

SUMMARY OF THE MINERAL PRODUCTION OF THE UNITED STATES IN 1904.

GENERAL REMARKS.

The varied character of the units of measurement employed in the mineral industry makes it impossible to compare the outputs of the several minerals except in the value of the products. The figures given in the following summary show a continuation of the activity in the mineral industries of the United States noted in 1900, 1901, 1902, and 1903, though the value of the output for 1904 was about 9 per cent less than that for 1903.

In 1904, for the fifth time, the total value of our mineral production exceeded the enormous sum of \$1,000,000,000.

The exact figures for 1904 were \$1,289,047,146, as compared with \$1,419,280,617 in 1903, with \$1,260,501,898 in 1902, with \$1,086,550,871 in 1901, and with \$1,063,678,053 in 1900; a loss in 1904 from 1903 of \$130,233,471, or 9.18 per cent; a gain in 1904 over 1902 of \$28,545,248, or 2.26 per cent; a gain in 1904 over 1901 of \$202,496,275, or 18.64 per cent, and a gain in 1904 over 1900 of \$225,369,093 or 21.19 per cent.

As heretofore, iron and coal are the most important of our mineral products. The value of the iron in 1904 was \$233,025,000; the value of the coal, \$444,816,288. The fuels decreased from \$634,226,291 in 1903 to \$584,483,514 in 1904, a loss of \$49,742,777, or 7.84 per cent. Anthracite coal showed a decrease in value of \$13,062,428 from \$152,036,448 in 1903 to \$138,974,020 in 1904. The average price of anthracite coal per long ton at the mine was \$2.35, as against \$2.50 in 1903, \$2.35 in 1902, \$2.05 in 1901, \$1.85 in 1900, and \$1.80 in 1899; and the average price per short ton for bituminous coal at the mine was \$1.10, as compared with \$1.24 in 1903 and with \$1.12 in 1902. The decrease in value of the bituminous coal output from 1903 was \$45,845,665, a combined decrease in value of coal of \$58,908,093 in 1904.

The loss of \$130,233,471 in the total value of our mineral production is due to losses in both metallic and nonmetallic products, the metallic products showing a decrease from \$624,318,008 in 1903 to \$541,466,796

in 1904, a loss of \$82,851,212, and the nonmetallic products showing a decrease from \$793,962,609 in 1903 to \$747,180,350 in 1904, a loss of \$46,782,259. To these products should be added estimated unspecified products, including molybdenum, bismuth, tungsten, and other mineral products, valued at \$400,000 (as against \$1,000,000 of unspecified products in 1903), making the total mineral production for 1904 \$1,289,047,146.

The manufacture of arsenious oxide, noted for the first time in the United States in the report for 1901, was continued in 1904, but again in decreased proportions as compared with 1902 and 1903.

Statistics of the production of sand for molding, building, engine, and furnace use, and for other purposes, were collected for the first time in 1904.

Included in the volume for 1904 is a brief report calling attention to peat in the United States and to its possibilities as a source of fuel.

Tin was produced commercially, though in small quantities, in South Carolina, South Dakota, and Alaska, and the mines were actively exploited during the year 1904.

In accordance with a provision in the appropriation for Mineral Resources of the United States for the fiscal year 1905-1906 a comprehensive investigation is in progress (November, 1905) to determine what minerals of economic value are contained in the black sands found in the placer mines of the United States. An invitation has been extended through the mails to all the placer miners in the United States to send samples of their heavy concentrates for examination. These have been tested as to their contents of precious metals, and their mineralogy has been exhaustively studied. Where it became evident that these sands contained useful minerals not already being utilized a competent geologist was sent to the deposit, and samples varying in size from 100 pounds to a carload were obtained and examined with concentrating machinery at Portland, Oreg. The results of this investigation will be published in the forthcoming volume of Mineral Resources of the United States for the calendar year 1905.

METALS.

Iron and steel.—Twenty States produced pig iron in 1904, as against 22 in 1903, 22 in 1902, 20 in 1901, and 21 in 1900 and 1899. The total production of pig iron in 1904 was 16,497,033 long tons, as against 18,009,252 long tons in 1903, 17,821,307 tons in 1902, 15,878,354 tons in 1901, 13,789,242 tons in 1900, 13,620,703 tons in 1899, 11,773,934 tons in 1898, and 9,652,680 tons in 1897. The production of 1904 shows a decrease in quantity of 1,512,219 long tons, or over 8 per cent, from the production of 1903, and a decrease in value from \$344,350,000 to \$233,025,000, amounting to \$111,325,000, or over 32 per cent. The average price per long ton of pig iron decreased from \$19.12 in 1903

to \$14.13 in 1904. The average prices per long ton in recent years have been as follows: 1902, \$20.92; 1901, \$15.25; 1900, \$18.85; 1899, \$18; 1897, \$9.85; 1896, \$10.47; 1895, \$11.14; 1894, \$9.75.

