was almost twice as much tonnage mined in 1908 as in 1907. In quantity gold, silver, and copper showed substantial increases. The smelter and mines of the Southwest Smelting and Reduction Company, at Oro Grande, were operated from January, 1908, to May. The plant is a 250-ton copper matting plant. Considerable copper ore was shipped from Mountain Park.

The chief value of the metallic yield of Lincoln County is gold. The chief districts are the Nogal (including Bonita) and the Whiteoaks. The Whiteoaks district maintained its usual yield, chiefly in bullion from stamp mills.

Mining operations in Luna County in 1908 were greatly curtailed. The total value of the production was one-twelfth of that in 1907. The major part of the output for both years was from lead. The

National Mining and Smelting Company's smelter, at Deming, was idle in 1908.

Santa Fe County, which ranked third in total value of production, and second to Grant County in yield of copper, in 1907, produced $2,034 in gold and silver in 1908, with no copper, a decrease in value of $273,836. Of the yield of 1908, 88 per cent was from placers near Cerillos and Golden. The cause of the decrease is due to the fact that the Santa Fe Gold-Copper Mining Company's smelter and mines at San Pedro were closed the entire year of 1908.

In Colfax County the yield of 1908 was all from placer mines, and was slightly greater than in 1907. Over three-fourths of the production came from the Moreno district, near Elizabethtown, and the rest from placers on Ute Creek, near Baldy.

Sierra County in 1908 produced gold, silver, copper, and lead valued at $24,524, which is an increase over the total value of the metal output of 1907 of $13,224. Most of the county yield came from the Las Animas district, near Hillsboro.

OREGON.

The production of both gold and silver in Oregon in the calendar year 1908 was less than in 1907, the falling off in gold yield alone being about $250,000. There are more than twice as many placer mines reporting output from this State as there are deep mines. In 1908 the output of ore from the deep mines was only about half of that in 1907, showing that the decrease in gold production was mainly due to the deep-mine operations. The largest yield of gold comes from Baker County, where the greatest production from deep mines is derived. The largest yield from placers is in Josephine County. The number of deep mines reporting yield was in 1908 about the same as in the previous year, but there is an apparent increase in the number of productive placer mines. Hydraulic mining is the most productive form of placer work, though the gold yield from this source was materially less in 1908 than it was in 1907. The yield of gold from siliceous ores derived from the deep mines was fully twice as much as that obtained by the different forms of placer mining.

A comparatively small amount of silver is produced in Oregon. Grant and Baker counties are the leading producers of this metal, the quartz mines yielding most of it, only small quantities coming from the placer work. The falling off in yield was due to the reduced output of the productive mines generally, not to any cessation of operations.

There are 15 counties in Oregon which yield more or less gold and silver, but over half the total output is derived from one county—Baker. The counties of Josephine, Grant, and Jackson follow in importance of yield, in the order named.

The northeastern Oregon counties, including Baker, Grant, Harney, Malheur, Union, Wallowa, and Wheeler, some of which are unimportant producers, yielded in 1908 about twice as much gold as the southwestern counties of Benton, Coos, Curry, Douglas, Jackson, Josephine, and Lane.

SOUTH DAKOTA.

The mining industry in South Dakota in 1908 was in a very flourishing condition. The increase in the total value of the metallic yield for 1908 was 85 per cent of the output of 1907. Both placer and deep mines increased their yield.

The gold mines of the Black Hills are not affected by the prices of silver and the base metals. The regular producers were operated steadily, and several large enterprises entered the producing stage for the first time. The adoption of the 8-hour day increased somewhat the price of labor, but the extended use of electricity effected considerable saving in running expenses. The output of the Homestake Mining Company, as the result of an unusually prosperous year, represents three-fourths of the state production. The discovery of ore in the lower quartzite by the Imperial Mining Company promises added life to the district. During the year the problem of treating successfully the "blue" (or unoxidized) ores, carrying from $5 to $7 per ton, and which generally fail to yield to the cyanide process an extraction of more than 30 to 40 per cent and are of too low grade to ship, received considerable attention. Renewed efforts were made to obtain a better extraction by the use of other chemicals with cyanide. Though promising results were obtained, no process of assured financial success was reached. The spread of slime processes in the Black Hills makes that region the best adapted locality for the study of these new methods. With the mills now building, there will be in operation 4 Moore filter plants, 1 Merrill sluice filter press plant, 1 closed type filter press plant, 2 decantation plants, 1 Burt press, 1 Chamberlain press, and 1 Butters plant.

All the state production, with the exception of about $7,000, came from Lawrence County. The chief producer in the county and State is the Homestake Mining Company, at Lead. The other large properties are those of the Golden Reward, Imperial, Lundberg, Dorr and Wilson, Portland, Reliance, and Wasp Number 2 companies.

Both Custer and Pennington counties show an increased yield in 1908. The mines of Custer County are chiefly around the town of Custer, in Pennington County; the mines are at Keystone, Hill City, Mystic, Oreville, Rochford, and Rockerville.

Nearly all the ore was treated in mills on the ground, though a little was shipped to smelters in outside States. The National smelter, at Rapid City, was closed in 1908.

UTAH.

The statement of Utah's metal production for the year 1908 shows decreases in gold, silver, lead, and zinc, but increases in the tonnage of ore marketed and amount of copper produced. The treatment of an immense tonnage of low-grade ore from Bingham resulted in these increases, while low metal prices, general depression, and restrictions of the smelters account for the decreases. The value of the total output was more than one-fourth less than that of the previous year. About 80 per cent of the tonnage was copper ore, but lead ore and siliceous gold and silver ore represented about 10 per cent each. More than 60 per cent of the gold was won from copper ore, more than 10 per cent from lead ore, and the remainder from siliceous ore. The silver, on the other hand, was largely derived from lead ore, while over 30 per cent came from copper ore, more than 10 per cent from copper-lead ore, and less than 2 per cent from siliceous ore. In the last seven years the tonnage of ore has been increasing, while the value per ton in gold and silver has decreased from $9 to almost $2. Nearly 60 per cent of the total value resulted from the shipment of crude ore

to the smelters, and the remainder, excluding the small value of ore treated in gold and silver mills, came from concentrates.

There were six smelting establishments in operation in Utah in 1908, but only two were used continuously. The copper plant at Garfield was active all year largely on Bingham ore, and the lead plant of the A. S. and R. Company at Murray ran continuously on custom ores. The copper plants of the Utah Consolidated and Bingham Consolidated remained idle the entire year as the result of a court decision, and the United States lead plant was operated only the latter half of the year by the use of a bag house in which the fumes are neutralized, by zinc oxide. The Yampa copper plant in Bingham Canyon was operated most of the year, largely on ore from the Yampa mine. For a short time the Independent Smelting Company, near Ogden, treated custom ore, but was evidently unable to compete with smelters nearer the copper camps. The Tintic smelter at Silver City was a new acquisition for 1908. At the end of August it began smelting lead ores and at the end of the year had reached a daily capacity of 500 tons. A copper furnace was installed and ready for use in 1909. The smelter site secured by the Utah Consolidated Mining Company near Tooele was acquired by the International Smelting Company and a copper plant of 1,500 tons daily capacity is planned. The Fink smelter was an experimental plant erected near Garfield, the object of which was to turn out blister copper from ore by one operation. Its success has not been permanently demonstrated.

The only railroad construction reported in the State was a narrow-gauge road connecting various mines with the Tintic smelter. Aside from the completion of the large concentrators at Garfield, the most important mill construction was that of the dry concentrating plant for the Daly Judge ore. A concentrator was also installed in the Columbia district of Tooele County.

Although the state output was far less than usual in total value, more than $5,000,000 in dividends was distributed.

Beaver County decreased the production of all metals but copper, of which the Cactus mine as usual produced more than any other property. In spite of plans for operating the Majestic smelter it remained idle as in 1907. The Horn Silver shipped lead ore part of the year, but made only test shipments of zinc ore. The Moscow marketed both lead and zinc ore. The Star district was active and produced considerable ore.

Box Elder County also increased its copper product while decreasing the output of other metals. The only producer of note was the Copper Mountain mine.

Cache County supplied a new producer of lead ore near Paradise.

Garfield, Grand, San Juan, and Uinta counties made the usual contributions of placer gold from the San Juan, Colorado, and Grand rivers.

Iron County increased its output as a result of the operations at the Jennie mine and mill. Bullion and cyanide product were shipped throughout the year.

In Juab County, Tintic continues to be the most important district, supplying more than one-fifth of the value of the State output. Decreases in all metals made an aggregate decrease in value of over $3,000,000. The Centennial Eureka mine remains the largest pro-

ducer, but since the copper plant of the United States smelter was idle the ore was shipped to other smelters. The Bullion Beck and Champion mines were operated through the workings of the Centennial Eureka, the property having been acquired by the United States Mining Company. There were no new producers of note.

In Piute and Sevier counties little was accomplished.

Salt Lake County shipped more ore and produced more copper than previously, but owing to the low grade of the ore and comparatively low metal prices the value of all metals produced was far less than that of 1907. Seven-tenths of the ore mined in the State came from the Bingham district, and nearly all this amount was copper ore, only a little more than 2 per cent being lead ore. The Utah Copper Company, operating a steam shovel on copper ore in monzonite, not only increased its output by 75 per cent, but produced half the total copper output of Utah, and marketed a product worth more than one-fourth the total value of the State's metal production. The combined capacity of this company's mills at Garfield and Copperton is 6,800 tons per day, but not more than 5,000 tons daily were treated in 1908. The Boston Consolidated, working a similar deposit, operated its new mill at Garfield, where 1,600 tons of ore were being treated daily at the close of the year. Other prominent producers which did important development work were the Utah Consolidated, United States Mining Company, Bingham and New Haven, and Tintic Mining and Development Company, which operated the Yampa smelter and increased its capacity to 1,200 tons per day.

The Park City district, which is in both Summit and Wasatch counties, recorded decreases generally, amounting in value to over a million dollars. The amount of zinc produced, however, was considerably increased. This was due to the erection of a plant to concentrate the zinc middlings from the Daly Judge mill. The Silver King, Daly West, and Daly Judge were, as in previous years, the largest shippers, and a new concentration mill of 150 tons daily capacity was built on the Adirondack property.

Tooele County mined more ore than in 1907, and produced more gold and copper, but the silver, lead, and zinc were less than in the past. In the Camp Floyd district the Consolidated Mercur had a successful year. The Clifton district, though lacking a railroad, is doing development work. A new concentrator in the Columbia district was erected for the Sharp mine. In the Ophir district the Ophir Hill mill was busy all year, turning out concentrates, but the district was rather dull.

Utah County includes American Fork and Tintic districts. The latter was mentioned under Juab County. There was considerable development on American Fork properties.

Washington County produced no copper as in past years, but the usual amount of silver bullion was shipped.

WASHINGTON.

The gold and silver output of the State of Washington in 1908 was less than $300,000, and is even then a slight falling off from that of the previous year. There are upward of 60 producing gold and silver mines in the State, of which about half are placers, but some 300 are yet unproductive and are held under development or assessment work.

Nearly 30,000 tons of siliceous ore were treated at the mills and smelters in 1908, and some gold and silver were also obtained from copper and lead ores. Stevens is the most productive county in the State in both gold and silver, followed in order by Ferry, King, and Okanogan, the others producing less amounts for the year. The counties of Ferry, King, and Okanogan increased their gold output in 1908 as compared with that of 1907, but the other counties show a decrease. The Benton and Clallam county mines are mainly small placers, while in Chelan there are both productive deep and placer mines.

The mines in Ferry County are mainly deep ones, the principal of which are in Republic district. In this district the outlook for future prosperity is much brighter than in years past, and there are several new and important producers.

In both Kittitas and King counties the producers of gold and silver are few in number. Okanogan County has less than a dozen producing mines, and most of them are deep ones. There are very few producers in Snohomish County. A very large proportion of the gold and silver of the State is derived from Stevens County, which shows more advancement in production than any of the other counties. There are less than a dozen productive mines in Whatcom and Whitman counties, and their aggregate output is quite small.

WYOMING.

The number of productive mines in Wyoming in 1908 was very small, and the number of properties undergoing development was less than that of 1907. Several companies, however, which have been developing steadily for several years reached a stage, in 1908, that promises an increased tonnage for 1909. The commencement of actual construction work on the part of several railroad companies during the latter part of 1908 and spring of 1909 on new branches, which had been in prospect for several years past, should aid in the marketing of ores from some of these developed properties.

There was an increase in the quantity of the yield from lode mines in 3 metals—gold, silver, and copper—though the value of the silver and copper output was less than that of 1907, because of lower average metal prices. The value of the copper production was 97 per cent of the value of the state yield of metals.

Placer mines yielded about one-fourth as much gold as in 1907. In combined deep and placer yield there was a decrease for the State in gold output. Lessened operations in the placer camps of the South Pass district, Fremont County, and the Jackson Hole district, Uinta County, were the cause of the smaller yield of placer gold.

The 3 southern counties—Albany, Carbon, and Laramie—produced 98 per cent of the total valuation of the state yield. There was a small amount of bullion produced by one mine in Albany County in a 5-stamp mill. The Penn-Wyoming mines and smelter at Encampment, Carbon County, produced the bulk of the output from Wyoming in gold, silver, and copper. The smelter was operated one hundred and nineteen days. The copper matte produced was shipped to eastern refineries. There was considerable development work performed in Carbon County at Encampment, Saratoga, Battle, Dillon, and French. Some of the properties in this district shipped early in

1909. A car or two of copper ore was shipped from a mine near Hartville, near Sunrise, Laramie County.

Crook County placers, in the Hurricane district, made a reduced output.

In Fremont County, 3 mines in the Copper Mountain and Willow Creek districts made several shipments of copper ore, carrying gold and silver. The proposed branch of the Burlington Railroad into these districts will greatly facilitate the marketing of ores from the mines, which are now ready to ship more steadily than heretofore. There was no yield from the placer mines in the South Pass district, Fremont County.

A very small placer yield from Jackson Hole, Uinta County, was reported in 1908. The placer gold won in 1907 from this district was considerable.

EASTERN STATES AND SOUTH APPALACHIAN STATES.

The combined value of gold and silver produced in the Eastern States, including the Appalachian region from Maine to Alabama, has been about the same during the past three years. An increase in value of gold production during each of these years has been offset by a corresponding decrease in the value of silver output, the latter largely due to industrial conditions, the low prices for copper, and decreased production of that metal. The production of silver in the Eastern States is largely from copper ores, there being no silver ores mined, and the production of argentiferous lead ores, or of silver from gold ores, being small. As in 1907, the copper production of Tennessee in 1908 showed an increase over that of the preceding year, but this was not sufficient to offset the decreased output in 1908 from Vermont and from North Carolina. Of the total silver production in 1908 a half of 1 per cent came from placer gold and lead ores combined, 2½ per cent came from dry or siliceous ores, and 97 per cent was derived from copper ores. Of the gold production, 12 per cent came from placers, 85 per cent from dry and siliceous ores, less than 3 per cent was derived from copper ores, and less than 1 per cent from lead ores.

As compared with the production of 1907 there was an increased output in value of gold from Alabama, Massachusetts, New Hampshire, Pennsylvania, and North Carolina, and of silver from Massachusetts, New Hampshire, Pennsylvania, and South Carolina.

The gold-mining industry showed increased activity over that of 1907. As stated above, recovery from the industrial depression of 1907, so far as the production of silver from the mining of copper ores elsewhere than in Tennessee was concerned, was very slow.

The most important gold mines of the Eastern States, the Haile of South Carolina; the Iola, of North Carolina; the Franklin, of Georgia; and the Hog Mountain, of Alabama, were all operated in 1908, but the Haile was temporarily closed in the latter part of the year as a result of an explosion in the mill, which killed the superintendent and damaged the plant. The most important producers of silver were the Ducktown copper mines, which had an active year, increasing their output over that of 1907.

23146—10——5

ALABAMA.

There was a marked increase in the production of gold in Alabama in 1908, but a slight decrease in the silver output. The Hog Mountain mines of the Hillabee Mining Company were worked throughout the year, furnishing the greater part of the precious metal production of the State. Exhaustive metallurgical experiments, with the view to ascertaining the most satisfactory process for the treatment of the ores, were continued. The placer production from Clear Creek and Arbacoochee was very small in 1908. In Randolph County the Gold Ridge Mining Company produced a small quantity of gold from the operation of their 20-stamp mill. The pyrites mine, at Pyriton in Clay County, whose ores furnish small amounts of copper and silver in the manufacture of sulphuric acid, was not operated in 1908.

GEORGIA.

The production of both gold and silver in 1908 was considerably below that of 1907, the decrease being principally in gold. About one-fifth of the production of precious metals was from placers and all of the remainder was from siliceous gold ores. There were no copper or lead ores mined in Georgia in 1908. There were 34 mines actively operated in 1908, of which 22 were placer or surface mines.

In Cherokee County the Franklin mine was again the most important producer in the State. In Forsythe County there was a small placer production and in Lumpkin County there was a considerable number of placer operations in the vicinity of Auraria and Dahlonega. There was only a single deep mine of importance at the latter place in 1908. At Auraria there was some production at the close of the year from deep mining. The most important gold production in the county was on Chestatee River, southeast of Dahlonega. In McDuffie and Union counties there was a small production. The most important placers of White County continued their production of gold.

MASSACHUSETTS.

In Massachusetts there was a small production of copper and silver from pyrite mines in Franklin County.

NEW HAMPSHIRE.

The Milan Mining and Milling Company, operating the Milan copper mine, in Coos County, N. H., began important development work in 1907 and made shipments of copper ore in 1908, one-fourth the value of which was in precious metals, the values of the gold and silver being nearly equal.

NORTH CAROLINA.

In 1908 the gold production of North Carolina increased over that of 1907, but the silver output decreased in quantity and therefore in value—the net result being a slight increase in combined value of the precious metals. The silver decrease was directly due to decreased mining of copper ores, chiefly at Gold Hill.

About the same number of deep and placer mines were operated in 1908 as in 1907. The ore from deep mines was almost entirely siliceous gold ore. About one-fifth of the gold and one-eleventh of the silver was derived from placers in 1908, the remainder of the gold and silver coming from siliceous ores. On the whole the gold mining industry held to the usual conditions of recent years, but showing some improvement over the conditions of 1907. North Carolina easily maintains first place among the Eastern States producing gold. The production of silver is largely dependent upon the copper mining industry, and this has not regained the position it held in North Carolina prior to the industrial depression of 1907.

In Burke and Cabarrus counties there was a small production of gold from placers and from reworking an old dump. In Catawba County various mines produced small amounts of gold. In Cleveland County, as well as in Burke County, some gold was recovered from concentration of monazite sands.

In Franklin and Gaston counties there was a small production. In Guilford County there was a small mine output and in McDowell County a small production of placer gold was reported.

The principal production in North Carolina in 1908, as usual in recent years, was from the Iola mine, the second largest producer in the East. Orange County made a small output and in Polk County there was a nominal output of placer gold.

In Rowan County there was a production of gold, silver, and copper from the Gold Hill mine, at Gold Hill; but the Union copper mines were not operated in 1908, thus reducing the usual production of copper and silver in the State.

There was a small placer production in Rutherford and Stanley counties and a small output from Union County.

PENNSYLVANIA.

A small production of gold in Pennsylvania in 1908 was of considerable interest as coming from a famous iron mine.

In the magnetic reconcentration of tailings of the Cornwall mine, in Lebanon County, there was a production of concentrates yielding copper and a small amount of gold.

SOUTH CAROLINA.

In South Carolina there was a small decrease in quantity and value of gold produced in 1908, as compared with the output of 1907, but there was a slight increase in both quantity and value of silver produced, the latter being due to a small production of copper ores. The gold production was almost wholly from siliceous ores, as usual, but the output of silver in 1908 from deep mines was about equally divided between siliceous ores and copper ores. There were 2 placers and 5 deep mines operated in 1908 as against 5 placers and 1 deep mine in 1907.

In Cherokee and Spartanburg counties there were small outputs of placer gold in 1908. The Haile mine, in Lancaster County, the largest gold producer east of the Black Hills, continued its important output until August, 1908, when an explosion of boilers in the mill killed the superintendent and seriously damaged the plant. The

mine was then temporarily closed down and production was thereby curtailed. In York County there was considerable activity in prospecting copper ores at several places, and shipments of this class of ore resulted in a small output of copper and silver.

TENNESSEE.

There was a slight decrease in both quantity and value of both gold and silver in Tennessee in 1908, while the output of copper was considerably increased. The output of gold is always small in this State, and, like that of silver, is chiefly derived as a by-product in the electrolytic refining of a part of the copper from the Ducktown mines. There was a very small production of placer gold from Monroe County.

VIRGINIA.

The production of gold in Virginia in 1908 was only about three-fourths of that of 1907, but the output of silver, always small, remained about the same. There were 4 placers and 4 deep mines producing in 1908, and copper, lead, and zinc ores were all mined in the State in addition to siliceous gold ores. The zinc ores yielded no gold or silver, but small tonnages of both copper and lead ores contributed somewhat to the production of precious metals.

In Floyd and Goochland counties there were small productions of placer gold in 1908, and the Virgilina district in Halifax County made a small production from siliceous ores, and the concentration of copper ores resulted in a production of copper, silver, and gold. A Prince William County pyrite mine produced some ore yielding copper and the precious metals. Smyth County produced lead ores from which lead and silver were obtained. In Spottsylvania County there was a small production of placer gold.

PART III.

PRODUCTION OF GOLD AND SILVER IN FOREIGN COUNTRIES.

PRODUCTION OF GOLD AND SILVER IN FOREIGN COUNTRIES IN 1908.

NORTH AMERICA.

British North America.

According to the figures furnished this bureau by the statistician, department of mines, Ottawa, Canada, the production of gold and silver in British North America in 1907 and 1908, by provinces, was as follows:

Province.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Commercial value.
1907.				
Nova Scotia	13,675	$282,686		
Quebec			16,000	$10,560
Ontario	3,212	66,399	9,982,363	6,588,360
Alberta	33	675		
British Columbia	236,216	4,883,020	2,745,448	1,811,995
Yukon District	152,381	3,150,000	35,988	23,752
Total	405,517	8,382,780	12,779,799	[a] 8,434,667
1908.				
Nova Scotia	11,842	244,799		
Quebec			13,299	7,114
Ontario	3,212	66,389	19,398,545	10,376,282
Alberta	50	1,037		
British Columbia	286,858	5,929,880	2,631,389	1,407,530
Yukon district	174,150	3,600,000	63,000	33,698
Total	476,112	9,842,105	22,106,233	[b] 11,824,624

[a] At 66 cents per fine ounce. [b] At 53.49 cents per fine ounce.

Mexico.

The American ambassador at Mexico City submits the following figures for the production of Mexico, 1908–9:

	Kilos fine.
Gold	33,661.264
Silver	2,291,260.570

Which represents for the gold, 1,082,210 ounces of fine gold of the value of $22,371,258, and for the silver, 73,664,027 ounces fine, of the commercial value of $39,402,888.

FOREIGN COMMERCE, 1908–9.

[From Bulletin of the International Union of the American Republics, October, 1909.]

* * * * * * *

Silver shipments totaled 73,841,592.59 pesos against 93,012,766.23 pesos, a decline of 19,171,173.64 pesos; whereas exports of gold exceeded those of the preceding year

by 7,288,781.48 pesos; the valuations for 1908–9 and 1907–8 being 39,210,080.32 and 31,921,298.84, respectively.

* * * * * * *

PRODUCTION OF GOLD AND SILVER FROM 1877 TO 1908.

During the thirty-one years from 1877 to 1908, Mexico produced 250,571 kilograms of gold, valued at $334,228,518 silver, and 40,225,278 kilograms of silver, valued at $1,649,528,978 silver, or a total value in Mexican silver during the period referred to, of $1,987,757,496.

COMMERCE AND MINERAL PRODUCTION IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

Mineral exports were distributed as follows: Silver, $46,517,300; gold, $15,960,500; copper, $12,417,000; lead, $2,672,200.

Gold shipments increased $4,023,600, and those of silver declined by $3,413,500, so that precious metals together advanced $610,100.

It is also worthy of note that while shipments of silver coin were nearly $14,000,000 less than in 1907, the exportation of bar silver, silver ore, cyanides, sulphides, etc., increased by $7,000,000, the increase in the exportation of bar silver being greater than the increase in the exportation of ore, which demonstrates the impetus given to home smelting and refining.

The decline in copper exports was caused by the depression of the market for that metal, which antedated by some months that of the silver market. Many of the mines were forced to suspend operations owing to this condition, but work has recently been resumed, the federal authorities contributing to the resumption of work by granting the free importation of fuel oil, thus cheapening the cost of production. Lead and zinc also participated in the decline caused by a fluctuating market.

* * * * * * *

The mines of Mexico are the principal source of national wealth and one of the leading fields of industry in the republic. Calculated from exportation figures, which constitute the only available index to production values, Señor Limantour, minister of finance, gives the mineral production for 1907–8 at $83,071,500 in the following distribution: Silver, $42,723,500; gold, $19,048,000; copper, $12,400,000; coal, $3,500,000; lead, $2,700,000; other metals, $1,700,000, and mineral oil, $1,000,000. The annual increase in the output of gold is a matter of great satisfaction, the present figures showing a marked advance over the output of $7,000,000 in 1898. The best paying gold mine in North and South America is the Esperanza at El Oro, Mexico, which paid its owners during the year 1908 $1,180,000, and since its incorporation the sum of $9,427,500, or 419 per cent on a capitalization of 2,250,000. The property is controlled by United States and British investors.

Notwithstanding the low price of silver since the middle of 1907, the operation of silver mines showed no decline during the latest fiscal year, and an increase was made both in quantity and value of the output, despite the fact that the average price per kilogram dropped from $22 to less than $20.

MEXICO'S MINERAL OUTPUT.

[From The Mining and Scientific Press, San Francisco, January 23, 1909.]

The annual budget sent to the Mexican Congress by Minister of Finance Limantour on December 14 gives some interesting figures as to the mineral output of the Republic. For 1907–8 the production of gold and silver was as follows:

	Pesos.
Gold	38,096,000
Silver	85,447,000

Gold ore and bullion exports, minus Mexican and foreign gold coins exported, were 20,156 kilograms, or 26,874,705 pesos; gold purchased for coinage by the exchange and currency commission, less 2,563,857 pesos obtained from foreign gold melted down, 8,316 kilograms, or 11,088,622 pesos; home consumption, 100 kilograms, or 133,333 pesos. The total production of gold for 1907 is 828,572 kilograms, amounting to 38,096,661 pesos, and for the year previous, 27,423 kilograms, or 36,563,898 pesos, an increase of 1,149 kilograms, or 1,523,763 pesos.

The exports of silver, minus those of Mexican and foreign silver coins, for the same time were 2,065,510 kilograms, valued at 82,192,655 pesos. Mexican silver bars bought for coinage, 85,504 kilograms, or 3,174,249 pesos, with a home consumption of 2,000 kilograms, or 80,000 pesos. The total production of silver for 1907–8 was 2,153,014 kilograms, valued at 85,446,904 pesos, while that of 1906–7 was 1,756,704 kilograms, or 77,088,877 pesos, an increase of 396,310 kilograms, or 8,358,077 pesos.

In mineral output Mexico ranks first in silver, second in copper, fourth in lead, and fifth in gold, and, it is said, will establish a high record for this year with 86 of the most important mines owned by Americans.

* * * * * * *

CENTRAL AMERICAN STATES.

The production of gold and silver in the Central American States is usually arrived at by assuming that their export figures represent their product. The following table is compiled, for the most part, from the United States import figures:

State.	Gold.		Silver.	
	Weight.	Value.	Weight.	Commercial value.
	Fine ounces.		*Fine ounces.*	
Costa Rica	28,641	$592,068	151,968	$81,288
Guatemala	351	7,247	.....	.....
Honduras	14,684	303,545	978,450	523,373
Nicaragua	45,142	933,171	.....	.....
Panama	8,224	170,000	.....	.....
Salvador	48,992	1,012,762	330,391	176,726
Total	146,034	3,018,793	1,460,809	781,387

Costa Rica.

The American consul at San José, Costa Rica, in reply to our inquiry relative to the production of gold and silver in 1908 submits the following export figures, which represent Costa Rica's production:

Gold bullion	$592,068
Silver bullion	81,288

equivalent to 28,641 ounces of fine gold, and 151,968 ounces of fine silver.

Guatemala.

The statement of imports furnished this bureau by the Bureau of Statistics (Department of Commerce and Labor) shows that there was imported from Guatemala during 1908 gold in ore valued at $7,247, equivalent to 351 ounces, fine. As no official production figures have been received from that State, the imports figures are accepted as representing the production.

Honduras.

The American minister at Tegucigalpa reports that there were exported from Honduras in 1908, 14,684 ounces of gold and 978,450 ounces of silver. Assuming that these were fine ounces, the value of the gold would be $303,545 and the commercial value of the silver $523,373, which figures are taken as the product of Honduras.

Commerce and Mineral Production in 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

Export values for the fiscal period ending July 31, 1908, under the head of minerals figured as follows: Cyanide products, for $204,862; ore, for $167,360; coined silver, $98,280; silver in bars, $85,912; and gold, $18,360.

* * * * * * *

Mining operations for the year 1908 were signalized by the location of valuable deposits at Minas de Oro, Macuelizo, and within 12 miles of San Pedro de Sula.

The Rosario property, which is said to be the best in the country, has yielded over $12,000,000 worth of ore, and with the application of modern methods it is confidently predicted that the output of this and other properties can be largely increased. The plant was first constructed to treat ores by panamalgamation; later the treatment was changed to concentration and amalgamation, and now the cyanide process is used, the company claiming a 96 per cent extraction.

It is a well-known fact that gold, platinum, silver, copper, iron, lead, zinc, tin, quicksilver, and more or less coal of varying quality occur in Honduras, and they have never been adequately exploited. Gold is found in either quartz veins or alluvial deposits. The most important gold mines are on the south coast of the country, several good prospects being only a few miles from the sea.

Silver ores are found in all the departments, occurring in quartz veins carrying sulphides, galena, and zinc-blende, with some gold values; in blanket veins carrying free silver with small quantities of sulphides, but with no gold values; and in lead-zinc veins, mostly blanket, with some sulphides and no gold values. There are also deposits of antimony and lead carbonates carrying silver in the ratio of 20 to 40 ounces to the ton, with no gold values. Despite the fact that copper lode formations are not currently supposed to exist in Honduras, outcrops and old works have been found in several of the departments.

* * * * * * *

Nicaragua.

The July number of the Bulletin of the International Union of the American Republics states that the exports of gold from Nicaragua in 1908 amounted to $933,171, equivalent to 45,142 ounces, fine, which figures are assumed to be the production for that State.

NICARAGUA IN 1908.

[The Mining Journal, London, January 2, 1909.]

It is a difficult matter to give exact statistics of the output of Nicaragua which are reliable. Most of our mining is done on the upper coast, and the news which we are getting here relates only to the exportation of gold which is done via Bluefields and Cape Gracias. I append a detailed list of gold exports from Bluefields, but the American consul at the "Cape," to whom I wrote, has not yet answered my inquiries, and I must estimate six months on Cape Gracias exports. To all this is to be added gold made up into native jewerly, gold sent to the interior, and gold exported via Honduras and through other channels, which at the very least represents $200,000. We have accordingly:

Bluefields exports	$468,171
Cape Gracias exports	265,000
Miscellaneous as above	200,000
Total production	933,171

* * * * * * *

There are several good mines stopping because the machinery is to be changed and mills are to be opened on new mines; also some cyanide plants are in erection, so that the coming year will be much better. The number of working mines is very small in proportion to those which can not be worked for want of capital, which is, however, coming in slowly, and the effect of which on the production will scarcely

be felt before June, 1909. My report, of course, is only for the coast, and you will doubtless know that there are many mines in the interior. The La Libertad-St. Domingo mining district had 26 mines running—more than ever since its discovery. Several mines ran also successfully in the Matayalpa district. All this gold goes over the Pacific side—partly to San Francisco, partly to England, and sometimes to Germany. It is easy there to send gold to Europe, because the senders are allowed to draw on it, and can sell the drafts readily.

* * * * * * *

PANAMA.

From the same source referred to above, the value of gold bullion shipped from the mines near Darien during 1907 was $170,000, which figures are repeated as the product of that State in 1908.

MINING INDUSTRY IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

In mining the Republic is being extensively prospected and 40 new claims were announced in 1907, as compared with 31 in 1906. Many of the rivers and points near the seashore contain gold in small quantities, while some of the deposits in the interior might be profitably worked. Gold bullion was shipped from mining properties near Darien in 1907 to the amount of $170,000.

* * * * * * *

SALVADOR.

The chargé d'affaires of the United States legation at San Salvador reports that the exports of gold and silver from that State in 1908 were as follows:

Gold bullion	$1,012,762
Silver bullion	176,726

representing 48,992 ounces of fine gold and 330,391 ounces of fine silver, which figures are assumed for the product of 1908.

COMMERCE IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

The shipments to the United States were made up in part as follows: Gold bullion, $822,181; coffee, $719,455; gold and silver, $387,902; sugar, $26,680; rubber, $10,595; indigo and hides, about $10,000; and other articles in lesser valuations. Substantial gains were noted in shipments of gold and silver bullion, rubber, sugar, and indigo; balsam, copper, and miscellaneous items remaining stationary; while in hides and lead there was a considerable decline.

As the development of the mining resources of the country increases, larger shipments of gold and silver bullion will undoubtedly be made to the United States. The coffee of the country has always found its best market in Europe.

* * * * * * *

SOUTH AMERICA.

ARGENTINA.

In estimating the production of the precious metals in Argentina, this bureau accepts the figures of the imports of those metals from Argentina by other countries, viz:

Country importing.	Gold.	Silver.
	Value.	Commercial value.
Great Britain	$7,525	$28,114
Germany	42,534	
United States	111,202	39,876
Total	161,261	67,990

These values represent, for the gold, 7,801 ounces, fine, and for the silver, 127,108 ounces, fine.

INDUSTRIES IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

Many causes contribute to the noticeable lack of interest shown in the exploitation of the mineral resources of the Republic, chief of which are lack of available capital, difficulties of transportation, and the high price of fuel. Official statistics show gold exports from 1903 to 1907 to have reached a total of $1,910,912, or a yearly average of about $382,000.

* * * * * * *

BOLIVIA AND CHILE.

No official information has been received by this bureau relative to the gold and silver product of Bolivia and Chile for 1908. Heretofore in estimating the product of these metals for Bolivia and Chile, by this bureau, it has been the custom to accept the figures of the imports from those countries by other countries plus their coinages, as the probable production.

Bolivia is compelled to export through some port of Peru or Chile and consequently does not get credit for her exports, at least we have been unable to find where any other country has received any gold or silver from Bolivia either in 1907 or 1908, thus making it almost impossible to separate Bolivia's product from Chile's.

The value of the imports of gold and silver bullion and ores from Chile by other countries during 1908 was as follows:

Country importing.	Gold.	Silver.
	Value.	Commercial value.
Great Britain	$199,902	$1,497,047
United States	146,398	1,599,016
Total	346,300	3,096,063

These values represent, for the gold, 16,752 ounces, fine, and for the silver, 5,788,117 ounces, fine.

There was no coinage of gold or silver reported from Chile during 1908. Bolivia coined 49,763 50-centavo pieces, containing 18,000 fine ounces of silver; adding this to the export figures given above, gives the total product of those countries as follows:

Gold, 16,752 fine ounces, valued at $346,300, and silver, 5,806,117 fine ounces, of the commerci alvalue of $3,105,692.

MINERAL PRODUCTION OF BOLIVIA IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

It is upon her mineral wealth that the Republic mainly depends, and present conditions all point to increased activity in the exploitation of these resources through the constantly increasing foreign demand for the mine products of the country.

The mineral wealth of Bolivia, including nearly all known metals, is widely distributed and very rich and abundant. Great veins of ore containing the precious metals are found in the mountains of the Republic, and while their exploitation is carried on on a considerable scale, yet, due to the lack of labor and capital and adequate transportation facilities, they are not fully developed, and in many instances remain entirely virgin. The copper mines of Corocoro and the tin and bismuth mines of the Republic are among the richest in the world.

* * * * * * *

From 1540 to 1750, a period of two hundred and ten years, the gold mines of Bolivia produced $2,100,000,000. From 1750 to the beginning of the nineteenth century the mines and placers situated in the provinces of Larecaja and Caupolican produced $14,000,000 gold, and from 1818 to 1868 the output was 150,770 ounces of gold. The product of the other mines and placers of the nation, from the middle of the eighteenth to the latter part of the nineteenth century, is estimated at $125,000,000. The annual gold production of Bolivia may be calculated at 17,460 troy ounces, which, at $20 an ounce, gives a value of $349,200. The 1907 shipments of silver aggregated 149 tons.

* * * * * * *

In 1908 silver shipments showed an increase of $209,400, reaching a total of $2,802,000, while gold showed a gain of $20,600.

* * * * * * *

BOLIVIA.

[From The Mining Journal, London, October 2, 1909.]

Mr. Acting Consul J. Watson, in his report on the trade of La Paz for the year 1908, states: The financial situation may still be considered as critical. The prospects for 1909 depend a great deal upon the present rate of exchange being maintained.

The official figures of the production of silver in Potosi for the year 1907 (the latest available), are as follows: £446,000. The principal mining establishments are situated in and around Potosi.

(The exportation of silver from Bolivia in 1907 was 149,122 bolivianos.)

[From Bulletin of the International Union of the American Republics, October, 1909.]

Figures published in the "South American Journal" for August 14, 1909, give the valuation of the exports of silver from Bolivia during 1908, as £644,648.

THE HUANCHACA COMPANY OF BOLIVIA.

[Specially abstracted for "The Mining Journal," London, August 21, 1909, from "Compañia Huanchaca de Bolivia, XXXVII. Memoria del Consejo de Administración; Balance General al 31 de Diciembre de 1908 y Anexos," Valparaiso, 1909.]

The production for the last two years has been as follows:

Classification.	1907.	1908.
	Tons.	*Tons.*
Rich and ordinary silver ores	20,907	22,562
Rich blende No. 1	6,624	6,288
Poor blende No. 2	1,266	928
Magnetic separation blende	840	1,420
Antimonial galena	2,896	3,533
Galena (concentrates)	1,420	1,720
Auriferous pyrites	8,724	9,824
Ground ores passed to stock	27,685	51,027
Total	70,362	97,302

Profit.—The balance of profit and loss account for 1908 shows a profit of 216,927.16 bolivianos. (In the report the boliviano is taken at 30d., it is usually valued at 19⅓d.) Adding the profit from the preceding campaign less government tax paid for 1907, and deducting two dividends of 2.50 francs each per share paid in February and June of 1908, there is a net profit of B./405,295.01.

* * * * * * *

CHILE.

From the Mining Journal, London, November 13, 1909, the following figures were obtained, showing the gold product of Chile for 1906 to have been 1,135.459 kilograms, and for 1907, 1,907.110 kilograms, fine. These weights represent 36,505 ounces, fine, and 61,313 ounces, fine, respectively, with the respective value of $754,625 and $1,267,452, which figures are employed as the gold product of Chile for those years in the tables of the world's production published in this report.

PRODUCTION AND INDUSTRIES IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

The only item of export which decreased in 1908 as compared with 1907 was coin, $548,485.

Gold mining is less actively carried on in late years than was formerly the case, although the exploitation of placer gold is increasing. These deposits have a great future, particularly in Cautin, Valdivia, and Magellan, in the southern part of the Republic. Hydraulic and dredge systems have recently been installed, but as the work has been largely experimental the best results have not yet been attained. In 1907 the total output of gold was 1,500,000 grams, amounting in value to nearly $1,000,000. Near Vallenar a gold deposit has lately been discovered assaying nearly 200 ounces of pure gold per ton. This is the old gold mining region of Chile.

Silver production, although it showed a slight advance in 1907, when the output amounted to 10,433 kilograms, does not receive the attention warranted by the known value of the deposits.

The mining energies of the country have been directed largely to copper, the production of which for 1908 was given as 35,000 tons of refined metal as compared with 28,854 tons in 1907. The mean copper percentage of ores worked in Chile during 1907 was 9½, a portion of which, with an average percentage of 20 per cent, is sent abroad as ore for treatment.

* * * * * * *

THE CHILIAN MINING INDUSTRY.

[From The Mining Journal, London, March 13, 1909.]

GOLD.

A notable decadence is noted in the industry of the "noble metal" (gold) during the last few years, inasmuch as the mines are concerned. On the other hand, we have an increase in the production of placer gold. These latter deposits have a great future in the southern parts of Chile—namely, Cautin, Valdivia, and Magallanes (Magellan). During the last few years these deposits have been worked by the hydraulic and dredge system, although this latter has not proved a commercial success, due perhaps to the fact that the work has been purely experimental and also on account of the crisis that the country had to suffer last year. In 1907 the total gold production was 1,500,000 grams, with a value, in round numbers, of $2,500,000 of 18d. (A Chilean dollar equals $0.354 American.)

In Chile no great companies have been formed for the systematic exploitation of gold mines, which to a certainty exist in abundance, because there is a peculiar tendency to direct attention more to copper, due, undoubtedly, to the high price to which the red metal has risen.

SILVER.

The past has shown the abundance and the wealth of our great silver deposits, such as Huantajaya, Chañarcillo, Caracoles, Tres Puntas, Esmeralda, Babeza de Vaca, Arqueros, Marquesa, etc., which, with their great richness have, so to speak, somewhat weakened the enterprising spirit of our miners who do not feel themselves inclined to work low-grade deposits under industrial conditions.

The metallurgy of silver ores is extremely undeveloped; there are few amalgamation plants working on the old system (arrastra).

In the smelting of silver ores with lead minerals there is no activity, although there exists a sure base for this class of installation.

The silver production in 1907 was 10,433 kilograms, being a little higher than in former years.

COPPER.

Mining energies have been directed chiefly to copper, and to this fact is due the increase realized in the production of this metal, so that we are recovering our old standard of production, though the progress is slower than one would naturally expect it to be.

There was a time—in 1879, about—when Chile used to produce 30 per cent of the world's output; nowadays it only produces 4 per cent, or 28,854 tons, to 1907. Nevertheless, it is satisfactory to be able to announce for the year that now ends a minimum production of 35,000 tons of refined copper, which production will increase with the opening of the rich deposits of Collahuasi, Calama, Chiquicamata, and several others, as also with the starting of establishments of greater capacity for our lower-grade ores.

The mean copper percentage of our ores worked in Chile during 1907 was 9½ per cent, a portion of which goes abroad, with a mean percentage of 20 per cent, as raw ore to be treated there. The modern metallurgy of copper is well represented by practical and simple methods, in which all modern progress is considered. All that is lacking is the systematic development of the mines, which in general terms are not worked for large production. This is the reason why mines worked for a long time more or less constantly show little depth. The greatest depth arrived at in Chile is about 1,000 meters—at the Dulcinea mine in Puquios, Copiapo; but this is an exception. The mines that go beyond 500 meters are not more than eight in all the Republic, while depths of 150 to 200 meters are very common. These facts give an idea of the small scale of the work.

The investment of capital in mining, even in that of copper, is very small as compared with its merits and with what it could return.

For a long time the idea has been predominant that our national deposits are very large, numerically considered, but small in area—that is to say, incapable of a great production. This is completely erroneous.

Undoubtedly, in our country, we do not possess a Rio Tinto, a Michigan, or a Montana; but many other countries do not possess them either. But, on the other hand, to show that all this comes from a lack of knowledge of our deposits, we can quote the Braden Copper Company of Rancagua. This company undertook, with sufficient

capital, the exploitation of the old mines of Teniente, worked during fifty years with the object of forming a mine, but without having at its disposition the necessary resources; and now, after two-and-a-half years' labor, this company has guaranteed the existence of ore for an output of 2,500 tons daily, which means that this deposit alone will produce a tonnage two-and-a-half times greater than the total tonnage of the country, and perhaps the same may be said within a short time of the smelter in course of construction under the direction of Count Bernard de Saint Seine in the zone of Naltagua, in the department of Melipilla.

BRAZIL.

The American ambassador at Petropolis states that the gold production of Brazil in 1908 was 4,157,367 grams, which amount, taken at a fineness, formerly reported, of 0.795, would give a product of 106,259 fine ounces, of the value of $2,196,568.

COMMERCE AND MINING IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

The gold deposits existing in the Caixa de Conversão on December 31, 1908, amounted to $27,154,141.92, which shows a decrease of $3,233,542.68 over the deposits on the same date of last year.

The imports of gold coins amounted to $688,537, while gold exports were only $100,602.

Specie imports for 1907 and 1908 are reported as $708,000 and $22,000,000, respectively.

Exchange was maintained throughout the year at an average of $15\frac{5}{32}$ per cent.

* * * * * * *

Old Portuguese records fixed the annual gold product of the country at over $5,000,000 annually, a large proportion of which was obtained from Bahia.

A very rich deposit of surface gold was recently discovered at a point called Olho de Agua, 8 kilometers from the city of Montes Claros, in the northern part of the State of Minas, Brazil, and prospectors to the number of 3,000 are in the field. Gold to the value of about $150,000 has been secured in flakes varying from 100 to 720 grams each. One of the latter, owing to its unusual weight, was exhibited in the National Exposition in Rio de Janeiro.

The most important placer is the basin of gold-bearing gravel below Guanay, reached by descending the Beni or Kaka River. This placer has been exploited to a considerable extent. The Incahuara basin, on the Beni River, and the gold-bearing gravel found on the banks of the Inambari River are also rich deposits, the gold being obtained from a black sand. Samples assayed ran over 80 ounces to the ton.

* * * * * * *

EXPORTS OF GOLD, 1905–6.

[From Bulletin of the International Union of the American Republics, April, 1909.]

The Jornal do Commercio of January 4, 1909, publishes comparative statistics covering exports of Brazilian gold for 1906, the latest period for which statistics are available, compared with 1905, as follows:

Metal.	1906.		1905.	
	Quantity.	Value.	Quantity.	Value.
Gold	*Grams.* 4,547,940	$2,204,814	*Grams.* 3,878,698	$1,946,342

As is well known, Brazil was formerly one of the greatest gold-producing countries of the world, occupying in this respect the same position held by California and Australia in the nineteenth century. At the present time, however, Brazil produces gold in relatively small quantity, as is seen from the above figures. This decline is attributed to several causes. Many of the gold-bearing gravels and veins which formerly yielded so abundantly have become exhausted, and, although new mines have been discovered, the high prices of labor, and in many cases the absence of streams, render their exploitation unprofitable. The greatest obstacle, however, to progress in the gold-mining industry is the fact that the State where it still shows signs of life is absolutely devoid of mining legislation. It is not probable that much progress will be made in the industry until state and federal legislatures enact adequate mining laws and the owners of gold-bearing lands come to have a better understanding of their true interests.

* * * * * * *

COLOMBIA.

The United States Bureau of Statistics, Department of Commerce and Labor, reports that gold in ore and bullion was imported from Colombia during 1908 valued at $1,937,346 and silver in ore and bullion valued at $26,140.

The Annual Statement of the Trade of the United Kingdom for 1908 shows that Great Britain received from Colombia in 1908, 78,977 ounces of gold bullion of British standard fineness, equivalent to 72,395 fine ounces, valued at $1,476,537, and gold in ore valued at £2,765, or $13,456, representing 651 ounces. The commercial value of the silver bullion and ore imported into Great Britain from Colombia was $553,114, representing 1,034,051 fine ounces; a total gold importation into the United States and Great Britain of $3,427,339, representing 165,797 fine ounces; and a silver importation of $579,254, representing 1,082,920 fine ounces.

The silver coinage of Bogota during 1908 was 870,526 50-cent pieces, containing 292,119 fine ounces, of the commercial value of $156,254. The coinage is supposed to have been made from the product of silver for the year, and is, consequently, added to the exports in order to obtain the total product; accordingly, the total gold product would be $3,427,339, representing 165,797 ounces, fine, and the silver product, 1,375,039 fine ounces, of a commercial value of $735,508.

COMMERCE AND MINERAL PRODUCTION IN 1908.

[From Bulletin of the International Union of the American Republics, July, 1909.]

* * * * * * *

Gold was shipped to the United States from Colombia during 1908 to the value of $789,241.33.

* * * * * * *

In some departments, notably Antioquia, the mineral industry is well established, while the Marmato and Riosucio gold deposits are said to be equal to those of the Transvaal. A French company has been organized for the exploitation of the surface veins of Alta, Baja, and Vetas, in the Department of Santander. Large quantities of machinery and material have been sent to the country for the equipment of the plant, and engineers have arrived for the immediate installation of the works.

The Choco district is of recognized importance, and at present native and foreign companies are engaged in the development of the region. It is said that the entire Pacific coast of Colombia has been formed by gold-bearing alluvial, so that with more effective development a great mining center will be established. Near Tuquerres and Samaniego, in the Department of Nariño, gold deposits are being profitably worked,

while in the central cordillera region exploitation has scarcely begun. Abundant deposits of coal, iron, copper, lead, and cinnabar are known to exist on both slopes, so that Colombia may be regarded as a rich storehouse of minerals, as well as a vast area of agricultural and pastoral resources.

The great gold-bearing region is found in the lofty cordilleras of the Choco and Antioquia provinces and in the mountain ranges that separate the Cauca and Magdalena rivers. In this large area of many thousands of square miles, wherever there is gravel there is gold, and back in the mountains where the rock has been laid bare veins are found everywhere. These veins contain vast treasures of gold that can be extracted by the systematic use of modern machinery and methods. Many hundreds of miles of this rich territory have never been explored except by the Indian hunter.