Iron ores.—The production of iron ores in 1904 amounted to 27,644,330 long tons, as compared with 35,019,308 long tons in 1903 and with 35,554,135 long tons in 1902, a loss in 1904 from 1903 of 7,374,978 long tons. The value at the mines of the ore mined in 1904 was \$43,186,741, a loss as compared with the 1903 value, \$66,328,415, of \$23,141,674. As in the five preceding years, the production of iron ores in the United States in 1904 was never equaled by that of any other country.

Manganese ores.—The production of manganese ores decreased from 11,995 long tons, valued at \$116,722, in 1901, to 7,477 long tons, valued at \$60,911, in 1902, and to 2,825 long tons, valued at \$25,335, in 1903, and increased in quantity to 3,146 long tons, valued at \$29,466, in 1904. The average price per ton in 1904 was \$9.37, as compared with \$8.97 in 1903, with \$8.15 in 1902, with \$9.73 in 1901, and with \$8.52 in 1900.

Gold.—The production of gold in 1904, as reported to the Survey, amounted to 3,910,729 fine ounces, as compared with 3,560,000 fine ounces in 1903, with 3,870,000 fine ounces in 1902, with 3,805,500 fine ounces in 1901, with 3,829,897 fine ounces in 1900, and with 3,437,210 fine ounces in 1899. The value was \$80,835,648, as compared with \$73,591,700 in 1903, with \$80,000,000 in 1902, with \$78,666,700 in 1901, with \$79,171,000 in 1900, and with \$71,053,409 in 1899.

Silver.—The coming value of the silver produced in 1904 was \$72,402,224, as compared with \$70,206,060 in 1903, with \$71,757,575 in 1902, with \$71,387,800 in 1901, and with \$74,533,495 in 1900. The production in 1904 was 55,999,864 fine ounces, as compared with 54,300,000 fine ounces in 1903, with 55,500,000 fine ounces in 1902, with 55,214,000 fine ounces in 1901, and with 57,647,000 fine ounces in 1900. The commercial value of the production in 1904 was \$32,035,378, as compared with \$29,322,000 in 1903, with \$29,415,000 in 1902, with \$33,128,400 in 1901, and with \$35,741,140 in 1900.

Copper.—The production of domestic copper increased from 698,044,517 pounds in 1903 to 812,537,267 pounds in 1904, an increase of 114,492,750 pounds, or about 16 per cent, in quantity, and it increased in value from \$91,506,006 in 1903 to \$105,629,845 in 1904, an increase of \$14,123,839, or about 15 per cent.

Lead.—The production of lead increased to 307,000 short tons in 1904 from 282,000 short tons in 1903. It was 270,000 short tons in 1902, 270,700 short tons in 1901, and 270,824 short tons in 1900. The value of the production in 1904 was \$26,402,000, as compared with \$23,520,000 in 1903, with \$22,140,000 in 1902, with \$23,280,200 in 1901, and with \$23,561,688 in 1900.

Zinc.—The production of zinc in 1904 showed an increase in quantity as compared with 1903, 1902, and 1901, the production being 186,702 short tons, as compared with 159,219 short tons in 1903, with 156,927 short tons in 1902, with 140,822 short tons in 1901, and with 123,886 short tons in 1900. The value of the zinc production in 1904 was \$18,670,200, as compared with \$16,717,995 in 1903, with \$14,625,596 in 1902, with \$11,265,760 in 1901, and with \$10,654,196 in 1900.

Aluminum.—The production of aluminum during 1904 was 8,600,000 pounds, valued at \$2,477,000, as compared with 7,500,000 pounds, valued at \$2,284,900, in 1903; with 7,300,000 pounds, valued at \$2,284,590, in 1902; with 7,150,000 pounds, valued at \$2,238,000, in 1901, and with 7,150,000 pounds, valued at \$1,920,000, in 1900.

Quicksilver.—The production of quicksilver during 1904 amounted to 34,570 flasks (of 76½ avoirdupois pounds net; 75 avoirdupois pounds net after June, 1904), as compared with 35,620 flasks in 1903, with 34,291 flasks in 1902, with 29,727 flasks in 1901, and with 28,317 flasks in 1900. The value of the quicksilver produced in 1904 was \$1,503,795, as compared with \$1,544,934 in 1903, with \$1,467,848 in 1902, with \$1,382,305 in 1901, and with \$1,302,586 in 1900. California, including Nevada, reported 29,234 flasks, as compared with 30,591 flasks in 1903, with 28,972 flasks in 1902, and with 26,720 flasks in 1901; and Texas reported 5,336 flasks, as against 5,029 flasks in 1903, 5,319 flasks in 1902, and 2,932 flasks in 1901.