The Choco placer region has twice as much territory as both the California and New Zealand regions together, and the possibilities for development are infinite. The construction of the Colombian Central Railroad will greatly stimulate mining in this part of the Republic, its northern terminal being opposite the mouth of the Atrato River. Much of the gravel of the river beds of the gold-bearing rivers of Colombia can not be worked because it is impossible to divert the streams, and the huge bowlders and hard bed rock, together with torrential currents, often render dredging impossible by any of the methods known to the mining industry of the present day.

Recent gold discoveries near Neiva, on the upper Magdalena River, have opened up a new section of the gold belt. It is known that the State of Nariño, bordering on the Ecuador line, is rich in gold. Gold nuggets are found in the gravel beds of all the rivers of this section flowing into the Pacific Ocean.

The development of the quartz mining depends almost entirely upon transportation. The extension of the Dorado Railroad and the Tolima Railroad will facilitate transport to some of the mines of the eastern slopes of the gold belt of the Republic, and the Colombian Central Railroad, when completed, will pass through the very heart of the gold region and, in addition, will provide direct transportation from the coast.

Discoveries have been made of rich gold-bearing quartz on the headwaters of the Andagueda and Chirvigo rivers, distant about 125 miles from Quibdo, one ledge being reported 18 feet wide, running about $50 gold per ton, and other veins, one carrying about 8 to 10 per cent copper, range from 6 to 8 feet in width.

Russia is the only country whose platinum output exceeds that of Colombia. This metal, which is always found mixed with gold, comes from the gravels of the Choco, its main source being the Platina and Condoto rivers, which are tributary to the San Juan River. It is also obtained from some of the streams that flow into the Atrato River.

Government returns covering platinum exploitation have not been published for a more recent period than 1905, but from records in the Bureau of Statistics of Bogota the total yield for exploitation during 1907 amounted to about 245 ounces. There is undoubtedly a great future for this branch of mining industry in the Republic, and concessions recently granted foreshadow the intention to adequately exploit it as a source of national wealth.

* * * * * * *

ECUADOR.

The United States consul-general at Guayaquil, Ecuador, writes that the gold product of that State in 1908 was valued at $350,292 and the silver product at $12,111, commercial value. These values represent 16,945 ounces of gold and 22,642 ounces of silver.

THE GUIANAS.

BRITISH GUIANA.

The United States consul at Georgetown states that there were produced in British Guiana in 1908, 73,639 ounces of gold of an average fineness of 0.920 to 0.930, which would equal 68,116 ounces of fine gold, of the value of $1,408,083.

DUTCH GUIANA.

From the same source as that mentioned above the product of Dutch Guiana is given as $662,960. This amount represents 32,071 fine ounces.

FRENCH GUIANA.

The United States minister at Paris states that the gold product of French Guiana for 1907 was 4,160 kilograms, valued at 12,232,000 francs, equivalent, in United States money, to $2,360,776, representing 114,202 fine ounces. These figures are repeated for the product of 1908.

British Guiana's Mining Industry.

[From the Mining Journal, London, December 19, 1908.]

Exports of Gold from January 1 to November 25.

Year.	Quantity.	Value.
	Ozs. dwts. grs.	
1907	61,030 15 17	$1,066,214.41
1908	62,921 19 11	1,113,125.04

[From Colonial Reports, No. 589, for 1907-8.]

The gold won during the year amounted to 67,209 ounces, or some 18,295 less than the output for the previous year. The decrease is due to the smaller returns from the alluvial workings. The fields originally worked are gradually being exhausted, and no new ones have been found to take their place. A large number of men previously engaged in the gold fields have now turned their attention to other pursuits, such as rice planting, etc., and prospecting has practically been at a standstill.

Quartz mining was continued during the greater part of the year at the Peters mine, on the Purini River. Some 8,916 tons of ore were crushed, from which 5,815 ounces 13 pennyweights 8 grains of gold were won. A considerable amount of development work has been undertaken since the last report. Development work has also been steadily carried on at the Barima mine. Dredging operations have continued on the Konawaruk River, and about 2,652 ounces of gold were obtained by this method. The richer gravels of the higher parts of the river have not yet been worked, and better returns may confidently be looked for in the future.

BRITISH GUIANA MINES.

[From The Engineering and Mining Journal, New York, February 20, 1909.]

Exports of gold from British Guiana for the year ended December 31 were 70,676 ounces bullion in 1907 and 73,089 ounces in 1908, an increase of 2,413 ounces. The bullion reported in 1908 was equal to $1,289,948, or 62,407 ounces fine gold.

DUTCH GUIANA.

Gold Production in Surinam.

Year.	Quantity.	Year.	Quantity.
	Kilos.		*Kilos.*
1901	753	1905	1,071
1902	588	1906	1,188
1903	682	1907	1,105
1904	801	1908	1,210

GOLD IN FRENCH GUIANA.

[From L'Économiste Européen, Paris, September 3, 1909.]

The "Journal officiel de la Guyane française" has recently published the amount of the production of gold, from custom-house statistics, since 1866. We give a statement of the amount in the following table:

Year.	Quantity.	Year.	Quantity.
	Kilos.		*Kilos.*
1866	228	1896	4,928
1871	728	1901	2,921
1876	1,858	1905	3,462
1881	1,977	1906	3,563
1886	1,594	1907	4,057
1891	1,896	1908	4,300

We see that the production of gold in French Guiana reached its maximum in 1896, which was the year of the discovery of Carsewene.

It afterwards declined and fell to 2,170 kilograms in 1900. The discovery of the Imni, in 1901, made it reascend to 4,246 kilograms in 1902, but in 1905 we find a considerable decrease, to 3,462 kilograms. It is notable, however, that since 1905 it has maintained a rising movement.

Gold exports.—The chief export of this colony is gold dust, valued at $1,867,285 in 1907.

PERU.

In the absence of any official data relative to the production of gold and silver in Peru in 1908, the returns from the United States minister at Lima for 1907 are repeated for 1908, viz: Gold, 24,890 fine ounces, valued at $514,522, and silver, 9,566,118 fine ounces, which, at the average price of silver for the year 1907 ($0.5349), gives the commercial value of $5,116,917.

THE MINERAL STATISTICS OF PERU FOR 1907.

[From The Mining Journal, London, February 13, 1909. Specially abstracted for "The Mining Journal" from "Boletin del Cuerpo de Ingenieros de Mines del Peru," No. 67, Lima, 1908.]

The following table shows the gold and silver production for 1907, as compared with the four previous years:

Years.	Gold.	Silver.
	Kilos.	*Tons.*[a]
1903	1,078	171
1904	601	145
1905	777	191
1906	1,247	230
1907	778	208

[a] Metric tons of 2,204.6 pounds avoirdupois.

Gold.—The production of gold from 28 districts (12 Departments) amounts to 25,013 Troy ounces, or 15,089 ounces less than in 1906.

Silver.—The production of fine silver from 30 districts (10 Departments) amounts to 6,687,304 Troy ounces, or 716,934 ounces less than in 1906.

URUGUAY.

The number of the BULLETIN of the International Union of the American Republics for July, 1909, states that the mining works of Cuñapiru during 1908 yielded 102,395 kilograms of gold, worth $45,056, and that the alluvial deposits and quartz from two other mines were valued at $46,586. The total of these two amounts gives $91,642, which represents 4,433 ounces, fine.

VENEZUELA.

The United States Bureau of Statistics, Department of Commerce and Labor, reports that the value of the imports of gold in ore and bullion from Venezuela during 1908 was $24,471, representing 1,184 ounces, fine.

The annual statement of the trade of the United Kingdom for 1908 shows that Great Britain imported silver ores from Venezuela in 1908 valued at £11,500 ($55,965), representing 104,626 ounces, fine.

EUROPE.

AUSTRIA-HUNGARY.

The United States chargé d'affaires at Vienna, reports that the production of gold and silver in Austria during 1908 was as follows:

Source.	Gold.		Silver.	
	Weight.	Value.	Weight.	Value.
	Kilos fine.	*Crowns.*	*Kilos fine.*	*Crowns.*
From washing	55.269	156,211		
From amalgamation	133.941	438,069	65.784	5,542
From leaching	12.416	39,602	6.997	591
From smelting	5.875	18,484	39,784.721	3,396,935
Total	207.501	[a] 652,366	39,857.502	[a] 3,403,068

[a] Besides these amounts, there was produced from gold and silver bearing slimes and from copper, 8.0216 kilos of fine gold, of the value of 30,854 crowns; and 3,341.15 kilos of fine silver, of the value of 296,628 crowns.

No official information has been received relative to the production of gold and silver in Hungary for 1908, therefore the product of 1907 is repeated for 1908, viz, 3,500 kilograms of fine gold, valued at 11,480,000 crowns, and 11,870, kilograms of fine silver, valued at 1,242,789 crowns. The total is equivalent to 119,454 fine ounces for the gold product, valued in United States currency at $2,469,334, and 1,770,457 fine ounces for the silver product, of the United States commercial value of $947,018.

THE PRECIOUS METALS IN BELGIUM.

From 1872 to 1884 the compant ("Société de la Vieille-Montagne") obtained from argentiferous galenas, extracted by the smelting works of Moresnet (Belgian territory), an insignificant quantity of silver (an average of 30 kilograms per year). That production has ceased.

The smelting works situated in the provinces of Liége and Limbourg (works of Bleyberg, Sclaigneaux and Overpelt) treat argentiferous ores of foreign production. The production of these establishments had, in 1908, amounted to 68,451 kilograms. The works of Overpelt has also extracted from auriferous silver 38.767 kilograms of gold.

For the forty-three years (1866–1908) the production amounted to more than 1,009,807 kilograms of fine silver.

A fourth works, started at Hoboken, near Anvers, treated ingots of lead imported principally from Spain. Their production for 1908 amounted to 154,331 kilograms of silver and 919 kilograms of gold.

FRANCE.

The United States ambassador at Paris gives the production of gold and silver in France for 1907, as follows:

Gold, 1,257 kilograms fine; valued at 4,330,000 francs.
Silver, 24,727 kilograms fine; valued at 2,967,000 francs.

The kilograms are equivalent to 40,412.55 fine ounces of gold, of the value of $835,402, and 794,973 fine ounces of silver, of the commercial value of $524,682.

No official figures have been received for 1908, therefore the product for 1907 is repeated.

MINERAL PRODUCTION OF FRENCH COLONIES.

[From The Engineering and Mining Journal, May 29, 1909.]

The minister of colonies has just issued the statistics of the mineral production of the French colonies for the year 1907. The quantity and value of gold produced is as follows: 7,201 kilograms, value $4,065,878.

Gold is obtained from placer workings and dredgings in Guiana, Madagascar, West Africa, and Indo-China. The production of Guiana was 4,160 kilograms, against 3,503 kilograms in 1906, declared for a value of 11,232,097 francs; of Madagascar, 2,940 kilograms, against 2,200 in 1906; the balance came from Indo-China and West Africa.

* * * * * * *

Some new companies are now working for gold in Guiana and Madagascar, but they are not yet producing.

GERMANY.

The following information relative to the production of precious metals in Germany in 1908 was received from the embassy of the United States at Berlin:

The German refineries produced gold and silver during 1908 as follows:

Description.	Gold.	Silver.
	Kilos.	*Kilos.*
From domestic ores	97.47	154,635.89
From foreign ores	669.23	179,457.05
From lead ores	.....	210.73
From foreign and domestic sweeps	3,991.32	73,530.12
Total	4,758.02	407,833.79
Value in marks	13,287,000	29,744,000

Only the amounts refined from domestic ores are taken as the product of Germany, viz, 97.47 kilograms of fine gold, and 154,635.89 kilograms of fine silver. These amounts are equivalent to 3,134 ounces of gold and 4,971,544 ounces of silver, the respective values of which are $64,785 and $2,659,279.

GREAT BRITAIN.

Official information received from the United States embassy at London, relative to the product of gold and silver in that country in 1908, gives the gold as 24 kilograms fine and silver as 4,207 kilo-

grams fine. These amounts are equivalent to 772 ounces fine of gold, and 135,255 ounces fine of silver, the respective values of which are $15,959 and $72,348.

BRITISH EMPIRE'S GOLD OUTPUT, 1893–1907.

Source of production and year.	Value.	Source of production and year.	Value.
United Kingdom:		British India (including native States):	
1893	£8,691	1893	£759,826
1894	14,811	1894	778,192
1895	18,520	1895	950,329
1896	5,035	1896	1,398,549
1897	7,185	1897	1,568,065
1898	1,299	1898	1,608,504
1899	12,086	1899	1,724,906
1900	52,147	1900	1,893,107
1901	22,042	1901	1,931,030
1902	14,570	1902	1,970,701
1903	19,308	1903	2,303,210
1904	73,925	1904	2,366,079
1905	21,222	1905	2,416,971
1906	6,569	1906	2,230,284
1907	6,228	1907	2,133,691

AUSTRALIA.

SELF-GOVERNING COLONIES.

Year.	New South Wales.	Victoria.	South Australia.[a]	Western Australia.[b]	Tasmania.	Queensland.	Total.[c]
1893	£651,286	£2,684,504	£153,132	£421,385	£145,875	£2,159,290	£6,215,472
1894	1,156,717	2,867,816	152,092	787,099	225,485	2,378,288	7,567,497
1895	1,315,929	2,960,344	128,792	879,748	212,329	2,210,887	7,708,029
1896	1,073,360	3,220,348	112,759	1,068,808	237,574	2,241,347	7,954,196
1897	1,104,315	3,251,064	120,044	2,564,977	289,241	2,553,141	9,882,782
1898	1,201,743	3,349,028	95,143	3,990,698	281,485	2,750,349	11,668,446
1899	1,623,320	3,353,022	79,041	6,246,732	327,545	2,838,119	14,467,779
1900	1,070,920	3,190,940	82,188	6,007,611	316,220	2,871,709	13,539,588
1901	737,164	3,102,753	93,222	7,235,653	295,176	2,541,764	14,005,732
1902	684,970	3,062,028	95,203	7,947,662	301,573	2,720,512	14,811,948
1903	1,080,029	3,259,482	90,250	8,770,719	254,403	2,839,801	16,294,684
1904	1,146,109	3,252,045	80,008	8,424,226	280,015	2,714,934	15,897,337
1905	1,165,013	3,173,744	76,824	8,305,654	312,380	2,517,295	15,550,910
1906	1,078,866	3,280,478	81,225	7,622,749	254,963	2,313,464	14,631,745
1907	1,050,730	2,954,617	42,468	7,210,749	277,607	1,978,938	13,515,109

Year.	Dominion of New Zealand.	Natal.	Cape of Good Hope.	Dominion of Canada.	Transvaal.[d]	Total.
1893	£913,138	£187	£1,989	£200,672	.....	£1,115,986
1894	887,839	259	1,115	231,922	.....	1,121,135
1895	1,162,164	540	581	428,152	.....	1,591,437
1896	1,041,428	161	530	566,049	.....	1,608,168
1897	980,204	157	308	1,238,428	.....	2,219,097
1898	1,080,691	64	456	2,830,506	.....	3,911,717
1899	1,513,173	238	508	4,368,819	.....	5,882,738
1900	1,439,602	51	488	5,734,552	.....	7,174,693
1901	1,753,783	607	301	4,957,911	[d] £1,097,219	7,809,821
1902	1,951,433	331	101	4,385,870	7,301,501	13,639,236
1903	2,037,831	.....	46	3,871,534	12,628,057	18,537,468
1904	1,987,501	.....	139	3,383,962	16,028,883	21,400,485
1905	2,093,936	458	367	3,003,248	20,854,440	25,952,449
1906	2,270,904	308	1,117	2,362,902	24,616,704	29,251,935
1907	2,027,490	3,730	2,386	1,698,868	27,410,210	31,142,684

[a] Including northern territory.

[b] The figures represent the quantity of gold "Entered for export," as well as that received at the Perth branch of the Royal Mint.

[c] The figures for years prior to 1906 are taken from the several Australian state returns and differ slightly in some cases from those obtainable from the Commonwealth returns.

[d] The gold production of the Transvaal is only included from May, 1901—the date of resumption of mining operations after annexation in September, 1900.

AUSTRALIA—continued.

OTHER COLONIES AND POSSESSIONS.

Year.	Federated Malay States.	Sarawak.	Territory of Papua.[a]	Bechuanaland Protectorate.	Swaziland.	Southern Rhodesia.[b]	Gold Coast.	British Guiana.[c]	Total.	Grand total.
1893...	.....	£2,764	£4,500	.....	.....	.....	£79,099	£505,049	£591,412	£7,922,870
1894...	.....	5,494	3,906	.....	.....	.....	76,796	484,876	571,072	9,259,704
1895...	£48,357	3,107	2,596	.....	.....	.....	91,497	442,185	587,711	9,887,177
1896...	77,794	.....	45,000	.....	.....	.....	86,186	464,768	673,748	10,236,112
1897...	96,583	2,871	73,085	.....	.....	.....	84,798	442,935	613,272	12,715,151
1898...	79,605	2,270	56,682	.....	.....	£59,598	63,838	412,395	674,388	16,254,551
1899...	72,219	52,666	64,425	.....	.....	205,690	51,300	411,211	857,511	21,208,028
1900...	68,192	84,371	89,075	£19,105	.....	308,219	38,007	415,997	1,022,966	21,737,247
1901...	77,795	119,419	79,060	.....	.....	610,389	22,187	369,439	1,277,689	23,093,242
1902...	63,390	116,747	76,047	.....	.....	687,096	96,880	381,080	1,421,240	29,872,424
1903...	56,662	156,152	87,545	431	.....	827,729	254,791	329,350	1,712,660	36,544,812
1904...	74,875	170,550	84,930	.....	.....	969,343	345,608	349,504	1,994,810	39,292,632
1905...	45,812	183,996	82,736	10,617	.....	1,449,985	596,583	349,510	2,719,239	44,222,598
1906...	46,320	165,138	87,869	18,732	.....	1,985,099	822,025	316,900	3,442,083	47,325,763
1907...	61,412	.....	58,886	20,406	£2,197	2,178,886	1,130,975	245,035	3,697,797	48,355,590

[a] Estimated figures.
[b] Figures for year ended June 30.
[c] For the twelve months ended March 31 of the years following those stated.

NOTE.—The quantity of gold produced in the several colonies and protectorates is stated in units of varying degrees of fineness, but for the most part fine ounces are given. Where production figures are not available, domestic exports figures are given.

For the British Empire the figures are mainly based upon official returns, but values for India and Canada are partly estimated. In the case of foreign countries the figures given have been arrived at on careful estimates from somewhat meager data. It is mainly to be noted that whereas in 1898 the British Empire (in which the Transvaal with its output valued at £16,044,135 is included to render the comparison a fair one) contributed 57 per cent (£33,938,000), and all other countries 43 per cent (£25,485,000); of the aggregate output in 1908 (on estimates) the British proportion apparently rose to about 60.2 per cent (£53,040,000), and the foreign proportion apparently fell to about 39.8 per cent (£35,000,000).

BRITISH EMPIRE'S SILVER OUTPUT, 1893–1907.

Source of production and year.	Value.	Source of production and year.	Value.
United Kingdom:		United Kingdom—Continued.	
1893	£40,687	1901	£19,764
1894	33,313	1902	14,737
1895	34,908	1903	18,036
1896	36,365	1904	17,549
1897	28,614	1905	19,419
1898	23,728	1906	19,083
1899	21,942	1907	19,331
1900	22,465		

AUSTRALIA.

SELF-GOVERNING COLONIES.

Year.	New South Wales.	Victoria.[a]	South Australia.[b]	Western Australia.	Tasmania.[c]	Queensland.	Total.
1893	£78,131	£6,375	.....	.....	£198,610	£42,408	£325,524
1894	94,150	5,996	£132	.....	293,043	22,077	415,398
1895	81,858	6,419	.....	.....	175,957	30,042	294,276
1896	26,518	6,703	.....	.....	229,660	32,162	295,043
1897	16,711	8,667	.....	.....	200,167	25,118	250,663
1898	59,278	9,300	.....	.....	188,892	10,585	268,055
1899	76,913	11,546	.....	.....	250,331	15,671	354,461
1900	90,243	6,846	.....	£3,594	279,372	12,712	392,767
1901	50,484	6,550	.....	7,609	207,228	62,241	334,112
1902	105,360	4,900	.....	9,190	218,864	70,145	407,459
1903	113,755	4,898	804	19,153	192,492	65,538	396,640
1904	123,256	4,900	.....	45,912	203,702	71,858	449,718
1905	52,196	4,100	1,626	44,278	246,888	69,176	418,264
1906	36,431	4,980	10,410	37,612	462,443	101,693	653,569
1907	275,314	4,355	780	25,382	572,560	112,540	972,931

[a] Quantity and value extracted at the Melbourne mint.
[b] Including northern territory.
[c] The figures given for Tasmania for value represent the value of "silver-lead ore" produced, according to the annual reports of the Tasmania secretary for mines.

The total given in the above table for the Australian Commonwealth are for the most part exclusive of the value of "silver" contained in silver-lead bullion and ore, the value of which can not be stated. The Commonwealth government state that in practically all cases the particulars available concerning the total production of silver in the Commonwealth are statistics of exports, and according to returns furnished by that government the estimated value of silver-lead and "silver-lead bullion and ore" produced in Australia in the above-mentioned years was as follows:

Year.	New South Wales.	Victoria.	South Australia.	Western Australia.	Tasmania.	Queensland.	Total.
1893	£3,035,925	£6,375	£755	.....	£153,859	£42,408	£3,239,322
1894	2,289,749	6,152	281	.....	217,844	26,447	2,540,473
1895	1,642,868	6,419	50	.....	227,916	33,676	1,910,929
1896	1,785,710	6,703	2,127	£4	222,948	38,342	2,055,834
1897	1,698,637	8,667	2,668	44	216,893	29,235	1,956,144
1898	1,723,337	9,540	4,911	96	167,618	13,065	1,918,567
1899	2,170,446	11,546	4,292	912	208,869	16,401	2,412,466
1900	2,743,263	6,846	22,428	4,127	252,080	16,071	3,044,815
1901	1,954,964	6,550	3,906	3,761	325,335	69,234	2,367,750
1902	1,487,837	4,900	42,063	9,467	387,024	72,851	2,004,142
1903	1,539,989	4,898	10,870	19,153	428,125	109,177	2,112,212
1904	2,131,504	4,990	1,387	45,912	318,971	96,418	2,599,182
1905	2,496,709	4,100	3,244	44,278	415,248	102,388	3,065,967
1906	2,864,057	4,980	12,982	37,612	552,704	151,577	3,623,912
1907	3,915,946	4,355	13,873	25,382	572,560	187,870	4,719,986

Year.	Dominion of New Zealand.	Dominion of Canada.	Transvaal.	Other colonies and possessions; southern Rhodesia.	Total.
1893	£9,743	£67,860	.....	.....	£77,603
1894	6,697	109,777	.....	.....	116,474
1895	10,679	211,705	.....	.....	222,384
1896	10,589	441,842	.....	.....	452,431
1897	20,872	683,142	.....	.....	704,014
1898	33,107	533,197	.....	.....	566,304
1899	40,838	417,824	.....	£12	458,674
1900	38,879	563,297	.....	95	602,271
1901	65,258	671,212	.....	313	736,783
1902	71,975	460,106	£13,025	346	545,452
1903	91,497	351,426	36,961	2,072	481,956
1904	112,875	420,792	47,813	7,015	588,495
1905	120,542	743,633	63,773	10,394	938,342
1906	143,572	1,176,414	83,620	14,253	1,417,859
1907	169,484	1,712,118	93,947	20,199	1,995,748

GREECE.

This bureau has received no official information relative to the product of silver in Greece since 1905, and, accordingly, the product for that year is repeated for 1908, viz, 829,025 ounces, fine, of the commercial value of $443,445.

ITALY.

According to the "Revista del Servizio Minerario," Rome, 1909, the product of gold ore from mines of Italy during 1908 amounted to 14,671 tons, valued at 241,115 lire (at 16.43 lire per ton), equivalent in United States currency to $46,535, representing 2,251 ounces, fine.

The product of silver ore from the only mine worked during 1908 was 53 tons, valued at 67,700 lire (at 1,277.36 lire per ton), equivalent to $13,066, representing 24,427 ounces, fine.

The value of the silver recovered from silver-lead ores and by cupellation in the metallurgical establishments of Italy during 1908 was 1,802,644 lire, or $347,910, representing 650,421 ounces, fine, being a total commercial value of $360,976, representing 674,848 ounces, fine.

ITALIAN MINING IN 1908.

[From the Mining Journal, London, December 19, 1908.]

* * * * * * *

The production of lead and zinc ores increased slightly, the figures being: Zinc ores, 160,517 tons; lead ores, 43,037 tons; and mixed ores, 680 tons. The chief production was, as usual, from Sardinia, the output being practically the same as in 1906. Zinc ores were 137,580 tons as against 137,611 tons, averaging in each case 43.40 per cent metal, while the lead ores amounted to 42,247 tons against 40,679 tons, of 56 per cent metal, and 500 grams silver as in the previous year. The Pertusola and Monteponi smelters produced 22,978 tons of lead from 43,195 tons of ore treated; 20,502 kilograms of silver and 88 tons of spelter, from 2,207 tons of calamine. The great bulk of the zinc ores are exported to the Vieille Montagne works in Belgium. The only other producing center of importance is the Bergamo district, where the Vieille Montagne, the English Crown Spelter Company, and the Società Austro-Belga are working. Here the production of calamine was 15,504 tons (43.68 per cent metal), and of blende 2,141 tons (38.25 per cent metal).

* * * * * * *

The output of gold ores was 13,475 tons, averaging 6.12 grams to the ton. The only mines worked were the Creas of the New Monte Rosa Mining Company, and the Fenillaz of the Evançon Gold Mining Company. The Orbeillaz mine, of the latter company, closed in February of last year, and the various prospects being opened by Mr. George Robinson, managing director of the New Monte Rosa Company, also were left idle.

* * * * * * *

NORWAY.

The United States minister at Christiania reports that the Kongsberg silver mines produced during the fiscal year ending March 31, 1908, 7,035 kilograms of fine silver, equivalent to 226,175 fine ounces which, taken at the average price of silver for the calendar year 1908, gives the commercial value of $120,981. Norway produces no gold.

SWEDEN.

According to information from the United States minister at Stockholm, the product of gold and silver in Sweden during 1908 was as follows:

	Kilos.
Gold	21.829
Silver	1,111.288

The kilograms of gold are equivalent to 702 fine ounces, and those of silver 35,728 fine ounces, the values of which are $14,512 and $19,111, respectively.

RUSSIA.

The United States ambassador to St. Petersburg gives the product of Russia in 1908 as 2,576 poods, 22 pounds of fine gold. This amount is equivalent to 1,356,927 fine ounces, of the value of $28,050,170.

In the absence of any official information relative to the product of silver in that country in 1908 the figures for 1907 are repeated, viz, 250 poods, 35 pounds, equivalent to 132,122 fine ounces, of the commercial value (at the average price of silver for 1908) of $70,672.

FINLAND.

The "Industri-Statistik" of Finland for 1907 gives the gold product in that country for 1907 as 3,559 grams, of the value of 10,750 Finnish marks, equivalent in United States money to $2,075, representing 100 fine ounces.

GOLD PRODUCTION OF FINLAND FOR THE LAST TEN YEARS.[a]

Year.	Weight.	Value.	Year.	Weight.	Value.
	Grams.	*Finnish marks.*		*Grams.*	*Finnish marks.*
1898	4,619	14,780	1903	2,995	9,586
1899	2,620	8,384	1904	1,950	6,241
1900	2,174	6,956	1905	925	2,960
1901	1,974	6,316	1906	2,867	9,176
1902	3,256	10,420	1907	3,559	10,750

[a] From official statistics of Finland for 1907, Helsingfors, 1909.

SERVIA.

No official information has been received by this bureau from Servia relative to the product of gold for 1908. The figures for 1906 (the latest received) are therefore repeated for 1908, viz, 2,893 ounces, fine, valued at $59,814.

SPAIN.

According to information received from the United States legation at Madrid, the product of silver in that country in 1908 was 129,881 kilograms, valued at the mines at 12,663,803 pesetas. This weight is equivalent to 4,175,674 fine ounces, of the commercial value of $2,233,568.

TURKEY.

The United States ambassador at Constantinople reports that the gold product of Turkey during 1908 was 3.374 kilograms and the silver product 247.923 kilograms. Assuming these amounts to be fine metals they are equivalent to 108 fine ounces of gold and 7,971 fine ounces of silver, the values of which are $2,233 for the gold and $4,264 (commercial value) for the silver.

ASIA.

CHINA.

As China publishes no statistics of her production of gold and silver, recourse is had to the figures of the imports of gold bullion from China by other countries.

The secretary of the United States embassy at Berlin reports that there were imported into Germany from China during 1908, 7,211 kilograms of gold bullion.

The United States ambassador at Tokyo states that the importation of gold bullion into Japan from China during 1908 was valued at 1,873,570 yen.

The "Seaborne Trade and Navigation Accounts of British India, 1908," gives the value of imports into that country from China during 1908 as £600,389.

The following table is compiled from these amounts:

Country importing.	Weight.	Value.
	Fine oz.	
Germany	231,834	$4,792,427
Japan	45,136	933,038
India	141,342	2,921,793
Total	418,312	8,647,258

INDO-CHINA.

The United States ambassador at Paris reports that the product of gold in Indo-China during 1907 amounted to 56 kilograms, valued at 165,000 francs, which is equivalent to $31,845 in United States currency, representing 1,540 ounces, fine.

As no information has been received at this bureau relative to the product in 1908 the 1907 figures are repeated for that year.

British India.

The London Mining Journal for October 23, 1909, states that the gold product of India for 1908 was 567,780 ounces, valued at £2,177,847, equivalent in United States money to $10,598,492, representing 512,702 ounces, fine.

THE MYSORE GOLD MINE.

[From the Engineering and Mining Journal, May 22, 1909.]

The report of the Mysore Gold Mining Company of Mysore, India, for the year 1908 is again a record of prosperity. The mill crushed 206,170 tons of ore, from which gold to the value of £848,145 was recovered, or an average yield of 82s. per ton, just under 1 ounce fine gold per ton.

* * * * * * *

For the last three years the operations of the company have been as follows:

Year.	Tons crushed.	Gold realized.
1906	185,900	£809,413
1907	194,838	820,114
1908	206,170	848,145

* * * * * * *

The ore reserves at the end of the year were estimated at 969,920 tons, excluding a quantity of low-grade ore, representing an ore supply sufficient for five years for the mills at the present increased rate of extraction. The average value of the ore reserves is not given.

* * * * * * *

INDIAN MINES' GOLD OUTPUT.

[From The Mining Journal, London, April 10, 1909.]

The production in ounces since the beginning of 1905 has been as follows:

Month.	1905.	1906.	1907.	1908.
	Ounces.	*Ounces.*	*Ounces.*	*Ounces.*
January	51,707	52,014	46,010	45,866
February	50,660	49,538	43,224	44,191
March	52,688	49,040	44,602	45,812
April	53,374	46,033	44,573	45,607
May	52,174	48,515	45,081	45,638
June	52,717	47,816	44,741	46,000
July	52,191	47,247	45,267	46,259
August	51,758	46,817	47,640	46,155
September	52,033	46,638	44,812	45,794
October	52,291	47,101	45,808	47,983
November	51,906	46,487	45,878	48,279
December	54,201	49,981	52,115	52,759
Total	627,700	577,227	549,751	560,343

KOLAR GOLD FIELD.

NUNDYDROOG.

[From The Statist, London, March 13, 1909.]

Year.	Ore crushed.	Total value of gold secured.	Value per ton.
	Tons.		*s. d.*
1901	52,030	£214,267	82 6
1902	55,940	218,171	78 0
1903	66,860	264,458	79 1
1904	75,840	258,155	68 0
1905	79,070	265,251	67 1
1906	81,750	272,385	66 8
1907	84,000	283,138	67 4
1908	87,000	303,807	69 10

COREGUM.

Year.	Ore crushed.	Total value of gold secured.	Value per ton.
	Tons.		*s. d.*
1898	67,942	£196,600	57 10
1899	64,107	229,029	71 6
1900	74,867	312,396	83 2
1901	78,125	310,915	82 2
1902	106,878	327,846	61 6
1903	141,755	317,050	44 8
1904	127,449	276,716	43 5
1905	121,779	248,505	40 9
1906	122,537	259,250	42 3
1907	124,160	278,898	45 0
1908	121,886	329,318	54 0

INDIA'S GOLD PRODUCTION IN 1908.

[From Daily Consular and Trade Reports.]

The following figures for the gold product of India during 1908, appeared in a recent issue of the official Indian Trade Journal of Calcutta: $10,598,492, as against $10,349,858 in 1907.

JAPAN.

The following figures of the production of gold and silver in Japan and Formosa during 1907 were taken from the Ninth Financial and Economic Annual of Japan, 1909:

1907.	Gold.			Silver.		
	Momme.[a]	Fine ounces.	Value in United States currency.	Momme.[a]	Fine ounces.	Value in United States currency.[b]
Japan, proper	783,409	.....	.....	25,492,267	.....	.....
Formosa	329,259	.....	.....	.....	.....	.....
Total	1,112,668	134,146	$2,773,044	25,492,267	3,073,411	$2,028,451

[a] The Momme is equivalent to 57.87 grains.

[b] Commercial value, 66 cents per fine ounce.

The United States Ambassador at Tokyo gives the following figures of the production of Japan (exclusive of Formosa) during 1908:

1908.	Gold.			Silver.		
	Momme.	Fine ounces.	Value in United States currency.	Momme.	Fine ounces.	Value in United States currency.[a]
Japan, proper	829,497			31,529,833		
Formosa	[b] 329,259					
Total	1,158,756	139,703	$2,887,917	31,529,833	3,801,315	$2,033,324

[a] Commercial value, $0.5349 per fine ounce. [b] Product for 1907.

KOREA.

The Ninth Financial and Economic Annual of Japan, 1909, give the value of gold exported from Korea in 1908 as 6,114,567 yen, the value of which in United States money is $3,047,500, representing 147,423 fine ounces, which is assumed to have been the product of that country for 1908.

MINING IN KOREA.

The following is an abstract of a report on mining by Mr. Sammons, American Consul-General at Seoul, written as recently as last October:

The Japanese have completed a geological survey of the country, which has been published, together with a detailed account of the mines and mineral resources of the country.

The general trend of opinion supported in this authority is in accord with the published views of many American and European engineers, viz, that Korea is a highly mineralized country, possessing an excellent climate and an abundant supply of good and cheap labor.

Very few of the prospect discoveries have yet been developed to a greater depth than a few feet, and the natives not possessing any means of pumping out the water, usually cease work upon its appearance.

Practically all mineral deposits in Korea have been discovered by Koreans, who are considered to be good miners. They have crushed gold quartz by the primitive method of rolling a large rock upon it, and in placer mining they are credited with being among the most expert in the world. They use wooden bowls in panning, the customary size being 2½ feet in diameter.

MINING LAWS AND REGULATIONS.

While the nominal substance of the mining laws and regulations, as originally extended to Korea by the Japanese protectorate, were not considered satisfactory to investors and mine promoters, the modifications made during 1908 are accepted as meeting most of the requirements of capital in mine exploitation. Technically, however, the laws and regulations may not in all cases be accepted as entirely satisfactory other than in the spirit of a friendly administrative interpretation. Unlike American methods, the administrative department in Korea has exceptional jurisdiction, and when viewed from the point of possible unfriendly or adverse administrative supervision the modified laws and regulations may be considered unsatisfactory to capital, which is proverbially timid.

On the whole the Japanese protectorate has, in addition to materially modifying the objectionable clauses of the mining laws, recently inaugurated a policy of encouraging mining exploitation in Korea by abolishing all import taxes on machinery and tools used in mining, and by adding copper and copper concentrates to the list of

chief mineral products that may be exported free of duty. The protectorate has also accepted in principle the policy of utilizing timber lands in the vicinity of mines for the promotion of the mining industry, in that the concessionaires are to enjoy special privileges in obtaining the necessary lumber and fuel supply at reasonable cost.

Metalliferous deposits of various kinds have been located in nearly all parts of Korea. Up to the present time, however, the bulk of these deposits have been of small size, and few of them have been opened up. Speaking generally, the northern portion of the peninsula is richer than the southern.

Gold is the principal product of Korean mines. The reported yearly output (valued at approximately $2,250,000, as shown by the customs returns) does not include a large amount of gold that is carried away by Chinese miners and others, and not accounted for in the official records.

Korea's chief gold quartz mines are included in the American concession at Unsan, which was granted originally in 1895 for twenty-five years, and, as modified and extended, may be operated until 1954. At the Unsan mines a series of large quartz lodes, occurring in granite, are being mined successfully and profitably under American management.

The quartz bands in the Unsan granite formation vary from a few inches to 10 feet in width, the greatest depth reached being 1,000 feet.

As the formation between the bands of quartz is not solid, as a rule, much timbering is required. This is particularly true in the wider formations and, consequently, a large amount of lumber is necessary to successfully operating the mines.

The timber question in Korea has, therefore, received much attention as the mineral development grows more promising. While the authorities have accepted, in principle, the proposition that that timber in the vicinity of mines is primarily to be utilized at reasonable cost for the promotion of the mining industry, an elaborate set of rules and regulations have been drawn up under the supervision of the Japanese protectorate, and the application of the same to the needs and purposes of practical mining operations is now about to be put to the test.

Without exception, it may be said that American mining interests in Korea favor the preservation of the forests without, however, endangering the successful operation of mining properties possessing vested interests based upon previous assurances of government assistance in securing an ample supply of the necessary mining lumber and fuel at reasonable cost.

* * * * * * *

Silver is not at present mined in Korea, although there is evidence that silver deposits exist. The same applies to lead.

* * * * * * *

SIAM.

The United States minister at Bangkok states that the gold product of Siam for 1908 was 493 kilograms, which represents 15,850 ounces, fine, of the value of $327,649.

EAST INDIES.

BRITISH EAST INDIES.

The Report of the Department of Mines, Western Australia, 1908, gives the production of the territory of Papua (British New Guinea) during 1908, as 12,439 ounces, fine, valued at £52,837. This is equivalent to $257,137 in United States money.

BRITISH NORTH BORNEO.

The figures of the gold product in Sarawak, British North Borneo, for 1907 are repeated for 1908, viz, 41,751 ounces, valued at $863,070.

FEDERATED MALAY STATES.

The vice and deputy consul-general from the United States in charge at Singapore gives the gold product for 1908 as 13,580.50 ounces, fine, valued at £57,686 (value in United States money, $280,734).

GOLD PRODUCTION OF THE FEDERATED MALAY STATES.

Items.	Ounces, troy.	Value at £3 17s. 6d. per ounce.
Gold exported, 1908[a]	13,652.6	£52,903.16
Gold reported to have been bought by gold buyers in Petak	1,234.2	4,782.10
Total	14,886.8	57,686.6

[a] Pahang was the only exporting State during 1908.

SILVER.

No silver was produced during 1908, but argentiferous galena was discovered in the Gopeng district, Petak.

DUTCH EAST INDIES.

According to the London Mining Journal the production of gold and silver in Dutch East Indies during 1908 was 108,641 ounces of gold and 510,070 ounces of silver. Value in United States money: Gold, $2,245,808; silver, $272,836 (commercial value).

AUSTRALASIA.

The Thirty-ninth Annual Report of the Deputy Master and Comptroller of the Mint, London, for 1908, gives the gold product of Australasia for 1908 as follows:

State.	Weight.	Value in United States currency.
	Fine ounces.	
New South Wales	224,792	$4,646,863
New Zealand	471,968	9,756,444
Queensland	465,085	9,614,160
South Australia	9,161	189,375
Tasmania	57,085	1,180,052
Victoria	671,208	13,875,101
Western Australia	1,647,911	34,065,344
Total	3,547,210	73,327,339

According to the same report referred to above, the silver production of Australasia for 1908 is given as follows:

State.	Weight.	Commercial value.
	Fine ounces.	
New South Wales	11,983,669	$6,410,065
New Zealand	1,731,336	926,092
Queensland	1,162,276	621,703
South Australia		
Tasmania[a]	2,100,000	1,123,290
Victoria	29,363	15,706
West Australia	168,455	90,107
Total	17,175,099	9,186,963

[a] Mr. T. Kapp, general manager Tasmania Smelting Company, Zeehan, stated in an article printed in the report of this bureau for 1906 that Tasmania silver-lead ores carried 34.4 ounces of silver to the ton. Tasmania's product for 1908 was 61,046.86 tons, valued at £319,549. Assuming that it carried the same proportion of silver—34.4 ounces per ton—it contained 2,100,000 ounces, which figure is taken as the silver product of Tasmania for 1908. Following the same procedure, the silver products for 1906 and 1907 are revised as follows: 1906, 2,996,859 ounces, of the commercial value of $2,025,877; 1907, 3,087,830 ounces, of the commercial value of $2,037,968.

AUSTRALIA'S DECLINING GOLD PRODUCTION.

[From the Mining World and Engineering Record, London, June 5, 1909.]

The latest commonwealth mining statistics apparently confirm the assertion that the Australian gold-mining industry is in a declining condition, but a close investigation of the returns from the different States shows that the production is stationary rather than retrogressive. Taking the period 1901–8, the value of the gold annually raised in New South Wales was as follows:

1901	£737,164	1905	£1,165,013
1902	684,970	1906	1,078,866
1903	1,080,029	1907	1,050,730
1904	1,146,109	1908	954,855

The decrease in this State is largely due to the increased attention given to copper and other mines, but there are indications that in the near future the level of 1905 will again be reached. In Victoria the value of the production was as subjoined:

1901	£3,102,753	1905	£3,173,744
1902	3,062,028	1906	3,280,478
1903	3,259,482	1907	2,954,617
1904	3,252,045	1908	2,871,485

In this State the decrease is attributed to the decreased richness of many of the known lodes, but this will probably be compensated by the discovery of others, only a limited portion of the State having been systematically prospected. The Queensland returns were:

1901	£2,541,764	1905	£2,517,295
1902	2,720,512	1906	2,313,464
1903	2,839,801	1907	1,978,938
1904	2,714,934	1908	1,959,727

It will be seen that the value of the production has, on the whole, been well maintained, and that, with increased facilities of communication with the northern auriferous districts, a largely augmented output may reasonably be anticipated. The heaviest decline, proportionately, has been in South Australia, which has never been regarded as an auriferous producer, although its possibilities have never been definitely ascertained. The figures during the last eight years were as follows:

1901	£99,222	1905	£76,824
1902	95,203	1906	81,225
1903	90,250	1907	42,468
1904	80,008	1908	38,917

The Tasmania figures show no heavy fluctuations. They were as subjoined:

1901	£295,176	1905	£312,380
1902	301,573	1906	254,963
1903	254,403	1907	277,607
1904	280,015	1908	257,888

The western Australian returns also display a fairly average level, as below:

1901	£7,235,653	1905	£8,305,654
1902	7,947,662	1906	7,622,749
1903	8,770,719	1907	7,210,749
1904	8,424,226	1908	7,002,399

The total commonwealth figures were:

1901	£14,055,782	1905	£15,550,910
1902	14,811,948	1906	14,631,745
1903	16,294,684	1907	13,515,109
1904	15,897,337	1908	13,085,271

The decline in 1908 on the value of the production of 1901 was £970,511. The production of 1903–1905 was simply phenomenal, and was not accepted as forming the rule. Even the reduced total in 1908 was in excess of all previous years, with the exception of 1899 and 1900. The probabilities are in favor of a high minimum level, say, of from £12,500,000 to £13,000,000, being maintained, if not exceeded, during the next couple of decades.

AFRICA.

The value of the gold product of Africa for 1908 was $166,520,518, representing 8,055,430 ounces, fine, and the commercial value of the silver product, $680,711, representing 1,272,595 ounces, fine.

Year.	Transvaal.		West Coast.		French colonies.[a]		Rhodesia.[b]		Total.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.
	Kilos.		*Kilos.*		*Kilos.*		*Kilos.*		*Kilos.*	
1889	11,719	$7,788,372	1,270	$844,262	261	$173,461	(c)	.....	13,250	$8,806,095
1890	15,706	10,438,356	1,062	705,705	261	173,461	(c)	.....	17,029	11,317,522
1891	22,398	14,885,639	1,289	856,730	261	173,461	(c)	.....	23,948	15,915,830
1892	34,938	23,220,108	1,528	1,011,924	[d] 261	173,461	(c)	.....	36,722	24,405,493
1893	42,573	28,293,831	977	649,695	261	173,461	(c)	.....	43,811	29,116,987
1894	59,730	39,696,330	865	574,653	261	173,461	(c)	.....	60,856	40,444,444
1895	66,045	43,893,300	995	661,630	261	173,461	(c)	.....	67,301	44,728,391
1896	65,874	43,779,669	945	627,938	261	173,461	(c)	.....	67,080	44,581,068
1897	86,720	57,633,861	751	499,311	640	425,510	(c)	.....	88,111	58,558,682
1898	119,190	79,213,953	518	343,928	189	125,987	669	$444,617	120,566	80,128,485
1899	107,410	71,384,561	422	280,185	344	228,512	1,700	1,129,773	109,876	73,023,031
1900	9,215	6,124,226	326	216,873	1,115	741,029	2,392	1,589,815	13,048	8,671,943
1901	8,026	5,333,994	216	143,813	958	636,700	4,476	2,974,943	13,676	9,089,450
1902	52,514	34,901,140	109	6,552	1,127	748,976	5,065	3,366,561	58,716	39,023,725
1903	92,468	61,454,439	2,028	1,347,845	1,701	1,130,358	6,117	4,065,489	102,314	67,998,131
1904	117,371	78,004,559	2,544	1,690,770	2,143	1,424,340	7,214	4,794,208	129,272	85,913,881
1905	152,707	101,489,199	4,351	2,891,928	2,312	1,536,353	11,040	7,337,211	170,410	113,254,691
1906	179,986	119,618,507	6,426	4,270,685	2,086	1,386,068	15,171	10,082,747	203,669	135,358,007
1907	200,665	133,361,943	8,456	5,620,248	2,712	1,802,676	16,851	11,199,181	228,685	151,984,048
1908	219,475	145,862,971	8,687	5,773,333	2,801	1,861,754	19,594	13,022,460	250,557	166,520,518

[a] Includes Madagascar, Algeria, and the French Sudan. For 1903 and 1904, Madagascar only. For 1905, figures for Madagascar and Egypt. For 1906 and 1907, Madagascar and Egypt for 1905 repeated.

[b] Includes Mozambique, Cape Colony, and Natal for all years except 1901, which does not include product of Mozambique or Natal. For 1903, includes Rhodesia, Cape Colony, and Natal. For 1904 and 1905, Rhodesia, Cape Colony, and Mozambique. For 1906 and 1907, Rhodesia, Cape Colony, Mozambique, Natal, and Bechuanaland.

[c] Previous to 1898 Rhodesia and Mozambique together produced 289 kilograms, fine, included in the Transvaal returns.

[d] Previous to 1897 the only figures obtainable were those for 1892—Madagascar only.

BECHUANALAND.

The United States ambassador at London reports that the product of gold in Bechuanaland during 1908 was 5,010 fine ounces, the value of which, in United States currency, is $103,566.

Return showing the weight and value of gold and silver produced in the Bechuanaland Protectorate during the year 1908, and also the approximate number of Europeans and natives employed in connection with mining on the 31st December, 1908:

Produced:		
Fine gold	ounces..	5,010
Fine silver	do....	586
Total value		£21,215. 15. 5
Approximate number employed:		
Europeans		20
Natives		360

CAPE COLONY.

The United States consul-general at Cape Town reports the product of gold for that colony in 1908 as 54.681734 kilograms, valued at £1,665, equivalent, in United States currency, to $8,103.

EGYPT.

The United States consul-general at Cairo states that the product of gold in Egypt during 1907 was valued at £20,714, and for 1908 £7,868, equivalent, in United States money, to $100,805 and $38,290, respectively.

AMERICAN DIPLOMATIC AGENCY AND CONSULATE-GENERAL.

[Copy of a note from the Financial Adviser dated March 23, 1909.]

DEAR MR. IDDINGS: With reference to the inclosed letter from the Director of the Washington mint, which you left with me some days ago, I have made inquiries on the three points raised by that letter.

(*a*) A few years ago the head of the Bureau de Poinçonnement made some inquiries in the goldsmith's bazaar with the object of arriving at an estimate of the amount of gold melted down into gold ornaments.

The estimate he submitted for the year in question, 1905, was the enormous sum of £2,000,000 (sterling), which, however surprising, was not inconsistent with the amount of gold coin registered through the customs as having been retained in the country during the period 1902–1905, viz, £11,000,000 (sterling).

We are, however, quite unable to confirm the above estimate, which has not been made the subject of a systematic inquiry, and which, at best, does not amount to more than a rough guess.

(*b*) The output of gold from Egyptian mines was, in 1907, £20,714; in 1908, £7,868. As to the Sudan, I believe the output is confined to the Um Nabadi mine, which made no returns in 1907 and only a few hundreds sterling in 1908. The department of mines of the Egyptian government has been abolished.