Nickel.—The production of metallic nickel reported in 1904 was 24,000 pounds, as against a production of 114,200 pounds in 1903, of 5,748 pounds in 1902, of 6,700 pounds in 1901, of 9,715 pounds in 1900, and of 22,541 pounds in 1899. The value in 1904 was \$11,400, as against \$45,900 in 1903, \$2,701 in 1902, \$3,551 in 1901, \$3,886 in 1900, and \$8,566 in 1899. The imports of nickel in 1904 were valued at \$1,121,491, as compared with \$1,493,889 in 1903, with \$1,437,649 in 1902, with \$1,849,620 in 1901, and with \$1,183,884 in 1900.

Platinum.—The production of platinum from domestic ores in 1904 was 200 ounces, valued at \$4,160, as compared with 110 ounces, valued at \$2,080 (not including \$6,000 worth of platinum reported as contained in slimes obtained from the treatment of copper ores from the Rambler mine, Wyoming), produced in 1903; with 94 ounces, valued at \$1,814, in 1902; with 1,408 ounces, valued at \$27,526, in 1901; with 400 ounces, valued at \$2,500, in 1900, and with 300 ounces, valued at \$1,800, in 1899.

Antimony.—The total quantity of antimony obtained from all sources in 1904 was 3,057 short tons, valued at \$505,524, as compared with a total production for 1903 of 3,128 short tons, valued at \$548,433. No antimony was obtained from domestic ores during 1903. The antimony obtained from the smelting of foreign imported ores in 1904 amounted to 486 short tons, valued at \$61,926, and the antimony

obtained from hard lead produced from foreign and domestic lead ores was 2,571 short tons, valued at \$443,598, a total production for 1904 of 3,057 short tons, valued at \$505,524, as compared with 3,128 short tons, valued at \$548,433, in 1903; with 3,561 short tons, valued at \$634,506, in 1902, and with 2,639 short tons, valued at \$539,902, in 1901.

Bismuth.—The marketed production of bismuth ore in 1904 was 5,184 pounds, valued at \$314. There was no marketed production of bismuth ores in the United States during 1903 or 1902. The marketed output in 1901 was 318.6 short tons. The ore contained gold and silver, for which the producers were paid. As nearly as can be ascertained, the value of the output in 1901 was \$80 per ton, not including charges for transportation or treatment. The price of the refined metal is kept so low by the combination controlling the business that profitable mining of domestic ores is practically out of the question.

Tin.—There was no production of metallic tin in 1904; but about 159 short tons of concentrates were shipped from South Carolina, South Dakota, and Alaska to England, as against 20 short tons of concentrates shipped from South Carolina in 1903; value not given either in 1903 or in 1904.

FUELS.

Coal.—For the third time in the history of the United States the production of coal in 1904 reached a total of over 300,000,000 short tons, showing an actual output of 352,310,427 tons of 2,000 pounds, valued at \$444,816,288. Of this total the output of anthracite coal amounted to 65,318,490 long tons (equivalent to 73,156,709 short tons), which, as compared with the production of 66,613,454 long tons in 1903, was a decrease of 1,294,964 long tons, or almost 2 per cent. The value of anthracite coal at the mines in 1904 was \$138,974,020, as against \$152,036,448 in 1903, \$76,173,586 in 1902, and \$112,504,020 in 1901. The average value of the marketed coal sold during the year at the mines was \$2.35 per long ton, the value in 1903 having been \$2.50, in 1902, \$2.35, and in 1901, \$2.05.

The output of bituminous coal (which includes semianthracite and all semibituminous and lignite coals) amounted in 1904 to 279,153,718 short tons, valued at \$305,842,268, as compared with 282,749,348 short tons, valued at \$351,687,933, in 1903, with 260,216,844 short tons, valued at \$290,858,483, in 1902, and with 225,828,149 short tons, valued at \$236,422,049, in 1901. The decrease in the production of bituminous coal in 1904 from 1903 was therefore 3,595,630 short tons in quantity and \$45,845,665 in value. The average price per ton at the mines during 1904 was \$1.10, as against \$1.24 per ton in 1903, the highest price recorded by the Survey.

Coke.—The coke production of the United States in 1904, which included the output from 2,610 retort or by-product ovens, amounted

to 23,621,520 short tons, as compared with 25,274,281 short tons in 1903, with 25,401,730 short tons in 1902, with 21,795,883 short tons in 1901, and with 20,533,348 short tons in 1900. The decrease in quantity in 1904 from 1903 was 1,652,761 short tons, or about 6.5 per cent. The total value was \$46,026,183, a loss from the 1903 value, \$66,498,664, of \$20,472,481. It should be borne in mind that the value for 1903 was in part the abnormal result of the coal strike in 1902.

Gas, coke, tar, and ammonia.—The aggregate value of all the products obtained from the distillation of coal in gas works and retort ovens in 1904 was \$51,157,736, as compared with \$47,830,600 in 1903 and with \$43,869,440 in 1902.