(*c*) The question of the stock of gold coin in Egypt is bound up with that of the amount melted down in ornaments, since hoards may be kept either in the form of coin or of ornaments. In the absence of data for estimating the amount of the latter, any figures given of the stock of gold must include gold in all its forms.

The stock of gold, usually stated as the stock of "gold coin," has formed the subject of several diverse estimates. The following list, I believe, comprises them all:

Ottomar Haupt, 1891	francs..	706, 500, 000
M. L. Muhleman, 1896	dollars..	120, 000, 000
De Beaupuis, 1901	pounds (sterling)..	8, 000, 000
United States mint, 1905	dollars..	87, 000, 000
P. Arminjon and B. Michel, 1908	pounds (Egyptian)..	33 to 41, 000, 000

It is a justifiable assumption that the only one of the foregoing estimates which is based on any scientific study is the last one. This has been worked out by the authors by a mathematical comparison of the curves of fluctuations in the gold and silver circulation during the last twenty years. The conclusion, however, is open to some discussion. Meanwhile their estimate remains, faute de mieux ("for want of better"), as the only one which has any pretension to accuracy. The authors are careful to state that it includes coin lost, hoarded, and melted down.

There is, of course, always a certain stock of coin in the hands of the banks, including, as the treasury correctly states, the 50 per cent of the coin held by the National Bank of Egypt against its note issue. This stock varies greatly according to the time of year and the activity of business, but it can never exceed a few millions, and, even were it accurately known, would furnish no guide to the amount of gold in the country. (Messrs. Arminjon and Michel's method and estimates are explained in full in their work "La Circulation, le Credit et leurs Instruments en Egypte.")

I hope the above information will meet the requirements of the Director of the Mint.

Yours, sincerely,

H. P. HARVEY.

MADAGASCAR.

The United States ambassador at Paris, France, gives the gold product of Madagascar for 1907 as 2,940 kilograms, valued at 8,820,000 francs. According to this valuation, the gold was only 0.871 fine, giving a fine product of 82,328 ounces, valued at $1,701,871.

The United States consul at Tamatave states that the gold produced in Madagascar in 1908 was 3,149 kilograms, valued at 9,448,002 francs, which represents 88,210 ounces fine, valued at $1,823,464.

MOZAMBIQUE.

The Annual Statement of the Trade of the United Kingdom for 1908 reports the value of the imports of gold from Portuguese East Africa into the United Kingdom during 1908 as £124,941, equivalent in United States money to $608,025, representating 29,413 ounces fine.

The value of the imports of silver ore during 1908 was £22,023, equivalent to $107,175, representing 200,364 ounces fine.

The value of the imports of silver ore during 1907 was £16,868, or $82,088, representing 124,376 ounces fine.

NATAL.

The secretary of the United States embassy in London gives the gold product of Natal for 1908 as 442 ounces fine, valued at £1,878, equivalent in United States money to $9,137.

NYASSALAND.

Report from the United States embassy in London states that there was produced in the Nyassaland Protectorate during 1908, 1.2603 kilograms of gold, valued at £168, equivalent in United States money to $821.

RETURN SHOWING THE GOLD AND SILVER PRODUCED IN THE NYASSALAND PROTECTORATE DURING THE CALENDAR YEAR 1908.

[By Thomas I. Binnie, Director of Mines, Zomba, Nyassaland Protectorate, December 31, 1908.]

Weight, expressed in kilograms, fine, and value of the gold produced from the mines of the colonies during the calendar year 1908: 1.2603 kilograms; value, £168 13s. 4d.

RHODESIA.

The Fourteenth Annual Report of the Rhodesia Chamber of Mines states that the production of gold in Rhodesia in 1908 was 606,962 ounces, valued at £2,526,006, and that of silver 283,424 ounces, valued at £29,425, representing a value in United States money for the gold of $12,292,808, equivalent to 594,664 ounces fine, and for the silver, the commercial value of $143,197, equivalent to 267,708 ounces fine.

PRODUCT OF GOLD AND SILVER IN SOUTHERN RHODESIA, ONLY, 1908.

[From "Rhodesia Chamber of Mines," Bulawayo, January, 1909.]

Month.	Gold.	Silver.
	Ounces.	*Ounces.*
January	50,520.67	16,546.50
February	47,683.39	14,796.59
March	48,925.25	18,673.45
April	50,716.71	26,494.51
May	53,187.82	28,024.63
June	53,423.80	27,701.45
July	54,237.42	28,151.35
August	52,482.36	27,743.91
September	48,573.46	24,506.41
October	48,847.34	24,615.48
November	46,726.78	23,820.77
December	51,636.84	22,348.95
Total	606,961.84	283,424.00

RHODESIA'S GOLD OUTPUT.

[From The Mining Journal, London, February 27, 1909.]

Month.	1906.		1907.		1908.	
	Ounces.		*Ounces.*		*Ounces.*	
January	42,950.23	£155,337	47,047.95	£168,240	50,520.67	£199,380
February	38,037.15	137,561	40,482.25	145,397	47,683.39	191,635
March	44,573.54	160,722	46,886.52	167,424	48,973.46	200,615
April	42,423.22	157,108	49,771.75	175,210	50,718.39	212,935
May	46,728.93	169,218	52,667.73	189,216	53,187.82	223,867
June	47,663.88	170,083	54,918.20	192,506	53,425.80	224,920
July	48,484.63	173,313	54,270.55	191,681	54,237.42	228,151
August	50,127.14	179,000	54,558.43	192,106	52,482.36	220,792
September	48,409.82	173,973	53,622.40	192,186	48,573.46	204,262
October	45,663.73	161,360	53,822.82	191,478	48,847.34	205,466
November	48,502.66	175,656	50,890.78	183,058	46,726.78	196,668
December	48,329.08	171,770	53,113.00	190,383	51,637.00	217,316
Total	551,894.01	1,985,101	612,052.38	2,178,885	607,013.89	2,526,007

TRANSVAAL.

The United States consul at Johannesburg reports that the gold product of the Transvaal for 1908 was 219,475 kilograms, valued at £29,973,214; this weight is equivalent to 7,056,121 ounces fine, of the value of $145,862,971.

The information regarding the silver product from the same source as the above is given as 25,024 kilograms, of the commercial value of £86,906; the weight represents 804,522 ounces fine, of the commercial value of $430,339.

THE RAND IN 1908.

[From The Statist, London, December 26, 1908.]

No one who has followed the facts and features in connection with the production of gold in South Africa can with reason controvert the statement we have more than once of late expressed, that never in its history of about twenty years has the gold industry of the Rand been in a sounder condition than it now is.

Along about 40 miles of the Rand from east to west gold in 1908 will be produced to a value of over one-third of what we estimate will be shown to be the world's total production of gold for the year, and the £28,600,000 which we estimate will be the production of gold from the Rand alone is more than the total production of the world seventeen years ago. The comparative figures since the Rand became a real gold producer are set out in the following table. Parenthetically we may say that for the year 1899 the output is not the actual result of the year, but is at the rate of the best month—August—multiplied by 12.

Year.	Rand's production.	World's production.	Proportion of Rand's to world's production.
1880	Nil.	£22,130,000	Nil.
1890	£1,855,000	24,260,000	7.6
1891	2,560,000	26,700,000	9.5
1892	4,297,610	29,900,000	14.2
1893	5,187,206	32,600,000	15.9
1894	6,963,100	36,765,000	16.2
1895	7,840,779	39,752,000	19.9
1896	7,864,341	40,450,000	19.5
1897	10,683,606	47,762,000	22.1
1898	15,141,376	57,486,000	26.3
1899	[a] 19,704,300	61,345,000	.....
1900	[b]	50,915,000	Nil.
1901	1,014,687	52,198,000	1.9
1902	7,179,074	59,348,000	12.1
1903	12,146,307	65,192,000	18.6
1904	15,520,329	69,378,000	22.3
1905	19,991,658	75,427,000	26.5
1906	23,615,400	82,480,000	28.6
1907	26,421,837	82,200,000	32.1
1908	[c] 28,600,000	[c] 85,000,000	33.6

[a] August result of 1899 multiplied by 12 for rate of production per annum. [b] War. [c] Estimated.

DISPOSAL OF GOLD FROM THE RAND.

[Paper read by T. Kirke Rose before the Chemical, Metallurgical, and Mining Society of South Africa February 20, 1909.]

By common consent statistics are admitted to be both misleading and dull, and the following account of the first rough distribution of the gold produced in South Africa can not be expected to escape the common lot of such papers. Consequently, I beg the society to remember that the paper was written at the invitation of the council, following a suggestion made by T. L. Carter. In drawing up this account I have used official publications only and have everywhere reached the limits of information almost at the beginning of the inquiry. My own private quarrel with statistics is not that they are misleading and dull, but that they always stop short before they have told what I want to know, so I am continually driven to making guesses.

The official publications consulted are the Annual Statements of Trade of the United Kingdom, the Statistical Abstract of the United Kingdom, and of the British

Colonies, Possessions, etc., and the Annual Reports of the English, French, and United States mints.

I have considered only the period of five years, 1903 to 1907, because during the war the production of gold in South Africa was comparatively unimportant, and the years 1899 to 1902 were abnormal in that and other respects. In a limited sense every year is abnormal. The conditions affecting the distribution of gold change continually, and it is useless, from a study of statistics alone, to hazard predictions.

At the beginning of the study of what becomes of the Rand gold it must be premised that no distinction can be drawn between the gold from the Rand and that from other districts. The gold from the Rand goes down to the coast and is at once, statistically speaking, mingled inextricably with that from the rest of the Transvaal and from Rhodesia. The combined stream flows into London and there joins other streams, and its identity is lost again. Little rills flow out hither and thither and are caught up in other currents so that by imperceptible degrees the whole world is involved. In this paper the assumption has been made that wherever two streams unite and become indistinguishable from each other, they are at once completely mixed, so that any sample, however small, contains the same proportion of each constituent as the whole mass.

When the Rand gold leaves South Africa, a slight difficulty is at once encountered, for no definite statement is available as to its destination. The declared value of the production of gold in the Transvaal and Rhodesia was, for example, £26,615,025 in 1906. The value of the exports of gold from British South Africa is given as £26,516,475 for 1906 in the Statistical Abstract. In the Annual Statement of Trade of the United Kingdom the value of the gold bullion imported into England from South Africa is not given, but only the gross weight in ounces, for example, 6,986,832 ounces in 1906. The result is that the imports into the United Kingdom can not be identified with the exports from or the production of British South Africa. These three figures are, however, in sufficient agreement (taking the mean gold fineness of South African bullion imported into England as 875) to justify the assumption that practically all the South African gold is exported to London. Apart from the figures this is, of course, perfectly well known.

On arriving in London the South African gold is mixed with bullion coming from other parts of the world, and can no longer be distinguished. This matters the less for the reason that the South African bullion forms the bulk of the total imports of gold bullion, as is shown in the following table, drawn from the Annual Statement of Trade for 1907:

IMPORTS OF GOLD INTO THE UNITED KINGDOM.

Country of origin.	1905.	1906.	1907.
	Troy ounces.	*Troy ounces.*	*Troy ounces.*
British South Africa	5,833,741	6,986,832	8,012,437
British India	610,320	571,033	547,452
Australasia	972,342	729,237	803,961
Rest of world	664,828	805,703	1,334,608
Total ounces	8,081,231	9,092,805	10,698,458
Total value	£30,114,369	£33,865,361	£39,956,304
Gold fineness	876.6	876.8	879.2

In these years South African gold is seen to form 72, 71, and 75 per cent, respectively, of the total weight, and judging from unofficial returns the values were in nearly the same proportions. The bullion on arrival in London is in part refined there and in part reexported in its unrefined state. Beginning with 1908, the customs establishment will publish statistics distinguishing between unrefined and refined bullion imported and exported, but no figures are as yet available. My own opinion is that about 15 per cent of the imported bullion was reexported, in the period 1903 to 1907, without being refined in London. Both the amount and the percentage of such bullion appear to be increasing, but there is little to go upon in forming these opinions. The refined bullion is partly retained in the country and partly exported. Comparison of the total imports and exports of bullion shows:

Items.	1903-7.	1907.
Imports	£151,973,235	£39,956,304
Exports	98,059,568	26,589,442
Excess imports	53,913,667	13,366,862

Here the imported bullion is divided clearly into two parts, one part required and retained in the United Kingdom, while the other part is reexported without delay. These will now be considered separately.

Dealing first with the bullion retained in the United Kingdom, it is at once evident that most of it is converted into coin, thus: Coinage, from ingots only, at the Royal Mint, London: 1903–7, £48,944,370; 1907, £16,098,894.

Some of the ingots received for coinage, however, are derived from the melting of gold coin. No exact record is kept of the value of these, but, in my opinion, it may be put at the following amounts: Ingots resulting from melting gold coin: 1903–7, £1,392,000; 1907, £4,500.

The coinage from refined ingots at the Royal Mint has accordingly been approximately as follows: 1903–7, £47,552,400; 1907, £16,094,400.

The rest of the bullion retained in England but not used for coinage, which amounted to about £6,361,300 for the five years 1903 to 1907, was added to the stock of bullion already in existence, or was used in the arts for the manufacture of jewelry, for gold plating, for the manufacture of gold leaf, in dentistry, in photography, etc.

The stock of bullion in the United Kingdom, apart from the floating stocks held by refiners and bullion dealers, is in the vaults of the Bank of England. No figures are available as to the amount so held, the bank making known only its total stock of bullion and coin. The stock of bullion is, of course, a fluctuating amount, but any gradual permanent change is doubtless in the direction of an increase. The gold bullion and coin held by the bank on December 31, 1902, was £27,840,385, that on January 2, 1907, £29,270,470, and on January 1, 1908, £31,602,515. For purposes of comparison, it may be remarked that the mean stock in the first week of January of the ten years 1881 to 1890 was £20,550,000. It is likely that a part of the increase shown was in the form of ingots. During the year 1907 it is quite possible that the stock of bullion was reduced.

Leaving all this on one side, therefore, we have the sum of £6,361,300 in ingots which was all or mostly used in the industrial arts in the United Kingdom during the years 1903 to 1907. No estimates of the consumption of gold are published officially in England, though the matter will doubtless be dealt with in the forthcoming census of production. The total consumption for the three years 1903 to 1905, however, has been estimated by the Director of the United States Mint at £7,706,000 (as stated in the Annual Report of the Director of the French Mint), excluding old material (remelted jewelry, etc.), but including gold coin. This seems to me, judging from returns of the manufacture of jewelry to which I have had access, to be a reasonable figure, but the annual consumption in 1906 and 1907 was certainly higher than from 1903 to 1905. The amount of English gold coin melted annually for use in the industrial arts is estimated at £500,000, at least (Annual Report of the Deputy Master of the Royal Mint, London, 1903), its only known use being for the manufacture of wedding rings. This would leave an annual amount of about £2,000,000 to be derived from gold ingots, or £10,000,000 in five years. There is here a discrepancy of nearly £4,000,000, which is most readily accounted for by assuming that the amount of British gold coin melted for use in the arts was underestimated in 1903, and that it really amounts to £1,500,000 per annum. The disappearance of immense quantities of British gold coin has certainly never been fully and satisfactorily explained. The discrepancy would be equally well accounted for by the assumption that £1,000,000 in gold coin is melted down annually in the United Kingdom and subsequently exported.

The destination of the exports is shown in the following table, which is abstracted from the Annual Statements of Trade for 1903 to 1907:

Countries to which exported.	1903–1907.		1907.	
	Troy ounces.	Per cent.	Troy ounces.	Per cent.
Continent of Europe	13,005,963	54.4	2,021,561	30.4
United States	6,063,671	25.3	3,143,700	48.1
British India	4,630,381	19.3	1,374,879	.....
Rest of the world	227,822	1.0	1,272	21.0
Total ounces	23,927,837	.....	6,541,402	.....
Total value	£98,059,568	.....	£26,589,442	.....
Gold fineness	964.8	.....	956.9	.....

Concerning these table it may be observed that "Europe" stands chiefly for France and Germany, which together take almost the whole of the exports in certain years. There are exceptional years, however, as, for example, 1906, when 402,559 ounces went to Russia, as against 1,140,537 ounces to France and only 77,068 ounces to Germany.

The gold bullion imported into France for the most part stays there, the exports of ingots being inconsiderable. The bars from England form over 30 per cent of the total imports of gold and over 40 per cent of the imported ingots. About one-half of the imported bar gold is coined, chiefly into 20-franc pieces; about a quarter of it is employed in the industries; perhaps 5 per cent is reexported; and the remainder presumably goes to swell the stock of bullion in the Banque de France, which increased by about £16,000,000 in the four years 1903 to 1906.

Of the gold bullion imported into Germany, something like 20 per cent is reexported, a like amount is used in the industries, and the remainder is coined. The gold ingots sent to America have varied in amount more than those exported elsewhere. From 1903 to 1907 (the year of the panic) they increased steadily from 158,945 ounces to 3,143,700 ounces. There was, of course, a large reduction in 1908. The mean for the five years from 1903 to 1907 amounted to over 10 per cent of the gold deposited at the United States mints. Of this total quantity, in the years 1903 to 1906, about 55 per cent was coined, about one-seventh was used in the industrial arts, and the remainder was added to the stock or exported. According to the United States mint reports, however, the ingots exported are almost invariably United States fine bars, practically never foreign ingots. Also rather more than 40 per cent of the imported gold bars were issued for use in the industrial arts in the years 1903 to 1905. This would leave nearly 60 per cent of the imported bars to be divided between coinage and additions to the stock of bullion in the United States mints and assay offices. This stock is subject to great fluctuations; for example, it was $124,083,823 on June 30, 1902; $51,910,029 on June 30, 1905; and $104,383,158 on June 30, 1906. No exact information is available as to the stocks on January 1, 1903, and December 31, 1907, and it is better to leave this aside, as in the case of the stock of bullion in the Bank of England, and to assume that 60 per cent of the imported bars was used for coinage. The difference between the percentage distribution of the total deposits in United States mints and the distribution of the imported gold bars (of which those from England form only a part) illustrates the difficulties of this part of the inquiry, and shows how great may be the errors in the statements as to the disposal of the gold exported to France and Germany.

The gold bullion (chiefly or entirely in the form of 10-ounce fine bars) which is sent from England to India disappears on arrival in that country, and is probably in great part converted into jewelry. As the Director of the United States Mint remarks: "The tide of gold and silver has been flowing into India for centuries." Probably some large hoards exist, but no doubt there are immense numbers of small hoards. From 1835, when the official records begin, the net imports to the end of 1906 amounted to £193,880,000, in addition to the production in India, which was £23,400,000. The world's production for the same period is estimated at £1,920,000,000, approximately 12 per cent of which was accordingly absorbed by India.

The wanderings of the gold bullion from the Rand have now been traced as far as is practicable. Summarizing the disposal of the Rand gold for the period 1903 to 1907, the following seems to be shown:

	Per cent.
Used in coinage	58. 6
Used in industrial arts	30. 5
Deposited as ingots in the Bank of France	3. 5
Undetermined	7. 4

The result may also be put in the form of a bet; such as that of any particular ounce of gold produced on the Rand, it is 7 to 1 against its disappearing into India as refined 10-ounce bars, 99 to 1 against its being exported from France to an unknown destination, and 69 to 31 against its being coined at the Royal Mint.

West Africa.

The London Mining Journal for October 23, 1909, gives the gold product of West Africa for 1908 as 297,366 ounces, valued at £1,186,342, which is equivalent in United States money to $5,773,333, representing 279,285 ounces, fine.

PART IV.

GENERAL STATISTICS.

No. 1.—Domestic Production, Deposits, and Purchases of Gold,

	Locality and description of deposits.	Philadelphia.	San Francisco.	New Orleans.	Denver.	New York.
		Stand. ozs.	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*
1	Alabama	23.182		118.596		
2	Alaska	132.106	43,590.406		748.581	225.454
3	Arizona	105.806	29,081.499		17,668.501	49.155
4	California	353.772	338,731.978		233.500	8,121.693
5	Colorado	74.291	121.863		552,535.925	27.965
6	Georgia	591.393				
7	Idaho	760.881	8.117		420.145	60.739
8	Michigan					.978
9	Montana		9.288		8,266.504	1,675.086
10	Nevada	89.731	98,268.742	.807	3,758.677	1,358.378
11	New Mexico	25.174	27.784		3,016.069	4,138.677
12	North Carolina	199.187				120.636
13	Oregon	141.795	9,299.993		245,091	27.648
14	South Carolina	10.466				1,164.458
15	South Dakota					334,970.277
16	Utah		39.518		34,874.004	10,296.366
17	Virginia	107.479				
18	Washington	9.934	64.889			86.111
19	Wyoming				74.718	
20	Porto Rico					31.670
21	Philippines		54.442			8.141
22	Other	340.294			2.210	
23	Total domestic	2,965.491	519,298.519	119.403	621,843.925	362,363.432
24	Domestic bullion, refinery bars	374.796			231,503.608	383,973.479
25	Domestic bullion, refined		1,323,781.733			1,647,248.774
26	Total domestic bullion	3,340.287	1,843,080.252	119.403	853,347.533	2,393,585.685
27	Domestic coin, mutilated	14,206.833	606.062	3,198.864	88.304	38,792.548
28	Domestic coin transferred	207,516.680				
29	Foreign bullion, crude	10,113.569	55,846.766	42,222.323	335.639	202,714.367
30	Foreign bullion, refined					397,008.187
31	Foreign coin	37.624	88,331.207	753.474		113,373.137
32	Jeweler's bars, old plate, etc	63,080.836	7,415.696	3,171.030	3,217.281	188,677.111
33	Surplus bullion		71.004	118.890	489.448	
34	Deposit, melting room, grains	46.739	70.730	19.258	54.094	733.564
35	Sweeps, from Helena				26.670	
36	Total deposits	298,342.568	1,995,421.717	49,603.242	857,558.969	3,334,884.599
	Redeposits:					
37	Fine bars	1,739,178.426				20.933
38	Unparted bars	1,344,837.987	187,180.914		916,545.420	
39	Mint bars	425,516.930				
40	Total redeposits	3,509,533.343	187,180.914		916,545.420	20.933
41	Total bullion	3,807,875.911	2,182,602.631	49,603.242	1,774,104.389	3,334,905.532

BY WEIGHT, DURING THE CALENDAR YEAR ENDED DECEMBER 31, 1908.