Petroleum.—The total production of crude petroleum in the United States in 1904 was 117,063,421 barrels, as against 100,461,337 barrels in 1903, 88,766,916 barrels in 1902, and 69,389,194 barrels in 1901, an increase of 16,602,084 barrels, or 16.53 per cent, over the production of 1903, and of 31.88 per cent over that of 1902. The increase in 1904 came from California, Kansas and Indian Territory and Oklahoma, Texas, Indiana, Louisiana, and Kentucky and Tennessee, in the order named. In round numbers, the gains in 1904 over 1903 were as follows: California, 5,300,000 barrels; Kansas and Indian Territory and Oklahoma, 4,500,000 barrels; Texas, 4,300,000 barrels; Indiana, 2,200,000 barrels; Louisiana, 2,000,000 barrels; Kentucky and Tennessee, 500,000 barrels. The largest decrease in production in 1904, as compared with 1903, was in Ohio, which showed a decrease of about 1,600,000 barrels, Pennsylvania and New York 280,000 barrels, and West Virginia 260,000 barrels. It will be observed that the greatest gains were in the South and West and in the Lima-Indiana field, and that, relatively, the Appalachian field lost heavily. The value of crude petroleum produced during 1904 was \$101,170,466, or 86.42 cents per barrel, as against \$94,694,050, or 94.26 cents per barrel, in 1903, and \$71,178,910, or 80.19 cents per barrel, in 1902.

Natural gas.—The value of the natural gas produced in 1904 was \$38,496,760, as compared with \$35,807,860 in 1903, with \$30,867,863 in 1902, with \$27,066,077 in 1901, with \$23,698,674 in 1900, and with \$20,074,873 in 1899—a gain of 7.51 per cent in 1904 over 1903.

STRUCTURAL MATERIALS.

Stone.—The value of all kinds of stone produced in the United States during 1904 amounted to \$74,200,361, as compared with \$72,945,908 in 1903, with \$69,830,351 in 1902, with \$60,275,762 in 1901, with \$48,008,739 in 1900, and with \$48,785,875 in 1899.

Clay products.—The activity in all branches of the clay-working industries noted in the reports as true of 1899, 1900, 1901, 1902, and 1903 diminished very slightly during 1904. The value of all clay products, as reported to this office in 1904 was \$131,023,248, as against

\$131,062,421 in 1903, \$122,169,531 in 1902, \$110,211,587 in 1901, and \$96,212,345 in 1900. The brick and tile products in 1904 were valued at \$105,864,978, as against \$105,626,369 in 1903, \$98,042,078 in 1902, \$87,747,727 in 1901, and \$76,413,775 in 1900. The pottery products were valued in 1904 at \$25,158,270, as against \$25,436,052 in 1903, \$24,127,453 in 1902, \$22,463,860 in 1901, and \$19,798,570 in 1900.

The commercial production of clay mined and sold by those not manufacturing the product themselves in 1904 was valued at \$2,320,162, as compared with \$2,594,042 in 1903, with \$2,061,072 in 1902, with \$2,576,932 in 1901, and with \$1,840,377 in 1900. The crude brick clay was valued at \$13,000,000.

Cement.—The total production of hydraulic cement in the United States in 1904 was 31,675,257 barrels, valued at \$26,031,920, as compared with 29,899,140 barrels, valued at \$31,931,341, in 1903; with 25,753,504 barrels, valued at \$25,366,380, in 1902; with 20,068,737 barrels, valued at \$15,786,789, in 1901, and with 17,231,150 barrels, valued at \$13,283,581, in 1900. The Portland cement production in 1904 was 26,505,881 barrels, valued at \$23,355,119, as compared with 22,342,973 barrels, valued at \$27,713,319, in 1903; with 17,230,644 barrels, valued at \$20,864,078, in 1902; with 12,711,225 barrels, valued at \$12,532,360, in 1901, and with 8,482,020 barrels, valued at \$9,280,525, in 1900—an increase in quantity in 1904 as compared with 1903 of 4,162,908 barrels, and a decrease in value of \$4,358,200. The production of natural-rock cement in 1904 was 4,866,331 barrels, valued at \$2,450,150, as compared with 7,030,271 barrels, valued at \$3,675,520, in 1903; with 8,044,305 barrels, valued at \$4,076,630, in 1902; with 7,084,823 barrels, valued at \$3,056,278, in 1901, and with 8,383,519 barrels, valued at \$3,728,848, in 1900—a decrease in quantity in 1904 of 2,163,940 barrels, and in value of \$1,225,370. The production of slag cement in 1904 amounted to 303,045 barrels, valued at \$226,651, as against 525,896 barrels, valued at \$542,502, in 1903.

ABRASIVE MATERIALS.

Carborundum.—The production of carborundum in 1904 was 7,060,380 pounds, as compared with 4,759,890 pounds in 1903, with 3,741,500 pounds in 1902, and with 3,838,175 pounds in 1901. The value of the carborundum varies from 8 to 10 cents a pound.

Corundum and emery.—The combined production of corundum and emery in 1904 amounted to 1,932 short tons, valued at \$57,235, as against 2,542 short tons, valued at \$64,102, in 1903; 4,251 short tons, valued at \$104,605, in 1902, and 4,305 short tons, valued at \$146,040, in 1901.

Crushed steel.—The production of crushed steel in 1904 was 790,000 pounds, as against 755,000 pounds in 1903, 735,000 pounds in 1902, and 690,000 pounds in 1901.

Crystalline quartz.—In 1904 the production of crystalline quartz included under abrasives amounted to 31,924 short tons, valued at \$74,600, as against 8,938 short tons, valued at \$76,908, in 1903; 15,104 short tons, valued at \$84,335, in 1902, and 14,050 short tons, valued at \$41,500, in 1901.

Garnet.—The production of abrasive garnet in the United States during 1904 amounted to 3,854 short tons, valued at \$117,581, as against 3,950 short tons, valued at \$132,500, in 1903; 3,926 short tons, valued at \$132,820, in 1902, and 4,444 short tons, valued at \$158,100, in 1901. The average price for the 1904 production is reported as \$30.51 per ton.

Grindstones.—The total value of all kinds of grindstones produced during 1904 was \$881,527, as against \$721,446 in 1903, \$667,431 in 1902, and \$580,703 in 1901. The production of 1904 was the largest on record for any year. It should be remembered, however, that the price, which was from \$15 to \$18 per ton, has decreased to from \$8 to \$11 per ton, and that therefore the tonnage of grindstones used has correspondingly increased within the last few years. The imports for 1904 amounted in value to \$93,152, as against \$85,705 in 1903, \$76,906 in 1902, and \$88,871 in 1901.

Infusorial earth and tripoli.—In 1904 the production of infusorial earth and tripoli amounted to 6,274 short tons, valued at \$44,164, as against 9,219 short tons, valued at \$76,273, in 1903; 5,665 short tons, valued at \$53,244, in 1902, and 4,020 short tons, valued at \$52,950, in 1901.

Millstones and buhrstones.—The value of the production of millstones and buhrstones in 1904 was \$37,338, as against \$52,552 in 1903, \$59,808 in 1902, and \$57,179 in 1901. From 1886 to 1894 there was a very large decrease—from \$140,000 to \$13,887—in the production of buhrstones. From 1894 to 1902 there was a gradual increase in the production, but there was a decrease in both 1903 and 1904.

Oilstones and whetstones.—There was a decided decrease in the commercial domestic production of oilstones and whetstones during 1904, the value falling from \$366,857 in 1903 to \$188,985 in 1904. The production was valued at \$221,762 in 1902 and \$158,300 in 1901.

Pumice.—The production of pumice amounted in 1904 to 1,530 short tons, valued at \$5,421, as against 885 short tons, valued at \$2,665, in 1903, and 700 short tons, valued at \$2,750, in 1902.

CHEMICAL MATERIALS.

Arsenious oxide.—The domestic production of arsenious oxide (white arsenic) in 1904 was 36 short tons, valued at \$2,185, as compared with 611 short tons, valued at \$36,691, in 1903; with 1,353 short tons, valued at \$81,180, in 1902, and with 300 short tons, valued at \$18,000, in 1901.

Borax.—The reported returns for 1904 gave an aggregate production of crude borax of 45,647 short tons, valued at \$698,810, as com-

pared with 34,430 short tons, valued at \$661,400, in 1903, and with 17,404 short tons of refined and 2,600 short tons of crude, valued at \$2,538,614, in 1902. The production during 1901 was 17,887 short tons of crude borax and 5,344 short tons of refined borax, with a total value of \$1,012,118.

Bromine.—The production of bromine in 1904, including the amount of bromine contained in potassium bromide, amounted to 897,100 pounds, valued at \$269,130, as compared with 598,500 pounds, valued at \$167,580, in 1903; with 513,893 pounds, valued at \$128,472, in 1902, and with 552,043 pounds, valued at \$154,572, in 1901.

Fluorspar.—The total commercial production of fluorspar in 1904 was 36,452 short tons, valued at \$234,755, as compared with 42,523 short tons, valued at \$213,617, in 1903; with 48,018 short tons, valued at \$271,832, in 1902, and with 19,586 short tons, valued at \$113,803, in 1901—a decrease in quantity in 1904 of 6,071 short tons, but an increase of \$21,138 in value over 1903. The average price of crude fluorspar in 1904 was reported as \$4.97, or 69 cents per ton more than the 1903 price, \$4.28, but 22 cents less than the 1902 price, \$5.19; and the average price of ground fluorspar in 1904 was \$8.44 per ton, a decrease of \$1.55 from the 1903 price, \$9.99, and of \$1.54 from the 1902 price, \$9.98.