Carson.	Boise.	Helena.	Charlotte.	St. Louis.	Deadwood.	Seattle.	Total.	
Stand. ozs.	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	
.....	.....	.....	18.531	.....	.....	.....	160.309	1
.....	.....	154.686	.....	60.624	.....	827,542.852	872,454.709	2
.....	.....	.....	.....	9.230	.....	13.294	46,927.485	3
9,561.375	329.778	.....	.....	.....	.....	64.840	357,396.936	4
.....	.....	.....	.....	.....	.....	14.848	552,774.892	5
.....	.....	.....	694.125	.....	.....	.....	1,285.518	6
.....	35,959.226	969.133	.....	.....	.....	1,128.903	39,307.144	7
.....	.....	.....	.....	.....	.....	.....	.978	8
.....	311.476	83,777.982	.....	.....	.....	55.300	94,095.636	9
105,449.713	11.425	5,293.054	.....	.....	.....	4.061	214,234.588	10
.....	.....	.....	.....	.....	.....	.....	7,207.704	11
.....	.....	.....	3,508.136	.....	.....	.....	3,827.959	12
.....	13,568.600	.....	.....	.....	.....	690.904	23,974.031	13
.....	.....	.....	52.300	.....	.....	.....	1,227.224	14
.....	.....	.....	.....	.....	71,575.395	.....	406,545.672	15
.....	89.093	4.079	.....	.....	.....	.....	45,303.060	16
.....	.....	.....	.....	.....	.....	.....	107.479	17
.....	373.562	204.945	.....	.....	.....	671.953	1,411,394	18
.....	.....	.....	.....	8.611	.....	.....	83.329	19
.....	.....	.....	.....	.....	.....	.....	31.670	20
.....	.....	.....	.....	.....	.....	.....	62.583	21
.....	.....	.....	.....	89.485	.....	.....	431.989	22
115,011.088	50,643.160	90,403.879	4,273.092	167.950	71,575.395	830,186.955	2,668,852.289	23
.....	.....	.....	5,619.869	483.282	.....	.....	621,955.034	24
.....	.....	.....	.....	1,689.325	.....	.807	2,972,720.639	25
115,011.088	50,643.160	90,403.879	9,892.961	2,340.557	71,575.395	830,187.762	6,263,527.962	26
.....	.....	.....	7.470	21,610.533	.....	2.089	78,512.703	27
.....	.....	.....	.....	.....	.....	.....	207,516.680	28
.....	.....	2,712.391	.....	12.220	.....	143,291.055	457,248.330	29
.....	.....	.....	.....	.....	.....	13,169.266	410,177.453	30
.....	.....	13.141	.....	.....	.....	3.992	202,512.575	31
.....	.....	132.770	88.571	2,027.522	.....	723.883	268,534.700	32
.....	.....	.....	.....	.....	.....	.....	679.342	33
.....	31.594	18.563	5.893	2.925	22.118	39.588	1,045.066	34
.....	.....	.....	.....	.....	.....	.....	26.670	35
115,011.088	50,674.754	93,280.744	9,994.895	25,993.757	71,597.513	987,417.635	7,889,781.481	36
.....	.....	.....	.....	.....	.....	.....	1,739,199.359	37
.....	.....	.....	.....	.....	.....	3.365	2,448,567.686	38
.....	.....	.....	.....	.....	.....	.....	425,516.930	39
.....	.....	.....	.....	.....	.....	3.365	4,613,283.975	40
115,011.088	50,674.754	93,280.744	9,994.895	25,993.757	71,597.513	987,421.000	12,503,065.456	41

No. 2.—Domestic Production, Deposits, and Purchases of Silver,

	Locality and description of deposits.	Philadelphia.	San Francisco.	New Orleans.	Denver.	New York.
		Stand. ozs.	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*
1	Alabama	6.17		1,327.58		
2	Alaska	18.63	4,782.39		38.87	28.75
3	Arizona	65.76	12,125.95		5,441.10	56.91
4	California	66.78	75,051.49		108.16	922.03
5	Colorado	15.98	37.01		333,385.21	16.29
6	Georgia	124.00				
7	Idaho	507.10	3.18		16.35	6.04
8	Michigan	1,582.24				15,425.81
9	Montana		2.00		1,859.49	12,139.06
10	Nevada	29.87	29,487.78	.26	481.27	1,246.62
11	New Mexico	5.57	2.77		781.26	187,668.99
12	North Carolina	34.03				27.55
13	Oregon	12.04	1,745.21		43.51	3.56
14	South Carolina	.75				25.07
15	South Dakota					102,738.00
16	Utah		8.09		4,912.72	13.99
17	Virginia	49.83				
18	Washington	3.60	7.21			7.30
19	Wyoming				8.11	
20	Porto Rico					3.61
21	Philippines		14.67			7.19
22	Other	62.32				
23	Total domestic	2,584.67	123,267.75	1,327.84	347,076.05	320,336.77
24	Domestic bullion, refinery bars.	32,042.31			11,227.72	196,487.62
25	Domestic bullion, refined	1,111,480.96	1,450,390.60	2,756,944.11	2,173,329.11	2,590,610.49
26	Total domestic bullion	1,146,107.94	1,573,658.35	2,758,271.95	2,531,632.88	3,107,434.88
27	Domestic coin, mutilated	2,426.82	93.60	163.11	48.96	
28	Domestic coin, transferred	662,191.00	26,690.11	93,722.90		
29	Trade dollars	96.57				
30	Foreign bullion, crude	302,556.94	897,224.72	20,575.05	458.63	1,182,273.10
31	Foreign bullion, refined					668,732.72
32	Foreign coin	276.75	22,548.80	39,755.68		25,999.51
33	Philippine coin for recoinage		13,137,897.65			
34	Philippine assay coins	3,790.20				
35	Philippine coin purchased		.80			
36	Jewelers' bars, old plate, etc.	80,094.75	37,683.42	5,499.19	2,551.79	400,502.34
37	Surplus bullion	5,769.45	4,128.08		11,438.52	870.71
38	Deposit, melting room, grains.	23.95	72.66	19.70	25.54	1,092.26
39	Sweeps from Helena				23.26	
40	Total deposits	2,203,334.37	15,699,998.19	2,918,007.58	2,546,179.58	5,386,905.52
	Redeposits:					
41	Fine bars	610.45	70,349.13			52,144.46
42	Unparted bars	2,546,766.90	60,732.32		137,096.25	
43	Mint bars	225,085.15				
44	Total redeposits	2,772,462.50	131,081.45		137,096.25	52,144.46
45	Total bullion	4,975,796.87	15,831,079.64	2,918,007.58	2,683,275.83	5,439,049.98

BY WEIGHT, DURING CALENDAR YEAR ENDED DECEMBER 31, 1908.

Carson.	Boise.	Helena.	Charlotte.	St. Louis.	Deadwood.	Seattle.	Total.	
Stand. ozs.	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	*Stand. ozs.*	
			14.07				1,347.82	1
		17.42		10.38		115,641.97	120,538.41	2
				9.83		52.70	17,752.25	3
6,253.02	617.42					13.28	83,032.18	4
						5.44	333,459.93	5
			70.01				194.01	6
	19,008.32	134.05				303.15	19,978.19	7
							17,008.05	8
	27.43	35,616.13				373.21	50,017.32	9
38,727.68	6.12	3,571.40				.16	73,551.16	10
							188,458.59	11
			909.86				971.44	12
	5,297.37					75.42	7,177.11	13
			11.89				37.71	14
					86,648.99		189,386.99	15
	53.28	.36					4,988.44	16
							49.83	17
	128.45	34.82				263.78	445.16	18
				.73			8.84	19
							3.61	20
							21.86	21
				7.64			69.96	22
44,980.70	25,138.39	39,374.18	1,005.83	28.58	86,648.99	116,729.11	1,108,498.86	23
			448.14	4.33			240,210.12	24
							10,082,755.27	25
44,980.70	25,138.39	39,374.18	1,453.97	32.91	86,648.99	116,729.11	11,431,464.25	26
							2,732.49	27
							782,604.01	28
							96.57	29
		742.58		1.64		32,426.30	2,436,258.96	30
							668,732.72	31
		.15					88,580.89	32
							13,137,897.65	33
							3,790.20	34
							.80	35
		36.14	29.68	657.17		238.29	527,292.77	36
							22,206.76	37
	33.11	6.91	1.07	3.61	23.39	5.88	1,308.08	38
							23.26	39
44,980.70	25,171.50	40,159.96	1,484.72	695.33	86,672.38	149,399.58	29,102,989.41	40
							123,104.04	41
						.59	2,744,596.06	42
							225,085.15	43
						.59	3,092,785.25	44
44,980.70	25,171.50	40,159.96	1,484.72	695.33	86,672.38	149,400.17	32,195,774.66	45

No. 3.—Mutilated and Uncurrent Domestic Gold and Silver Coin Recoinage during the

	Denomination.	Philadelphia.		San Francisco.		New Orleans.	
		Received from Treasury.	Purchased.	Received from Treasury.	Purchased.	Received from Treasury.	Purchased.
	GOLD.						
1	Double eagles	$775,720.00	$42,700.00		$7,680.00		$14,340.00
2	Eagles	961,490.00	71,570.00		1,520.00		15,600.00
3	Half eagles	2,138,890.00	143,125.00		2,205.00		29,995.00
4	Three-dollar pieces	24.00	42.00		9.00		
5	Quarter eagles	10,902.50	8,280.00		70.00		215.00
6	Dollars	61.00	177.00		12.00		
7	Total face value	3,887,087.50	265,894.00		11,496.00		60,150.00
	SILVER.						
8	Trade dollars		111.00				
9	Dollars		871.00				82.00
10	Half dollars	315,568.50	684.50	$19,000.00	87.50	$46,990.00	36.00
11	Quarter dollars	265,349.50	1,165.75	9,500.00	26.75	35,850.00	44.75
12	Twenty-cent pieces	175.60		.80		5.00	
13	Dimes	299,108.10	380.50	7,000.00	10.70	43,375.00	44.40
14	Half dimes	749.55	4.00	23.40		30.00	.05
15	Three-cent pieces	81.00	.66				
16	Total face value	881,032.25	3,217.41	35,524.20	124.95	126,250.00	207.20
	SUMMARY.	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*
17	Gold coins	207,516.680	14,206.833		606.062		3,198.864
18	Silver coins	662,191.00	2,523.39	26,690.11	93.60	93,722.90	163.11
19	Gold coining value	$3,860,775.45	$264,313.17		$11,275.58		$59,513.71
20	Silver coining value, subsidiary.	823,876.83	3,139.52	$33,206.98	116.45	$116,607.01	202.93
21	Loss, gold value	26,312.05	1,580.83		220.42		636.29
22	Loss, silver subsidiary	57,155.42	77.89	2,317.22	8.50	9,642.99	4.27

No. 4.—Coinage of United States

	Denomination.	Philadelphia.		San Francisco.	
		Pieces.	Value.	Pieces.	Value.
	GOLD.				
1	Double eagles	4,427,910	$88,558,200.00	22,000	$440,000.00
2	Eagles	374,986	3,749,860.00	59,850	598,500.00
3	Half eagles	999,886	4,999,430.00	82,000	410,000.00
4	Quarter eagles	565,057	1,412,642.50		
5	Total gold	6,367,839	98,720,132.50	163,850	1,448,500.00
	SILVER, SUDSIDIARY.				
6	Half dollars	1,354,545	677,272.50	1,644,828	822,414.00
7	Quarter dollars	4,232,545	1,058,136.25	784,000	196,000.00
8	Dimes	10,600,545	1,060,054.50	3,220,000	322,000.00
9	Total silver	16,187,635	2,795,463.25	5,648,828	1,340,414.00
	MINOR.				
10	Five-cent nickel	22,686,177	1,134,308.85		
11	One-cent bronze	32,327,987	323,279.87	1,115,000	11,150.00
12	Total minor	55,014,164	1,457,588.72	1,115,000	11,150.00
13	Total coinage	77,569,638	102,973,184.47	6,927,678	2,800,064.00

Note.—All the double eagles and eagles were of the St. Gaudens design. There were $98,706,020 in double eagles without the motto and $10,557,180 with the motto; also $635,000 in eagles without the motto and $14,178,360 with the motto. There were $2,109,370 in half eagles of the old design made during the first three months of 1908, and $4,040,060 were made from the Bigelow-Pratt design; all the quarter eagles from the Bigelow-Pratt design.

TRANSFERRED FROM THE TREASURY AND PURCHASED OVER THE COUNTER FOR CALENDAR YEAR 1908.

Denver.	New York.	St. Louis.	Charlotte.	Seattle.	Total.		Total.	
Purchased.	Purchased.	Purchased.	Purchased.	Purchased.	Received from Treasury.	Purchased.		
$440.00	$138,780.00	$119,380.00	$140.00	.....	$775,720.00	$323,460.00	$1,099,180.00	1
570.00	396,330.00	105,300.00	10.00	$20.00	961,490.00	590,920.00	1,552,410.00	2
730.00	192,060.00	181,025.00	.....	20.00	2,138,890.00	549,160.00	2,688,050.00	3
.....	123.00	.....	.....	.....	24.00	174.00	198.00	4
5.00	1,187.50	47.50	.....	.....	10,902.50	9,805.00	20,707.50	5
1.00	89.00	1.00	.....	.....	61.00	280.00	341.00	6
1,746.00	728,569.50	405,753.50	150.00	40.00	3,887,087.50	1,473,799.00	5,360,886.50	7
.....	.....	.....	.....	.....	.....	111.00	111.00	8
12.00	.....	.....	.....	.....	.....	965.00	965.00	9
5.50	.....	.....	.....	.....	381,558.50	813.50	382,372.00	10
43.00	.....	.....	.....	.....	310,699.50	1,280.25	311,979.75	11
.....	.....	.....	.....	.....	181.40	.....	181.40	12
.....	.....	.....	.....	.....	349,483.10	435.60	349,918.70	13
.80	.....	.....	.....	.....	802.95	4.85	807.80	14
.....	.....	.....	.....	.....	81.00	.66	81.66	15
61.30	.....	.....	.....	.....	1,042,806.45	3,610.86	1,046,417.31	16
Stand. oz.	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	*Stand. oz.*	
88.304	38,792.548	21,610.533	7.470	2.089	207,516.680	78,512.703	286,029.383	17
48.96	.....	.....	.....	.....	782,604.01	2,829.06	785,433.07	18
$1,642.88	$721,721.84	$402,056.42	$138.98	$38.89	$3,860,775.45	$1,460,701.47	$5,321,476.92	19
60.91	.....	.....	.....	.....	973,690.82	3,519.81	977,210.63	20
103.12	6,847.66	3,697.08	11.02	1.11	26,312.05	13,097.53	39,409.58	21
.39	.....	.....	.....	.....	69,115.63	91.05	69,206.68	22

MINT DURING THE CALENDAR YEAR 1908.

New Orleans.		Denver.		Total.		
Pieces.	Value.	Pieces.	Value.	Pieces.	Value.	
.....	.....	1,013,250	$20,265,000.00	5,463,160	$109,263,200.00	1
.....	.....	1,046,500	10,465,000.00	1,481,336	14,813,360.00	2
.....	.....	148,000	740,000.00	1,229,886	6,149,430.00	3
.....	.....	.....	.....	565,057	1,412,642.50	4
.....	.....	2,207,750	31,470,000.00	8,739,439	131,638,632.50	5
5,360,000	$2,680,000.00	3,280,000	1,640,000.00	11,639.373	5,819,686.50	6
6,244,000	1,561,000.00	5,788,000	1,447,000.00	17,048,545	4,262,136.25	7
1,789,000	178,900.00	7,490,000	749,000.00	23,099.545	2,309,954.50	8
13,393,000	4,419,900.00	16,558,000	3,836,000.00	51,787,463	12,391,777.25	9
.....	.....	.....	.....	22,686,177	1,134,308.85	10
.....	.....	.....	.....	33,442,987	334,429.87	11
.....	.....	.....	.....	56,129,164	1,468,738.72	12
13,393,000	4,419,900.00	18,765,750	35,306,000.00	116,656,066	145,499,148.47	13

PHILIPPINE COINAGE.

Denomination.		Made at—	
		Philadelphia.	San Francisco.
		Pieces.	*Pieces.*
Peso	silver	501	20,954,944
50-centavo	do	501	1,601,000
20-centavo	do	501	1,535,000
10-centavo	do	501	3,363,911
5-centavo	nickel	500	.....
1-centavo	bronze	500	2,187,000
½-centavo	do	500	.....
Total		3,504	29,641,855

No. 5.—Assets and Liabilities of the United States

ASSETS.

	Institutions.	Gold bullion.		Silver bullion.		Value of bullion shipped for coinage.
		Quantity.	Value.	Quantity.	Value (cost).	
	COINAGE MINTS.	*Standard ozs.*	*Dollars.*	*Standard ozs.*	*Dollars.*	*Dollars.*
1	Philadelphia	935,359.578	17,402,038.73	5,994,345.82	3,209,155.51	.....
2	Bullion for Philippine coinage.	.....	.....	116.05	73.24	.....
3	San Francisco	3,610,888.504	67,179,320.94	1,933,680.18	1,013,867.81	.....
4	Bullion for Philippine coinage.	.....	.....	2,878,216.17	2,477,276.95	.....
5	Bullion for San Salvador coinage.	.....	.....	557,148.53	250,716.84	.....
6	New Orleans	135,787.896	2,526,286.22	504,190.16	231,236.57	.....
7	Denver	808,679.360	15,045,197.40	841,473.84	389,389.66	.....
	ASSAY OFFICES.					
8	New York	453,079.438	8,429,384.90	472,593.25	212,847.68	.....
9	Carson	2,325.457	43,260.38	1,043.28	472.79	159,861.01
10	Helena	1,161.163	21,603.31	231.25	104.06	50,895.47
11	Boise	2,485.333	46,238.77	1,142.15	513.97	.....
12	St. Louis	2,460.594	45,778.46	89.56	40.32	.....
13	Charlotte	611.250	11,372.09	73.73	33.18	.....
14	Deadwood	3,514.435	65,385.38	4,933.25	2,255.78	.....
15	Seattle	12,119.174	225,472.25	1,823.28	818.06	645,276.38
16	Total	5,968,472.182	111,041,338.83	13,191,100.50	7,788,802.42	856,032.86

LIABILITIES.

	Institutions.	Bullion fund.	Undeposited earnings.	Seigniorage on silver.	Unpaid depositors.	Minor coinage profits.
	COINAGE MINTS.	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
17	Philadelphia	430,570,640.95	30,300.80	426,285.84	64,289.66	169,890.03
18	San Francisco	147,271,751.11	14,435.47	.....	279,012.58	10,007.80
19	New Orleans	37,211,116.85	165.29	283,448.79	73.79	.....
20	Denver	312,900,226.96	20.71	77,880.30	643,269.68	.....
	ASSAY OFFICES.					
21	New York	10,204,048.62	29,320.84	.....	19,767.46	.....
22	Carson	521,150.29	1,161.49	.....	.....	.....
23	Helena	295,767.74	680.72	.....	.....	.....
24	Boise	110,564.26	177.65	.....	.....	.....
25	St. Louis	63,232.85	213.50	.....	.....	.....
26	Charlotte	54,332.07	229.89	.....	.....	.....
27	Deadwood	80,024.39	416.13	.....	.....	.....
28	Seattle	5,989,290.44	2,500.50	.....	13,032.72	.....
29	Total	945,272,146.53	79,622.99	787,614.93	1,019,445.89	179,897.83

MINTS AND ASSAY OFFICES, DECEMBER 31, 1908.

ASSETS.

Gold coin.	Silver coin.	Credit with assistant treasurer and depository banks.	Minor coin.	Minor coinage metal.	Deficiencies.	Total.	
Dollars.	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	
302,751,748.45	107,715,031.37	.....	1,199,719.43	177,751.22	13,543.82	432,468,988.53	1
.....	.....	.....	.....	1.88	.....	75.12	2
8,477,325.00	62,562,894.12	8,654,489.41	8,859.82	2,147.98	413,558.24	148,312,463.32	3
.....	.....	.....	3,082.66	8,657.42	.....	2,489,017.03	4
.....	.....	.....	.....	.....	.....	250,716.84	5
1,443,371.18	32,995,767.69	298,143.06	.....	.....	.....	37,494,804.72	6
293,928,760.00	3,239,290.63	1,018,759.96	.....	.....	.....	313,621,397.65	7
1,117,087.78	.....	493,816.56	.....	.....	.....	10,253,136.92	8
67,494.48	796.67	174,876.70	.....	.....	75,549.75	522,311.78	9
.....	.....	223,845.62	.....	.....	.....	296,448.46	10
.....	.....	63,989.17	.....	.....	.....	110,741.91	11
.....	.....	17,627.57	.....	.....	.....	63,446.35	12
.....	.....	43,156.69	.....	.....	.....	54,561.96	13
.....	.....	12,799.36	.....	.....	.....	80,440.52	14
.....	.....	5,133,256.97	.....	.....	.....	6,004,823.66	15
607,785,786.89	206,513,780.48	16,134,761.07	1,211,661.91	188,558.50	502,651.81	952,023,374.77	16

LIABILITIES.

Minor coin metal fund.	Unpaid cent depositors and subtreasury minor coin transfers.	Government of the Philippine Islands and San Salvador.	Total.	
Dollars.	*Dollars.*	*Dollars.*	*Dollars.*	
160,000.00	1,047,580.62	75.75	432,469,063.65	17
1,000.00	.....	3,475,990.23	151,052,197.19	18
.....	.....	.....	37,494,804.72	19
.....	.....	.....	313,621,397.65	20
.....	.....	.....	10,253,136.92	21
.....	.....	.....	522,311.78	22
.....	.....	.....	296,448.46	23
.....	.....	.....	110,741.91	24
.....	.....	.....	63,446.35	25
.....	.....	.....	54,561.96	26
.....	.....	.....	80,440.52	27
.....	.....	.....	6,004,823.66	28
161,000.00	1,047,580.62	3,476,065.98	952,023,374.77	29

No. 6.—Highest, Lowest, and Average Price of Bar Silver in London, per Ounce British Standard (.925), since 1833, and the Equivalent in United States Gold Coin of an Ounce 1,000 Fine, taken at the Average Price.

Calendar year.	Highest quotation.	Lowest quotation.	Average quotation.	Value of a fine ounce at average quotation.	Calendar year.	Highest quotation.	Lowest quotation.	Average quotation.	Value of a fine ounce at average quotation.
	d.	*d.*	*d.*	*Dollars.*		*d.*	*d.*	*d.*	*Dollars.*
1833	59 7/8	58 3/4	59 1/16	1.297	1871	61	60 1/16	60 1/2	1.326
1834	60 1/4	59 3/4	59 15/16	1.313	1872	61 1/8	59 1/4	60 9/16	1.322
1835	60	59 1/4	59 11/16	1.308	1873	59 15/16	57 7/8	59 3/16	1.29769
1836	60 3/4	59 5/8	60	1.315	1874	59 1/2	57 1/4	58 5/16	1.27883
1837	60 3/8	59	59 3/16	1.305	1875	57 7/8	55 1/4	56 1/16	1.24233
1838	60 1/8	59 1/2	59 1/2	1.304	1876	58 1/2	46 3/4	53 1/8	1.16414
1839	60 5/8	60	60 3/8	1.323	1877	58 1/4	53 1/4	54 1/16	1.20189
1840	60 1/4	60 1/8	60 3/8	1.323	1878	55 1/4	49 1/2	52 5/8	1.15358
1841	60 3/8	59 3/4	60 1/16	1.316	1879	53 3/4	58 7/8	51 1/4	1.12392
1842	60	59 1/4	59 7/16	1.303	1880	52 13/16	51 1/2	52 1/4	1.14507
1843	59 5/8	59	59 3/16	1.297	1881	52 7/8	50 7/8	51 5/8	1.13229
1844	59 3/4	59 1/4	59 1/2	1.304	1882	52 3/8	50	51 1/16	1.13562
1845	59 7/8	58 7/8	59 1/4	1.298	1883	51 1/16	50 1/16	50 9/16	1.10874
1846	60 1/8	59	59 5/16	1.300	1884	51 3/8	49 1/2	50 1/16	1.11068
1847	60 3/8	58 7/8	59 1/16	1.308	1885	50	46 7/8	48 9/16	1.06510
1848	60	58 1/2	59 1/2	1.304	1886	47	42	45 3/8	.99467
1849	60	59 1/4	59 3/4	1.309	1887	47 1/8	43 1/4	44 11/16	.97946
1850	61 1/2	59 1/2	61 1/16	1.316	1888	44 9/16	41 5/8	42 7/8	.93974
1851	61 5/8	60	61	1.337	1889	44 3/8	41 15/16	42 11/16	.93511
1852	61 7/8	59 7/8	60 1/2	1.326	1890	54 5/8	43 5/8	47 3/4	1.04634
1853	61 7/8	60 5/8	61 1/2	1.348	1891	48 3/4	43 1/2	45 1/16	.98800
1854	61 7/8	60 5/8	61 1/2	1.348	1892	43 3/4	37 7/8	39 3/4	.87145
1855	61 5/8	60	61 5/16	1.344	1893	38 3/4	30 1/2	35 9/16	.78030
1856	62 1/4	60 1/2	61 5/16	1.344	1894	31 3/4	27	28 15/16	.63479
1857	62 3/8	61	61 3/4	1.353	1895	31 3/8	27 3/16	29 3/16	.65406
1858	61 7/8	60 3/4	61 5/16	1.344	1896	31 15/16	29 3/4	30 13/16	.67565
1859	62 3/4	61 3/4	62 1/16	1.360	1897	29 13/16	23 5/8	27 9/16	.60438
1860	62 3/8	61 1/4	61 11/16	1.352	1898	28 3/8	25	26 1/16	.59010
1861	61 3/8	60 1/8	60 13/16	1.333	1899	29	26 5/8	27 7/16	.60154
1862	62 1/8	61	61 7/16	1.346	1900	30 1/4	27	28 5/16	.62007
1863	61 3/4	61	61 3/8	1.345	1901	29 9/16	24 15/16	27 3/16	.59595
1864	62 1/2	60 5/8	61 3/8	1.345	1902	26 1/16	21 11/16	24 1/16	.52795
1865	61 5/8	60 1/2	61 1/16	1.338	1903	28 1/2	21 11/16	24 3/4	.54257
1866	62 1/4	60 3/8	61 1/8	1.339	1904	28 5/16	24 7/16	26 13/32	.57876
1867	61 1/4	60 3/8	60 9/16	1.328	1905	30 1/16	25 7/16	27 13/16	.61027
1868	61 1/8	60 1/8	60 1/2	1.326	1906	33 1/8	29	30 5/8	.67689
1869	61	60	60 7/16	1.325	1907	32 7/16	24 1/4	30 3/16	.66152
1870	60 3/4	60 1/4	60 9/16	1.328	1908	27	22	24 13/32	.53490

No. 7.—Commercial Ratio of Silver to Gold Each Year since 1687.

[Note.—From 1687 to 1832 the ratios are taken from Dr. A. Soetbeer, from 1833 to 1878 from Pixley and Abell's tables, and from 1879 to 1896 from daily cablegrams from London to the Bureau of the Mint, and since from daily London quotations.]