Gypsum.—The output of crude gypsum in 1904 was 940,917 short tons, valued in its first marketable condition at \$2,784,325, as compared with 1,041,704 short tons, valued in its first marketable condition at \$3,792,943, in 1903; with 816,478 short tons, valued at \$2,089,341, in 1902; with 633,791 short tons, valued at \$1,506,641, in 1901, and with 594,462 short tons, valued at \$1,627,203, in 1900. The production in 1899 was 486,235 short tons, and in 1898 it was 291,638 short tons. The greatly increased production of late years is attributable to the largely increased use of wall plaster and of plaster of Paris in large modern buildings and in the manufacture of staff for temporary buildings.

Marls.—The production of marls in the United States in 1904 was 18,989 short tons, valued at \$13,145; in 1903 it was 34,211 short tons, valued at \$22,521, and in 1902 it was 12,439 short tons, valued at \$12,741.

Phosphate rock.—The total commercial production of phosphate rock reported to the Survey in 1904 amounted to 1,874,428 long tons, valued at \$6,873,625, as compared with 1,581,576 long tons, valued at \$5,319,294, in 1903; with 1,490,314 long tons, valued at \$4,693,444, in 1902, and with 1,483,723 long tons, valued at \$5,316,403, in 1901—an increase in quantity in 1904 over 1903 of 292,852 tons, and in value of \$1,554,331. The total quantity of phosphate rock reported as mined during 1904 was 1,991,169 long tons, as against 1,618,799 long tons in 1903 and 1,499,617 long tons in 1902.

Salt.—The salt product includes salt in the form of brine used in large quantities for the manufacture of soda ash, sodium bicarbonate, caustic soda, and other sodium salts. The domestic production of salt in 1904 amounted to 22,030,002 barrels of 280 pounds, valued at \$6,021,222, as compared with 18,968,089 barrels, valued at \$5,286,988, in 1903; with 23,849,231 barrels, valued at \$5,668,636, in 1902; with 20,566,661 barrels, valued at \$6,617,449, in 1901, and with 20,869,342 barrels, valued at \$6,944,603, in 1900.

Sulphur and pyrite.—The combined domestic production in 1904 of sulphur and of pyrite for the manufacture of sulphuric acid amounted to 333,542 long tons, valued at \$3,460,863, a considerable increase as compared with 233,127 long tons, valued at \$1,109,818, produced in 1903; with 207,874 long tons, valued at \$947,089, in 1902, and with 241,691 long tons, valued at \$1,257,879, in 1901.

PIGMENTS.

Barytes.—The production of crude barytes in 1904 was 65,727 short tons, valued at \$174,958, as compared with 50,397 short tons, valued at \$152,150, in 1903; with 61,668 short tons, valued at \$203,154, in 1902, and with 49,070 short tons, valued at \$157,844, in 1901.

Cobalt oxide.—The production of cobalt oxide reported in 1904 was 22,000 pounds, valued at \$42,600; in 1903 it was 120,000 pounds, valued at \$228,000 (not including the value of 60 short tons of cobalt ore); in 1902 it was 3,730 pounds, valued at \$6,714, and in 1901 it was 13,360 pounds, valued at \$24,048. All the cobalt oxide was obtained as a by-product in smelting lead ores at Mine La Motte, Mo.

Mineral paints.—The commercial production of mineral paints in 1904 amounted to 59,785 short tons, valued at \$631,171, as compared with 63,687 short tons, valued at \$635,557, in 1903; with 73,049 short tons, valued at \$944,332, in 1902, and with 61,460 short tons, valued at \$789,962, in 1901.

Zinc white.—The production of zinc white in 1904 amounted to 63,363 short tons, valued at \$4,808,482, as compared with 62,962 short tons, valued at \$4,801,718, in 1903; with 52,645 short tons, valued at \$4,016,499, in 1902, and with 46,500 short tons, valued at \$3,720,000, in 1901.

MISCELLANEOUS.

Asbestos.—The asbestos commercially produced in the United States in 1904 was obtained chiefly from deposits in Georgia and Virginia, with a small quantity from Massachusetts. The total commercial production was 1,480 short tons, valued at \$25,740, as against 887 short tons, valued at \$16,760, in 1903, and 1,005 short tons, valued at \$16,200, in 1902.

Asphaltum.—Under this title are included the various bitumens or hydrocarbons not discussed under the heading "petroleum" in the

volume on mineral resources. The commercial production in 1904 was 81,572 short tons, valued at \$903,741, as against 101,255 short tons, valued at \$1,005,446, in 1903, 105,458 short tons, valued at \$765,048, in 1902, and 63,134 short tons, valued at \$555,335, in 1901.

Bauxite.—In 1904 the production of bauxite was 47,661 long tons, valued at \$235,704, as compared with 48,087 long tons, valued at \$171,306, in 1903; with 27,322 long tons, valued at \$120,366, in 1902, and with 18,905 long tons, valued at \$79,914, in 1901.

Chromic iron ore.—California was the only State producing chromite during 1904, the quantity being 123 long tons, valued at \$1,845, as compared with 150 long tons, valued at \$2,250, in 1903; with 315 long tons, valued at \$4,567, in 1902, and with 368 long tons, valued at \$5,790, in 1901.

Feldspar.—The production of feldspar in 1904 was 45,188 short tons, valued at \$266,326, as against 41,891 short tons, valued at \$256,733, in 1903; 45,287 short tons, valued at \$250,424, in 1902, and 34,741 short tons, valued at \$220,422, in 1901—an increase in 1904 over 1903 of 3,297 tons in quantity and of \$9,593 in value.

Fibrous talc.—This variety of talc or soapstone occurs in but one locality in the United States—Gouverneur, St. Lawrence County, N. Y. It is used principally as makeweight in the manufacture of paper. In 1904 the production was 64,005 short tons, valued at \$507,400, as against 60,230 short tons, valued at \$421,600, in 1903; 71,100 short tons, valued at \$615,350, in 1902; and 69,200 short tons, valued at \$483,600, in 1901.

Flint.—The production of flint in 1904 was 52,270 short tons, valued at \$100,590, as against 55,233 short tons, valued at \$156,947, in 1903; 36,365 short tons, valued at \$144,209, in 1902; and 34,420 short tons, valued at \$149,297, in 1901.

Fuller's earth.—As reported to the Survey, the production of fuller's earth in 1904 was 29,480 short tons, valued at \$168,500, as compared with 20,693 short tons, valued at \$190,277, in 1903, with 11,492 short tons, valued at \$98,144, in 1902, and with 14,112 short tons, valued at \$96,835, in 1901.

Glass sand.—The production of glass sand in 1904 was 858,719 short tons, valued at \$796,492, as against 823,044 short tons, valued at \$855,828, in 1903, and 943,135 short tons, valued at \$807,797, in 1902.

Graphite.—The commercial production of crystalline graphite during 1904 amounted to 5,681,177 pounds, valued at \$238,447, as compared with 4,538,155 pounds, valued at \$154,170, in 1903; with 3,936,824 pounds, valued at \$126,144, in 1902; with 3,967,612 pounds, valued at \$135,914, in 1901, and with 5,507,855 pounds, valued at \$178,761, in 1900. The production of amorphous graphite in 1904 was 19,115 short tons, valued at \$102,925, as compared with 16,591 short tons, valued at \$71,384, in 1903; with 4,739 short tons, valued at

\$55,964, in 1902; with 809 short tons, valued at \$31,800, in 1901; and with 611 short tons, valued at \$18,818, in 1900. The production of artificial graphite in 1904 was 3,248,000 pounds, valued at \$217,790, the average price being 6.71 cents per pound, as compared with 2,620,000 pounds, valued at \$178,670, in 1903, when the average price was 6.82 cents per pound, and with 2,358,828 pounds, valued at \$110,700 in 1902, when the average price was 4.70 cents per pound.

Limestone for iron flux.—The quantity of limestone used for fluxing in blast furnaces in 1904 was 10,657,038 long tons, valued at \$4,702,768, as compared with 12,029,719 long tons, valued at \$5,423,732, in 1903; with 12,139,248 long tons, valued at \$5,271,252, in 1902, and with 8,540,168 long tons, valued at \$4,659,836, in 1901, the decrease in 1904 being due to idleness of furnaces during the year.

Lithium minerals.—The production of lithium minerals in 1904 was 577 short tons, valued at \$5,155, a decrease of 578 short tons in quantity and of \$18,270 in value from the 1903 production of 1,155 short tons, valued at \$23,425. Of this 1904 production the greater part was spodumene from South Dakota.

Magnesite.—The production of magnesite in the United States continues to be limited to California. During the year 1904 the commercial production reported was 2,850 short tons, valued at \$9,298, as compared with 3,744 short tons, valued at \$10,595, in 1903, and with 2,830 short tons, valued at \$8,490, in 1902.

Mica.—The total production of mica in 1904 was 668,358 pounds of sheet mica, valued at \$109,462, and 1,096 short tons of scrap mica, valued at \$10,854, as against 619,600 pounds of sheet mica, valued at \$118,088, and 1,659 short tons of scrap mica, valued at \$25,040, produced in 1903, and against a total value of \$118,849 for the production of 1902.

Mineral waters.—The total production of mineral waters in 1904 was 67,718,500 gallons, valued at \$10,398,450, as compared with 51,242,757 gallons, valued at \$9,041,078, in 1903; with 64,859,451 gallons, valued at \$8,793,761, in 1902, and with 55,771,188 gallons, valued at \$7,586,962, in 1901.