Year.	Ratio.	Year.	Ratio.	Year.	Ratio.	Year.	Ratio.	Year.	Ratio.	Year.	Ratio.
1687	14.94	1724	15.11	1761	14.54	1798	15.59	1835	15.80	1872	15.63
1688	14.94	1725	15.11	1762	15.27	1799	15.74	1836	15.72	1873	15.93
1689	15.02	1726	15.15	1763	14.99	1800	15.68	1837	15.83	1874	16.16
1690	15.02	1727	15.24	1764	14.70	1801	15.46	1838	15.85	1875	16.64
1691	14.98	1728	15.11	1765	14.83	1802	15.26	1839	15.62	1876	17.75
1692	14.92	1729	14.92	1766	14.80	1803	15.41	1840	15.62	1877	17.20
1693	14.83	1730	14.81	1767	14.85	1804	15.41	1841	15.70	1878	17.92
1694	14.87	1731	14.94	1768	14.80	1805	15.79	1842	15.87	1879	18.39
1695	15.02	1732	15.09	1769	14.72	1806	15.52	1843	15.93	1880	18.05
1696	15.00	1733	15.18	1770	14.62	1807	15.43	1844	15.85	1881	18.25
1697	15.20	1734	15.39	1771	14.66	1808	16.08	1845	15.92	1882	18.20
1698	15.07	1735	15.41	1772	14.52	1809	15.96	1846	15.90	1883	18.64
1699	14.94	1736	15.18	1773	14.62	1810	15.77	1847	15.80	1884	18.61
1700	14.81	1737	15.02	1774	14.62	1811	15.53	1848	15.85	1885	19.41
1701	15.07	1738	14.91	1775	14.72	1812	16.11	1849	15.78	1886	20.78
1702	15.52	1739	14.91	1776	14.55	1813	16.25	1850	15.70	1887	21.10
1703	15.17	1740	14.94	1777	14.54	1814	15.04	1851	15.46	1888	22.00
1704	15.22	1741	14.92	1778	14.68	1815	15.26	1852	15.59	1889	22.10
1705	15.11	1742	14.85	1779	14.80	1816	15.28	1853	15.33	1890	19.75
1706	15.27	1743	14.85	1780	14.72	1817	15.11	1854	15.33	1891	20.92
1707	15.44	1744	14.87	1781	14.78	1818	15.35	1855	15.38	1892	23.72
1708	15.41	1745	14.98	1782	14.42	1819	15.33	1856	15.38	1893	26.49
1709	15.31	1746	15.13	1783	14.48	1820	15.62	1857	15.27	1894	32.56
1710	15.22	1747	15.26	1784	14.70	1821	15.95	1858	15.38	1895	31.60
1711	15.29	1748	15.11	1785	14.92	1822	15.80	1859	15.19	1896	30.59
1712	15.31	1749	14.80	1786	14.96	1823	15.84	1860	15.29	1897	34.20
1713	15.24	1750	14.55	1787	14.92	1824	15.82	1861	15.50	1898	35.03
1714	15.13	1751	14.39	1788	14.65	1825	15.70	1862	15.35	1899	34.36
1715	15.11	1752	14.54	1789	14.75	1826	15.76	1863	15.37	1900	33.33
1716	15.09	1753	14.54	1790	15.04	1827	15.74	1864	15.37	1901	34.68
1717	15.13	1754	14.48	1791	15.05	1828	15.78	1865	15.44	1902	39.15
1718	15.11	1755	14.68	1792	15.17	1829	15.78	1866	15.43	1903	38.10
1719	15.09	1756	14.94	1793	15.00	1830	15.82	1867	15.57	1904	35.70
1720	15.04	1757	14.87	1794	15.37	1831	15.72	1868	15.59	1905	33.87
1721	15.05	1758	14.85	1795	15.55	1832	15.73	1869	15.60	1906	30.54
1722	15.17	1759	14.15	1796	15.65	1833	15.93	1870	15.57	1907	31.24
1723	15.20	1760	14.14	1797	15.41	1834	15.73	1871	15.57	1908	38.64

No. 8.—Imports of Gold and Silver, by Customs Districts, into the

	Customs districts.	GOLD.					
		In ore and base bullion.	Bullion, refined.		Coin.		Total gold.
					United States.	Foreign.	
		Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
1	Baltimore, Md		24,400	497,683			497,683
2	Bangor, Me	99	1,546	30,901		46	31,046
3	Boston and Charlestown, Mass.		875	14,953	4,100	5,213	24,266
4	Bridgeport, Conn						
5	Newark, N. J						
6	New York, N. Y	1,117,916	493,637	10,168,942	7,080,799	1,938,211	20,305,868
7	Passamaquoddy, Me		9,450	187,398	4,237	540	192,175
8	Perth Amboy, N. J	3,460,352					3,460,352
9	Philadelphia, Pa	150	170	2,700		965	3,815
10	Porto Rico				3,000		3,000
11	Key West, Fla				1,340		1,340
12	Mobile, Ala						
13	New Orleans, La	752,046	279	4,185	7,570		763,801
14	Tampa, Fla				120,508		120,508
15	Arizona	716,113	96,737	1,934,744			2,650,857
16	Brazos de Santiago, Tex						
17	Corpus Christi, Tex		199,898	4,131,833	10,344	1,906	4,144,083
18	Paso del Norte, Tex	489,174	27,039	540,794	2,851	9,462	1,042,281
19	Saluria, Tex	194,970	7,918	162,390			357,360
20	Alaska	168,318	139,344	2,237,494	19,298		2,425,110
21	Hawaii						
22	Los Angeles, Cal	75					75
23	Puget Sound, Wash	3,522,379	119,704	2,362,284	180,310		6,064,973
24	San Diego, Cal	9,612	490	8,775			18,387
25	San Francisco, Cal	807,944	88,468	1,827,966	72,477	1,686,745	4,395,132
26	Buffalo Creek, N. Y	12,916			821,495		834,411
27	Champlain, N. Y	14,900			810,496		825,396
28	Chicago, Ill	27,128	3	60		50,183	77,371
29	Detroit, Mich	2,060	315	4,950	852,724		859,734
30	Huron, Mich	2,000					2,000
31	Memphremagog, Vt	50					50
32	Minnesota, Minn	1,000					1,000
33	Montana and Idaho	76					76
34	Niagara, N. Y	10,620	21	443	426,050		437,113
35	North and South Dakota	139,791					139,791
36	Oswegatchie, N. Y	465,999					465,999
37	Superior, Mich	13,500					13,500
38	Vermont, Vt	838	90	2,080	33,728	81,094	117,740
39	Denver, Colo						
	Total	11,930,026	1,210,384	24,120,575	10,451,327	3,774,365	50,276,293

UNITED STATES DURING THE CALENDAR YEAR ENDING DECEMBER 31, 1908.

SILVER.						Total gold and silver.	
Contained in ore.	Bullion.		Coin.		Total silver.		
			United States.	Foreign.			
Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	
141,911	1,113,862	595,650	.....	.....	737,561	1,235,244	1
.....	.....	.....	10,101	345	10,446	41,492	2
.....	.....	.....	1,457	487	1,944	26,210	3
18,349	6,463	3,555	.....	.....	21,904	21,904	4
2,967	.....	.....	.....	.....	2,967	2,967	5
2,780,012	6,841,708	3,623,215	383,280	141,767	6,928,274	27,234,142	6
.....	.....	.....	29,074	60	29,134	221,309	7
11,581,885	.....	.....	.....	.....	11,581,885	15,042,237	8
.....	.....	.....	.....	234	234	4,049	9
.....	.....	.....	21,861	.....	21,861	21,861	10
.....	.....	.....	.....	.....	.....	1,340	11
.....	.....	.....	.....	12,780	12,780	12,780	12
.....	.....	.....	.....	189,568	189,568	953,369	13
.....	.....	.....	793	.....	793	121,301	14
2,302,355	1,075,282	662,019	.....	.....	2,964,374	5,615,231	15
.....	.....	.....	821	.....	821	821	16
25	332,687	198,844	2,537	.....	201,406	4,345,489	17
1,566,615	2,680,510	1,399,948	.....	87,728	3,054,291	4,096,572	18
725,710	3,824,779	2,032,955	.....	.....	2,758,665	3,116,025	19
26	.....	.....	.....	.....	26	2,425,136	20
.....	.....	.....	3,500	.....	3,500	3,500	21
.....	.....	.....	.....	.....	.....	75	22
540,989	.....	.....	218,343	.....	759,332	6,824,305	23
.....	.....	.....	.....	.....	.....	18,387	24
422,710	4,364,327	2,294,542	.....	34,939	2,752,191	7,147,323	25
418,985	.....	.....	226,795	.....	645,780	1,480,191	26
3,470,832	.....	.....	43,605	.....	3,514,437	4,339,833	27
166,447	.....	.....	.....	.....	166,447	243,818	28
616	.....	.....	1,518,267	.....	1,518,883	2,378,617	29
356,851	.....	.....	.....	.....	356,851	358,851	30
.....	.....	.....	.....	.....	.....	50	31
.....	.....	.....	.....	.....	.....	1,000	32
3,297	.....	.....	.....	.....	3,297	3,373	33
1,997,812	469,453	231,359	20,461	.....	2,249,632	2,686,745	34
14,089	.....	.....	.....	.....	14,089	153,880	35
1,081,006	.....	.....	.....	.....	1,081,006	1,547,005	36
121,117	.....	.....	.....	.....	121,117	134,617	37
3,502	257,660	141,198	37,436	.....	182,136	299,876	38
336,498	.....	.....	.....	.....	336,498	336,498	39
28,054,606	20,966,731	11,183,285	2,518,331	467,908	42,224,130	92,500,423	

No. 9.—Imports of Gold and Silver, by Countries, into the United

	Countries.	GOLD.					
		In ore and base bullion.	Bullion, refined.		Coin.		Total gold.
					United States.	Foreign.	
		Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
1	Austria-Hungary					1,660	1,660
2	Azores, and Madeira Islands				1,814		1,814
3	Belgium		18	375			375
4	France	57,741	9,706	199,957	486,553	874,154	1,618,405
5	Germany	9,922	1,736	35,750	9,676	40	55,388
6	Gibraltar					85	85
7	Greece				1,100		1,100
8	Italy				4,745	695	5,440
9	Netherlands						
10	Portugal				3,728		3,728
11	Servia		457	9,419			9,419
12	Spain	7,614	1,319	27,159	1,213		35,986
13	United Kingdom—England	16,921	206,079	4,244,946	136,033	404,223	4,802,123
14	Bermuda					14,599	14,599
15	British Honduras				4,370		4,370
	Dominion of Canada:						
16	Nova Scotia, etc	99	11,871	233,252	4,237	586	238,174
17	Quebec, Ontario, etc	221,412	139,940	2,247,667	2,963,791	81,094	5,513,964
18	British Columbia	4,081,953	119,704	2,362,284	180,310		6,624,547
19	Newfoundland and Labrador.	34,950	868	17,876			52,826
	Central American States:						
20	Costa Rica		21,104	434,795	220,244	35,000	690,039
21	Guatemala	7,247					7,247
22	Honduras	234,771	4,827	99,527	3,200	2,120	339,618
23	Nicaragua	747,629	5,644	114,695			862,324
24	Panama		1,390	28,636	475		29,111
25	Salvador		38,985	805,724	8,018		813,742
26	Mexico	6,189,325	419,029	8,572,261	26,584	11,475	14,799,645
	West Indies:						
27	British	7,114	5,260	108,299	1,034,958	19,750	1,170,121
28	Cuba	7,647	1,344	27,493	4,345,198	69,523	4,449,861
29	Danish				54,163	1,425	55,588
30	Dutch		30	615	23,545	56,796	80,956
31	French				15,360	896	16,256
32	Haiti	25			190,441	2,000	192,466
33	Santo Domingo		58	1,199	25,488	3,189	29,876
34	Argentina	55,095	2,724	56,107	640		111,842
35	Chile	91,865	2,652	54,533	570		146,968
36	Colombia	9,191	93,598	1,928,155	75,000	688	2,013,034
37	Ecuador	110,639	7,791	160,514	550,245	497,330	1,318,728
	Guiana:						
38	British	176	2	50	60		286
39	Dutch		303	6,252			6,252
40	Peru	15,531	3,878	79,898	7,055	847	103,331
41	Uruguay						
42	Venezuela	471	1,167	24,000	12,470	9,445	46,386
43	Chinese Empire				2,865	145,995	148,860
44	Japan	3,488	1,742	35,901	14,740	79,170	133,299
45	Korea	16,600					16,600
46	Russia-Asiatic				25,975		25,975
47	Australia and Tasmania		106,286	2,185,115	1,073	1,461,580	3,647,768
48	French Oceania				15,390		15,390
49	Philippine Islands	2,600	872	18,121			20,721
50	Total	11,930,026	1,210,384	24,120,575	10,451,327	3,774,365	50,276,293

STATES DURING THE CALENDAR YEAR ENDING DECEMBER 31, 1908.

SILVER.							
Contained in ore.	Bullion.		Coin.		Total silver.	Total gold and silver.	
			United States.	Foreign.			
Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	
.....	.....	.....	59	.....	59	1,719	1
.....	.....	.....	.....	.....	.....	1,814	2
.....	21,529	12,203	.....	.....	12,203	12,578	3
34,778	360	217	41,453	29,103	105,551	1,723,956	4
8,561	79,478	43,920	87,247	7,648	147,376	202,764	5
.....	.....	.....	62	1,676	1,738	1,823	6
.....	.....	.....	.....	.....	.....	1,100	7
.....	.....	.....	.....	780	780	6,220	8
.....	.....	.....	1,994	.....	1,994	1,994	9
.....	.....	.....	10	.....	10	3,738	10
.....	1,636	814	.....	.....	814	10,233	11
22,646	61,141	33,600	.....	.....	56,246	92,232	12
9,415	333,367	168,880	16,936	39,059	234,290	5,036,413	13
.....	.....	.....	375	3,893	4,268	18,867	14
.....	.....	.....	.....	46,313	46,313	50,683	15
164	.....	.....	40,632	405	41,201	279,375	16
7,598,820	733,576	376,112	1,846,564	.....	9,821,496	15,335,460	17
503,996	.....	.....	218,343	.....	722,339	7,346,886	18
4,580	14,494	8,526	.....	.....	13,106	65,932	19
.....	153,580	86,723	.....	.....	86,723	776,762	20
.....	.....	.....	.....	12,593	12,593	19,840	21
386,628	82,483	47,333	.....	145,892	579,853	919,471	22
.....	1,800	1,080	.....	6,191	7,271	869,595	23
.....	237	120	.....	.....	120	29,231	24
.....	50,600	26,812	.....	.....	26,812	840,554	25
18,002,739	16,964,607	9,007,973	3,370	89,629	27,103,711	41,903,356	26
.....	6,670	3,893	46,365	3,550	53,808	1,223,929	27
200	26,815	16,326	127,793	14,000	158,319	4,608,180	28
.....	.....	.....	26,604	.....	26,604	82,192	29
.....	.....	.....	5,966	2,263	8,229	89,185	30
.....	.....	.....	166	383	549	16,805	31
31	.....	.....	5,114	27,280	32,425	224,891	32
.....	.....	.....	44,743	105	44,848	74,724	33
21,098	36,191	18,778	.....	.....	39,876	151,718	34
1,395,226	373,616	203,790	.....	.....	1,599,016	1,745,984	35
3,809	40,233	22,331	650	2,592	29,382	2,042,416	36
.....	3,759	2,244	.....	150	2,394	1,321,122	37
.....	.....	.....	.....	.....	.....	286	38
.....	.....	.....	.....	.....	.....	6,252	39
55,517	1,156,920	655,554	75	.....	711,146	814,477	40
.....	.....	.....	260	.....	260	260	41
.....	.....	.....	50	.....	50	46,436	42
.....	430	240	.....	18,543	18,783	167,643	43
496	135,043	70,654	3,500	15,270	89,920	223,219	44
5,855	.....	.....	.....	.....	5,855	22,455	45
.....	.....	.....	.....	.....	.....	25,975	46
.....	688,166	375,162	.....	590	375,752	4,023,520	47
.....	.....	.....	.....	.....	.....	15,390	48
47	.....	.....	.....	.....	47	20,768	49
28,054,606	20,966,731	11,183,285	2,518,331	467,908	42,224,130	92,500,423	50

No. 10.—Exports by Customs Districts of Domestic Gold and Silver from the United States during the Calendar Year ending December 31, 1908.

Customs districts.	GOLD.				
	In ore and base bullion.	Bullion, refined.		Coin.	Total gold.
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*
Baltimore, Md				8,500	8,500
Bangor, Me		3	67		67
Newark, N. J					
New York, N. Y	272	[a] 1,995,169	40,974,672	13,167,426	54,142,370
Perth Amboy, N. J					
New Orleans, La				68,100	68,100
Corpus Christi, Tex				5,248	5,248
Paso del Norte, Tex	68,998	7	140		69,138
Alaska	207,375	4,086	63,000		270,375
Hawaii				5,355	5,355
Puget Sound, Wash	136,528	2,217	44,091	18,334	198,953
San Francisco, Cal		92	1,903	18,577	20,480
Buffalo Creek, N. Y		8,120	168,062	200.000	368,062
Champlain, N. Y				19,830,000	19,830,000
Detroit, Mich		15	312		312
Memphremagog, Vt					
Montana and Idaho	50				50
Niagara, N. Y		7,349	150,565	526,555	677,120
Oswegatchie, N. Y					
Vermont, Vt		1,959	38,486	4,025,000	4,063,486
Total	413,223	2,019,017	41,441,298	37,873,095	79,727,616

Customs districts.	SILVER.					Total gold and silver.
	In ore and base bullion.	Bullion, refined.		Coin.	Total silver.	
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
Baltimore, Md				665	665	9,165
Bangor, Me						67
Newark, N. J		1,860,228	985,530		985,530	985,530
New York, N. Y	106,097	[a] 269,039 78,871,492	147,900 41,580,550	109,391	41,943,938	96,086,308
Perth Amboy, N. J		2,894,320	1,592,244		1,592,244	1,592,244
New Orleans, La				904	904	69,004
Corpus Christi, Tex						5,248
Paso del Norte, Tex	154,899	120	63	32,000	186,962	256,100
Alaska	1,008				1,008	271,383
Hawaii				21	21	5,376
Puget Sound, Wash	10,794	22,980	14,808	60,188	85,790	284,743
San Francisco, Cal		10,883,456	5,752,460		5,752,460	5,772,940
Buffalo Creek, N. Y	3,496	75,177	45,083		48,579	416,641
Champlain, N. Y		2,473	1,376	85	1,461	19,831,461
Detroit, Mich		20	12		12	324
Memphremagog, Vt		795	421	50	471	471
Montana and Idaho						50
Niagara, N. Y		18,343	10,131	397	10,528	687,648
Oswegatchie, N. Y	6,963	283	174		7,137	7,137
Vermont, Vt		146,574	77,361	700	78,061	4,141,547
Total	283,257	95,045,300	50,208,113	204,401	50,695,771	130,423,387

[a] United States mint or assay office bars.

No. 11.—Exports by Countries of Domestic Gold and Silver from the United States during the Calendar Year ending December 31, 1908.

Countries.	GOLD.				
	In ore and base bullion.	Bullion, refined.		Coin.	Total gold.
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*
France		[a] 1,524,967	31,307,329	1,055,000	32,362,329
Germany	500	[a] 470,202	9,667,343	9,350,000	19,017,843
United Kingdom—England	272			4,325	4,597
British Honduras				29,200	29,200
Dominion of Canada:					
Nova Scotia, etc		3	67		67
Quebec, Ontario, etc	198,145	17,443	357,425	24,581,555	25,137,125
British Columbia	145,308	6,303	107,091	18,334	270,733
Central American States:					
Costa Rica				1,300	1,300
Guatemala				28,600	28,600
Honduras				8,000	8,000
Nicaragua				1,000	1,000
Panama				900,000	900,000
Mexico	68,998	7	140	12,248	81,386
West Indies:					
British				14,500	14,500
Haiti				343,280	343,280
Santo Domingo				226,610	226,610
Argentina				1,000,000	1,000,000
Brazil				131	131
Colombia				2,500	2,500
Ecuador				50,000	50,000
Guiana—British					
Venezuela				221,830	221,830
Chinese Empire					
East Indies:					
British India					
Straits Settlements				750	750
Hongkong		92	1,903	8,877	10,780
Japan				55	55
French Oceania				15,000	15,000
Total	413,223	2,019,017	41,441,298	37,873,095	79,727,616

Countries.	SILVER.					Total gold and silver.
	In ore and base bullion.	Bullion, refined.		Coin.	Total silver.	
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
France		9,580,901	5,050,290		5,050,290	37,412,619
Germany	102,613				102,613	19,120,456
United Kingdom—England	3,484	[a] 269,039 73,989,940	147,900 39,080,121		39,231,505	39,236,102
British Honduras						29,200
Dominion of Canada:						
Nova Scotia, etc						67
Quebec, Ontario, etc	10,459	243,655	134,558	1,232	146,249	25,283,374
British Columbia	11,802	22,980	14,808	60,188	86,798	357,531
Central American States:						
Costa Rica						1,300
Guatemala						28,600
Honduras				904	904	8,904
Nicaragua						1,000
Panama				870	870	900,870
Mexico	154,899	120	63	32,000	186,962	268,348
West Indies:						
British		10	5	6,685	6,690	21,190
Haiti						343,280
Santo Domingo				102,501	102,501	329,111
Argentina						1,000,000
Brazil						131
Colombia						2,500
Ecuador						50,000
Guiana—British		5,103	2,808		2,808	2,808
Venezuela						221,830
Chinese Empire		1,306,736	691,222		691,222	691,222
East Indies:						
British India		50,096	25,100		25,100	25,100
Straits Settlements						750
Hongkong		9,576,720	5,061,238		5,061,238	5,072,018
Japan				21	21	76
French Oceania						15,000
Total	283,257	95,045,300	50,208,113	204,401	50,695,771	130,423,387

[a] United States mint or assay office bars.

No. 12.—Exports, by Customs Districts, of Foreign Gold and Silver from the United States during the Calendar Year ending December 31, 1908.

Customs districts.	GOLD.				
	In ore and base bullion.	Bullion, refined.		Coin.	Total gold.
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*
Baltimore, Md					
New York, N. Y				794,250	794,250
New Orleans, La					
Paso Del Norte, Tex					
Alaska	5,842				5,842
Hawaii				16,525	16,525
Puget Sound, Wash				3,828	3,828
San Diego, Cal					
San Francisco, Cal					
Buffalo Creek, N. Y		55	1,147		1,147
Champlain, N. Y				454,424	454,424
Detroit, Mich					
Vermont, Vt				211,824	211,824
Total	5,842	55	1,147	1,480,851	1,487,840

Customs districts.	SILVER.					Total gold and silver.
	Contained in ore.	Bullion, refined.		Coin.	Total silver.	
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
Baltimore, Md				600	600	600
New York, N. Y		1,410,733	802,867	83,253	886,120	1,680,370
New Orleans, La				43,366	43,366	43,366
Paso del Norte, Tex				19,247	19,247	19,247
Alaska						5,842
Hawaii				232	232	16,757
Puget Sound, Wash		53,256	34,124	5,795	39,919	43,747
San Diego, Cal				997	997	997
San Francisco, Cal				7,829	7,829	7,829
Buffalo Creek, N. Y		6,450	3,874	33,119	36,993	38,140
Champlain, N. Y				56,084	56,084	510,508
Detroit, Mich				602	602	602
Vermont, Vt				49,911	49,911	261,735
Total		1,470,439	840,865	301,035	1,141,900	2,629,740

No. 13.—Exports, by Countries, of Foreign Gold and Silver from the United States during the Calendar Year ending December 31, 1908.

Countries.	GOLD.				
	In ore and base bullion.	Bullion, refined.		Coin.	Total gold.
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*
United Kingdom—England					
Bermuda				9,735	9,735
Dominion of Canada:					
Quebec, Ontario, etc		55	1,147	666,248	667,395
British Columbia	5,842			3,928	9,770
Nicaragua					
Mexico					
West Indies:					
British					
Cuba				774,300	774,300
Dutch				240	240
French				1,975	1,975
Brazil				2,500	2,500
Chile				5,500	5,500
Colombia					
Guiana—British					
Chinese Empire					
Hongkong					
British Oceania:					
Australia and Tasmania				16,425	16,425
Other British Oceania					
Total	5,842	55	1,147	1,480,851	1,487,840

Countries.	SILVER.					Total gold and silver.
	Contained in ore.	Bullion, refined.		Coin.	Total silver.	
	Dollars.	*Ounces.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
United Kingdom—England		1,410,733	802,867	31,000	833,867	833,867
Bermuda						9,735
Dominion of Canada:						
Quebec, Ontario, etc		6,450	3,874	139,716	143,590	810,985
British Columbia				5,798	5,798	15,568
Nicaragua				43,366	43,366	43,366
Mexico				26,634	26,634	26,634
West Indies:						
British				33,556	33,556	33,556
Cuba						774,300
Dutch						240
French						1,975
Brazil						2,500
Chile						5,500
Colombia				3,000	3,000	3,000
Guiana—British				9,907	9,907	9,907
Chinese Empire		53,256	34,124		34,124	34,124
Hongkong				66	66	66
British Oceania:						
Australia and Tasmania				229	229	16,654
Other British Oceania				7,763	7,763	7,763
Total		1,470,439	840,865	301,035	1,141,900	2,629,740

No. 14.—Recapitulation of Imports and Exports of Gold and Silver during the Calendar Year 1908.

Description.	Imports.	Exports.	Excess.	
			Imports.	Exports.
GOLD.				
Contained in domestic ore	.....	$413,223	.....	$413,223
Contained in foreign ore	$11,930,026	5,842	$11,924,184	.....
Domestic bullion	.....	41,441,298	.....	41,441,298
Foreign bullion	24,120,575	1,147	24,119,428	.....
United States coin	10,451,327	37,873,095	.....	27,421,768
Foreign coin	3,774,365	1,480,851	2,293,514	.....
Total	50,276,293	81,215,456	38,337,126	69,276,289
Excess of exports	.....	.....	.....	30,939,163
SILVER.				
Contained in domestic ore	.....	283,257	.....	283,257
Contained in foreign ore	28,054,606	.....	28,054,606	.....
Domestic bullion	.....	50,208,113	.....	50,208,113
Foreign bullion	11,183,285	840,865	10,342,420	.....
United States coin	2,518,331	204,401	2,313,930	.....
Foreign coin	467,908	301,035	166,873	.....
Total	42,224,130	51,837,671	40,877,829	50,491,370
Excess of exports	.....	.....	.....	9,613,541

Items.	GOLD.						
	Contained in domestic ore.	Contained in foreign ore.	Domestic bullion.	Foreign bullion.	United States coin.	Foreign coin.	Total.
Imports	.....	$11,930,026	.....	$24,120,575	$10,451,327	$3,774,365	$50,276,293
Exports	$413,223	5,842	$41,441,298	1,147	37,873,095	1,480,851	81,215,456
Excess:							
Imports	.....	11,924,184	.....	24,119,428	.....	2,293,514	38,337,126
Exports	413,223	.....	41,441,298	.....	27,421,768	.....	69,276,289
Total excess exports	.....	.....	.....	.....	.....	.....	30,939,163

Items.	SILVER.						
	Contained in domestic ore.	Contained in foreign ore.	Domestic bullion.	Foreign bullion.	United States coin.	Foreign coin.	Total.
Imports	.....	$28,054,606	.....	$11,183,285	$2,518,331	$467,908	$42,224,130
Exports	$283,257	.....	$50,208,113	840,865	204,401	301,035	51,837,671
Excess:							
Imports	.....	28,054,606	.....	10,342,420	2,313,930	166,873	40,877,829
Exports	283,257	.....	50,208,113	.....	.....	.....	50,491,370
Total excess exports	.....	.....	.....	.....	.....	.....	9,613,541

No. 15.—Transit and Transshipment of Gold and Silver in the Customs Districts of New York during the Calendar Year ending December 31, 1908.

Countries from which received and to which shipped.	GOLD.				SILVER.				Total gold and silver.
	In ore.	Bullion refined.	Coin.	Total gold.	In ore.	Bullion.	Coin.	Total silver.	
Received from—									
United Kingdom—England	.....	.....	.....	.....	.....	.....	$1,186,445	$1,186,445	$1,186,445
Central American States:									
Nicaragua	.....	$4,039	.....	$4,039	.....	$1,095	.....	1,095	5,134
Panama	.....	.....	.....	.....	$1,375	.....	.....	1,375	1,375
Mexico	$14,720	1,379	.....	16,099	74,530	4,879,398	200	4,954,128	4,970,227
West Indies:									
British	.....	45,005	$1,500	46,505	.....	4,342	.....	4,342	50,847
Cuba	.....	.....	560,000	560,000	17,000	1,131,250	233,000	1,381,250	1,941,250
Haiti	.....	1,000	.....	1,000	.....	.....	.....	.....	1,000
Colombia	.....	354,297	.....	354,297	.....	37,969	.....	37,969	392,266
Venezuela	2,370	33,574	.....	35,944	.....	.....	.....	.....	35,944
Total	17,090	439,294	561,500	1,017,884	92,905	6,054,054	1,419,645	7,566,604	8,584,488
Shipped to—									
France	.....	19,101	560,000	579,101	800	3,298,770	.....	3,299,570	3,878,671
Germany	.....	1,379	.....	1,379	.....	1,105,535	200	1,105,735	1,107,114
Italy	.....	2,150	.....	2,150	.....	.....	.....	.....	2,150
United Kingdom—England	17,090	416,664	1,500	435,254	92,105	1,649,749	233,000	1,974,854	2,410,108
Mexico	.....	.....	.....	.....	.....	.....	1,186,445	1,186,445	1,186,445
Total	17,090	439,294	561,500	1,017,884	92,905	6,054,054	1,419,645	7,566,604	8,584,488

No. 16.—Coinage of Nations.

Country.	1906.		1907.		1908.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
United States	$78,793,045	$10,651,088	$131,907,490	$13,178,436	$131,638,633	$12,391,777
Philippine Islands	.....	100,951	.....	6,730,260	.....	11,199,868
Austria-Hungary	7,403,715	932,581	4,605,184	3,458,435	5,890,827	10,868,313
Belgium	.....	.....	.....	105,185	.....	.....
Bolivia	.....	295,462	.....	.....	.....	9,687
Brazil	4,324	604,968	40,962	4,340,900	69,331	2,888,288
British Empire:						
Australasia	55,841,584	.....	52,772,229	.....	50,887,122	.....
Canada	.....	809,463	.....	1,194,000	3,299	313,338
British Honduras	.....	.....	.....	24,500	.....	.....
Ceylon	.....	.....	.....	25,955	.....	81,108
Cyprus	.....	.....	.....	24,333	.....	.....
Newfoundland	.....	.....	.....	50,000	.....	100,000
Great Britain	61,147,573	8,865,780	100,011,442	9,924,740	67,157,700	4,911,301
Guiana (British)	.....	.....	.....	.....	.....	2,433
Hongkong	.....	248,813	.....	.....	.....	1,945,726
India	.....	64,891,356	.....	84,630,837	.....	58,773,220
Straits Settlements	.....	.....	.....	17,517,000	.....	6,929,500
Sarawak	.....	15,000	.....	2,000	.....	.....
Chile	.....	293,948	90,867	750,166	.....	.....
China	.....	11,089,409	.....	5,316,439	.....	24,498,653
Colombia	.....	227,433	.....	1,017,580	.....	407,058
Danish West Indies	.....	.....	.....	29,172	.....	.....
Denmark	.....	80,815	.....	216,789	3,912,084	.....
Egypt	.....	1,349,094	.....	2,224,350	.....	.....
France	64,064,117	626,801	75,261,788	1,202,130	29,574,098	3,110,555
French colonies:						
Indo-China	.....	10,194,060	.....	14,061,745	.....	14,785,004
Tunis	249	349	266	77,551	498	116,499
Germany	40,995,041	14,716,370	15,925,915	20,216,679	15,660,469	13,834,161
Colony of German East Africa	.....	561,667	.....	324,433	.....	162,217
Honduras	.....	.....	.....	3,000	.....	.....
Italy	.....	1,274,612	.....	2,115,806	.....	1,288,730
San Marino	.....	11,580	.....	.....	.....	.....
Japan	13,286,840	4,096,944	8,944,080	8,586,999	10,371,704	8,459,796
Korea	49,800	647,400	.....	517,920	423,640	935,071
Liberia	.....	24,000	.....	.....	.....	.....
Mexico	26,234,640	11,296,000	10,632,152	9,651,454	4,436,294	3,932,351
Morocco	.....	868,500	.....	.....	.....	.....
Netherlands	68,144	562,800	.....	1,849,200	207,799	1,206,000
Dutch East Indies	.....	904,500	.....	1,869,300	.....	1,809,000
Norway	.....	53,600	.....	97,927	.....	155,440
Persia	149,571	1,014,061	.....	.....	.....	.....
Peru	1,075,908	109,759	996,016	415,527	704,207	152,869
Portugal	.....	.....	.....	207,360	.....	2,344,468
Russia	77	4,348,085	280	5,660,338	1,930	3,263,078
Roumania	579,000	675,500	.....	.....	.....	.....
San Salvador	.....	.....	.....	.....	.....	2,315,280
Siam	.....	1,705,217	.....	1,342,891	.....	47,560
Sweden	.....	217,509	.....	714,428	.....	319,726
Switzerland	386,000	386,000	579,000	653,305	1,370,300	386,000
Turkey	16,247,160	738,991	10,036,231	1,323,756	4,708,265	748,707
Total	366,326,788	155,490,466	411,803,902	221,652,826	327,018,200	194,692,737

No. 17.—World's Production of Gold and Silver.

CALENDAR YEAR 1906.

Country.	Gold.			Silver.		
	Kilograms (fine).	Ounces (fine).	Value.	Kilograms (fine).	Ounces (fine).	Commercial value.
North America:						
United States	142,001	4,565,333	$94,373,800	1,757,944	56,517,900	$38,256,400
Canada	18,092	581,657	12,023,900	266,521	8,568,665	5,800,000
Mexico	27,889	896,615	18,534,700	1,717,738	55,225,268	37,381,400
Africa	203,669	6,547,943	135,358,000	21,850	702,464	475,500
Australasia	123,971	3,985,684	82,391,400	432,640	13,909,371	9,412,400
Europe:						
Russia	29,336	943,142	19,496,500	5,169	166,183	112,500
Austria-Hungary	3,935	126,519	2,615,400	56,184	1,806,322	1,222,700
Germany	121	3,890	80,400	177,183	5,696,433	3,855,900
Norway	.....	.....	.....	5,458	175,475	118,800
Sweden	20	643	13,300	1,007	32,375	21,900
Italy	62	1,993	41,200	20,916	672,449	455,200
Spain	.....	.....	.....	126,424	4,064,532	2,751,200
Greece	.....	.....	.....	25,786	829,025	561,200
Turkey	9	289	6,000	1,178	37,874	25,600
France	756	24,305	502,400	22,378	719,453	487,000
Great Britain	44	1,414	29,200	4,268	137,216	92,900
Servia	90	2,893	59,800	.....	.....	.....
South America:						
Argentina	8	268	5,500	449	14,440	9,800
Bolivia, Chile	1,135	36,505	754,600	97,959	3,149,395	2,131,800
Colombia	3,296	105,982	2,190,800	23,743	763,335	516,700
Ecuador	443	14,233	294,200	423	13,592	9,200
Brazil	3,616	116,243	2,403,000	.....	.....	.....
Venezuela	38	1,223	25,300	.....	.....	.....
Guiana—						
British	2,419	77,770	1,607,700	.....	.....	.....
Dutch	1,037	33,338	689,200	.....	.....	.....
French	2,797	89,923	1,858,900	.....	.....	.....
Peru	1,247	40,102	829,000	230,303	7,404,238	5,011,900
Uruguay	48	1,535	31,700	.....	.....	.....
Central America	2,875	92,432	1,910,700	51,949	1,670,159	1,130,500
Asia:						
Japan	4,136	132,979	2,748,900	78,696	2,530,093	1,712,600
China	6,771	217,688	4,500,000	.....	.....	.....
Korea	3,435	110,438	2,283,000	.....	.....	.....
Siam	80	2,572	53,200	.....	.....	.....
India (British)	18,188	584,744	12,087,700	.....	.....	.....
East Indies—						
British	2,180	70,079	1,448,700	.....	.....	.....
Dutch	1,888	60,706	1,254,900	7,721	248,240	168,000
Total	605,632	19,471,080	402,503,000	5,133,887	165,054,497	111,721,100

No. 17.—World's Production of Gold and Silver—Continued.

CALENDAR YEAR 1907.

Country.	Gold.			Silver.		
	Kilograms (fine).	Ounces (fine).	Value.	Kilograms (fine).	Ounces (fine).	Commercial value.
North America:						
United States	136,075	4,374,827	$90,435,700	1,757,844	56,514,700	$37,299,700
Mexico	28,109	903,699	18,681,100	1,901,934	61,147,203	40,357,200
Canada	12,613	405,517	8,382,800	397,505	12,779,800	8,434,700
Africa	228,685	7,352,228	151,984,100	24,586	790,431	521,700
Australasia	113,870	3,660,911	75,677,700	558,292	17,949,099	11,846,400
Europe:						
Russia	40,151	1,290,854	26,684,300	4,110	132,122	87,200
Austria-Hungary	3,739	120,209	2,484,900	54,253	1,744,233	1,151,200
Germany	100	3,220	66,600	158,261	5,088,086	3,358,100
Norway	.....	.....	.....	6,268	201,516	133,000
Sweden	28	903	18,700	929	29,761	19,600
Italy	60	1,914	39,600	22,950	737,843	487,000
Spain	.....	.....	.....	127,435	4,097,035	2,704,000
Greece	.....	.....	.....	25,786	829,025	547,200
Turkey	7	216	4,500	2,095	67,351	44,500
France	1,257	40,413	835,400	24,727	794,973	524,600
Great Britain	44	1,414	29,200	4,268	137,216	90,600
Servia	90	2,893	59,800	.....	.....	.....
South America:						
Argentina	155	4,985	103,000	783	25,178	16,600
Bolivia, Chile	1,907	61,313	1,267,400	162,437	5,222,358	3,446,800
Colombia	4,898	157,491	3,255,600	32,619	1,048,719	692,200
Ecuador	402	12,923	267,100	76	2,456	1,600
Brazil	3,040	97,750	2,020,700	.....	.....	.....
Venezuela	34	1,082	22,400	.....	.....	.....
Guiana—						
British	1,963	63,099	1,304,400	.....	.....	.....
Dutch	963	30,961	640,000	.....	.....	.....
French	3,552	114,202	2,360,800	.....	.....	.....
Peru	774	24,890	514,500	297,546	9,566,118	6,313,600
Uruguay	78	2,510	51,900	.....	.....	.....
Central America	3,172	101,965	2,107,800	58,877	1,892,896	1,249,300
Asia:						
Japan	4,172	134,146	2,773,000	95,596	3,073,411	2,028,400
China	6,771	217,688	4,500,000	.....	.....	.....
Indo-China	48	1,540	31,800	.....	.....	.....
Korea	3,266	105,013	2,170,800	.....	.....	.....
Siam	250	8,038	166,200	.....	.....	.....
India (British)	15,624	502,307	10,383,600	.....	.....	.....
East Indies—						
British	2,349	75,525	1,561,300	.....	.....	.....
Dutch	2,477	79,637	1,646,200	10,033	322,560	212,900
Total	620,723	19,956,283	412,532,900	5,729,210	184,194,090	121,568,100

No. 17.—World's Production of Gold and Silver—Continued.

CALENDAR YEAR 1908.

Country.	Gold.			Silver.		
	Kilograms (fine).	Ounces (fine).	Value.	Kilograms (fine).	Ounces (fine).	Commercial value.
North America:						
United States	142,281	4,574,340	$94,560,000	1,631,129	52,440,800	$28,050,600
Canada	14,809	476,112	9,842,100	687,597	22,106,233	11,824,600
Mexico	33,661	1,082,210	22,371,200	2,291,260	73,664,027	39,402,900
Africa	250,558	8,055,430	166,520,500	39,583	1,272,595	680,700
Australasia	110,333	3,547,210	73,327,300	534,218	17,175,099	9,187,000
Europe:						
Russia	42,209	1,357,027	28,052,200	4,109	132,122	70,700
Austria-Hungary	3,715	119,454	2,469,300	55,069	1,770,457	947,000
Germany	97	3,134	64,800	154,636	4,971,544	2,659,300
Norway	.....	.....	.....	7,035	226,175	121,000
Sweden	22	702	14,500	1,111	35,728	19,100
Italy	70	2,251	46,500	20,990	674,848	361,000
Spain	.....	.....	.....	129,881	4,175,674	2,233,600
Greece	.....	.....	.....	25,786	829,025	443,400
Turkey	3	108	2,200	248	7,971	4,300
France	1,257	40,413	835,400	24,727	794,973	425,200
Great Britain	24	772	16,000	4,207	135,255	72,300
Servia	90	2,893	59,800	.....	.....	.....
South America:						
Argentina	243	7,801	161,300	3,954	127,108	68,000
Bolivia, Chile	521	16,752	346,300	180,595	5,806,117	3,105,700
Colombia	5,157	165,797	3,427,300	42,769	1,375,039	735,500
Ecuador	527	16,945	350,300	704	22,642	12,100
Brazil	3,305	106,259	2,196,600	.....	.....	.....
Venezuela	37	1,184	24,500	3,254	104,626	56,000
Guiana—						
British	2,119	68,116	1,408,100	.....	.....	.....
Dutch	998	32,071	663,000	.....	.....	.....
French	3,552	114,202	2,360,800	.....	.....	.....
Peru	774	24,890	514,500	297,546	9,566,118	5,116,900
Uruguay	138	4,433	91,600	.....	.....	.....
Central America	4,542	146,034	3,018,800	45,437	1,460,809	781,400
Asia:						
Japan	4,345	139,703	2,887,900	118,237	3,801,315	2,033,300
China	13,011	418,312	8,647,300	.....	.....	.....
Indo-China	48	1,540	31,800	.....	.....	.....
Korea	4,585	147,423	3,047,500	.....	.....	.....
Siam	493	15,850	327,600	.....	.....	.....
India (British)	15,947	512,702	10,598,500	.....	.....	.....
East Indies—						
British	2,108	67,770	1,400,900	.....	.....	.....
Dutch	3,379	108,641	2,245,800	15,865	510,070	272,800
Total	664,958	21,378,481	441,932,200	6,319,947	203,186,370	108,684,400

No. 18.—Production of Gold and Silver in the World since the Discovery of America.

[From 1493 to 1885 is from a table of averages for certain periods compiled by Dr. Adolph Soetbeer; for the years 1886 to 1908 the production is the annual estimate of the Bureau of the Mint.]

Period.	Gold.				Silver.				Percentage of production.			
	Annual average for period.		Total for period.		Annual average for period.		Total for period.		By weight.		By value.	
	Fine ounces.	Value.	Fine ounces.	Value.	Fine ounces.	Coining value.	Fine ounces.	Coining value.	Gold.	Silver.	Gold.	Silver.
1493–1520	186,470	$3,855,000	5,221,160	$107,931,000	1,511,050	$1,954,000	42,309,400	$54,703,000	11	89	66.4	33.6
1521–1544	230,194	4,759,000	5,524,656	114,205,000	2,899,930	3,740,000	69,598,320	89,986,000	7.4	92.6	55.9	44.1
1545–1560	273,596	5,656,000	4,377,544	90,492,000	10,017,940	12,952,000	160,287,040	207,240,000	2.7	97.3	30.4	69.6
1561–1580	219,906	4,546,000	4,398,120	90,917,000	9,628,925	12,450,000	192,578,500	248,990,000	2.2	97.8	26.7	73.3
1581–1600	237,267	4,905,000	4,745,340	98,095,000	13,467,635	17,413,000	269,352,700	348,254,000	1.7	98.3	22	78
1601–1620	273,918	5,662,000	5,478,360	113,248,000	13,596,235	17,579,000	271,924,700	351,579,000	2	98	24.4	75.6
1621–1640	266,845	5,516,000	5,336,900	110,324,000	12,654,240	16,361,000	253,084,800	327,221,000	2.1	97.9	25.2	74.8
1641–1660	281,955	5,828,000	5,639,110	116,571,000	11,776,545	15,226,000	235,530,900	304,525,000	2.3	97.7	27.7	72.3
1661–1680	297,709	6,154,000	5,954,180	123,084,000	10,834,550	14,008,000	216,691,000	280,166,000	2.7	97.3	30.5	69.5
1681–1700	346,095	7,154,000	6,921,895	143,088,000	10,992,085	14,212,000	219,841,700	284,240,000	3.1	96.9	33.5	66.5
1701–1720	412,163	8,520,000	8,243,260	170,403,000	11,432,540	14,781,000	228,650,800	295,629,000	3.5	96.5	36.6	63.4
1721–1740	613,422	12,681,000	12,268,440	253,611,000	13,863,080	17,924,000	277,261,600	358,480,000	4.2	95.8	41.4	58.6
1741–1760	791,211	16,356,000	15,824,230	327,116,000	17,140,612	22,162,000	342,812,235	443,232,000	4.4	95.6	42.5	57.5
1761–1780	665,666	13,761,000	13,313,315	275,211,000	20,985,591	27,133,000	419,711,820	542,658,000	3.1	96.9	33.7	66.3
1781–1800	571,948	11,823,000	11,438,970	236,464,000	28,261,779	36,540,000	565,235,580	730,810,000	2	98	24.4	75.6
1801–1810	571,563	11,815,000	5,715,627	118,152,000	28,746,922	37,168,000	287,469,225	371,677,000	1.9	98.1	24.1	75.9
1811–1820	367,957	7,606,000	3,679,568	76,063,000	17,385,755	22,479,000	173,857,555	224,786,000	2.1	97.9	25.3	74.7
1821–1830	457,044	9,448,000	4,570,444	94,479,000	14,807,004	19,144,000	148,070,040	191,444,000	3	97	33	67
1831–1840	652,291	13,484,000	6,522,913	134,841,000	19,175,867	24,793,000	191,758,675	247,930,000	3.3	96.7	35.2	64.8
1841–1850	1,760,502	36,393,000	17,605,018	363,928,000	25,090,342	32,440,000	250,903,422	324,400,000	6.6	93.4	52.9	47.1
1851–1855	6,410,324	132,513,000	32,051,621	662,566,000	28,488,597	36,824,000	142,442,986	184,169,000	18.4	81.6	78.3	21.7
1856–1860	6,486,262	134,083,000	32,431,312	670,415,000	29,095,428	37,618,000	145,477,142	188,092,000	18.2	81.8	78.1	21.9
1861–1865	5,949,582	122,989,000	29,747,913	614,944,000	35,401,972	45,772,000	177,009,862	228,861,000	14.4	85.6	72.9	27.1
1866–1870	6,270,086	129,614,000	31,350,430	648,071,000	43,051,583	55,663,000	215,257,914	278,313,000	12.7	87.3	70	30
1871–1875	5,591,014	115,577,000	27,955,068	577,883,000	63,317,014	81,864,000	316,585,069	409,322,000	8.1	91.9	58.5	41.5
1876–1880	5,543,110	114,586,000	27,715,550	572,931,000	78,775,602	101,851,000	393,878,009	509,256,000	6.6	93.4	53	47
1881–1885	4,794,755	99,116,000	23,973,773	495,582,000	92,003,944	118,955,000	460,019,722	594,773,000	5	95	45.5	54.5
1886–1890	5,461,282	112,895,000	37,306,411	564,474,000	108,911,431	140,815,000	544,557,155	704,074,000	4.8	95.2	44.5	55.5
1891–1895	7,882,565	162,947,000	39,412,823	814,736,000	157,581,331	203,742,000	787,906,656	1,018,708,000	4.8	95.2	44.4	55.6
1896–1900	12,446,939	257,301,100	62,234,698	1,286,505,400	165,693,304	214,229,700	828,466,522	1,071,148,400	7	93	54.6	45.4
1901	12,625,527	260,992,900	12,625,527	260,992,900	173,011,283	223,691,300	173,011,283	223,691,300	6.8	93.2	53.8	46.2
1902	14,354,680	296,737,600	14,354,680	296,737,600	162,763,483	210,441,900	162,763,483	210,441,900	8.1	91.9	58.5	41.5
1903	15,852,620	327,702,700	15,852,620	327,702,700	167,689,322	216,810,300	167,689,322	216,810,300	8.6	91.4	60.2	39.8
1904	16,804,372	347,377,200	16,804,372	347,377,200	164,195,266	212,292,900	164,195,266	212,292,900	9.3	90.7	62.1	37.9
1905	18,396,451	380,288,700	18,396,451	380,288,700	172,317,688	222,794,500	172,317,688	222,794,500	9.6	90.4	63.1	36.9
1906	19,471,080	402,503,000	19,471,080	402,503,000	165,054,497	213,403,800	165,054,497	213,403,800	10.5	89.5	65.3	34.7
1907	19,956,283	412,532,900	19,956,283	412,532,900	184,194,090	238,149,900	184,194,090	238,149,900	9.8	90.2	63.4	36.6
1908	21,378,481	441,932,200	21,378,481	441,932,200	203,186,370	262,705,600	203,186,370	262,705,600	9.5	90.5	62.7	37.3
Total			625,798,143	12,936,397,600			10,220,943,048	13,214,956,600	5.8	94.2	49.5	50.5

INDEX.

A.

B.

C.

D.

K.

L.

M.

N.

O.

P.

R.

S.

T.

O