Molybdenum.—The commercial production of molybdenum in 1904 was 14.5 short tons of concentrates, valued at \$2,175, as against 795 short tons of concentrates, valued at \$60,865, in 1903. The value of molybdenum ores fluctuates very greatly.

Monazite and zircon.—The production of monazite is confined exclusively to North Carolina and South Carolina, by far the larger quantity being obtained from the former State. In 1904 the production amounted to 745,999 pounds (including small quantities of zircon, columbite, and gadolinite), valued at \$85,038, as compared with 865,000 pounds, valued at \$65,200 (including 3,000 pounds of zircon, valued at \$570), produced in 1903; with 802,000 pounds of monazite, valued at

\$64,160, in 1902, and with 748,736 pounds, valued at \$59,262, in 1901—a decrease in 1904 of 119,001 pounds in quantity, but an increase in value of \$19,838, as compared with 1903.

Peat.—The production of peat in 1904 is estimated as amounting to about 1,200 short tons, valued at \$4,200.

Potassium salts.—There was no production of potassium salts in the United States in 1904; the imports amounted to 216,182,603 pounds, valued at \$3,651,808.

Precious stones.—The value of the gems and precious stones found in the United States in 1904 was \$324,300, as against \$307,900 in 1903, \$328,450 in 1902, and \$289,050 in 1901. There has been a great advance in the lapidary industry in the United States since 1894. The fact that larger establishments have been formed, which are able to purchase the rough diamonds in greater quantities, has placed our American diamond cutters in a position equal to that held by the cutters of Amsterdam, Antwerp, and Paris. The cutting of our native gems has also grown to the proportions of an industry, notably in the case of the beryls and the amethysts found in North Carolina and Connecticut; the turquoises from New Mexico, Arizona, Nevada, and California; the fine-colored and deep-blue sapphires found in Montana; the colored tourmalines of San Joaquin County, Cal.; the chrysoprases from Visalia, Tulare County, Cal., the garnets of Arizona and New Mexico, and the pale-purple garnets of North Carolina.

Rutile.—Rutile to the value of \$7,000 was reported in 1904.

Sands, molding, building, engine, etc.—The production of sands for molding, building, engine, furnace, and other purposes reported in 1904 was 9,821,009 short tons, valued at \$4,951,607.

Talc and soapstone.—Exclusive of the production of fibrous talc from Gouverneur, N. Y., the production of talc and soapstone in 1904 amounted to 27,184 short tons, valued at \$433,331, as compared with 26,671 short tons, valued at \$418,460, in 1903; with 26,854 short tons, valued at \$525,157, in 1902; with 28,643 short tons, valued at \$424,888, in 1901, and with 27,943 short tons, valued at \$383,541, in 1900.

Tungsten.—The commercial production of concentrated tungsten ores during 1904 amounted to 740 short tons, valued at \$184,000, as against 292 short tons, valued at \$43,639, in 1903, and 184 short tons in 1902, of which not more than a few tons were sold. In 1901 the production amounted to 179 tons of concentrated ore, valued at \$27,720.

Uranium and vanadium.—The production of uranium and vanadium minerals in 1904, as reported to the Survey, amounted to about 45 short tons of crude and concentrated ore, valued at \$10,600, as against 30 short tons of concentrates, equivalent to about 19 short tons of metal, valued at \$5,625, in 1903, and 3,810 short tons of crude ore, valued at \$48,125, in 1902.

Mineral products of the United

Product.		1903.	
		Quantity.	Value.
METALLIC.			
1	Pig iron (spot value).....long tons..	18,009,252	\$344,350,000
2	Silver, coining value.....troy ounces..	54,300,000	70,206,060
3	Gold, coining value.....do.....	3,560,000	73,591,700
4	Copper, value at New York City.....pounds..	698,044,517	91,506,006
5	Lead, value at New York City.....short tons..	282,000	23,520,000
6	Zinc, value at New York City.....do.....	159,219	16,717,995
7	Quicksilver, value at San Francisco.....a flasks..	35,620	1,544,934
8	Aluminum, value at Pittsburg.....pounds..	7,500,000	2,284,900
9	Antimony, value at San Francisco.....short tons..	3,128	548,433
10	Nickel, value at Philadelphia.....pounds..	114,200	45,900
11	Tin.....do.....	(c)	.....
12	Platinum, value (crude) at San Francisco.....troy ounces..	110	2,080
13	Total value of metallic products.....	.....	624,318,008
NONMETALLIC (spot values).			
14	Bituminous coal.....short tons..	282,749,348	351,687,933
15	Pennsylvania anthracite.....long tons..	66,613,454	152,036,448
16	Natural gas.....	.....	35,807,860
17	Petroleum.....barrels.....	100,461,337	94,694,050
18	Brick clay.....	.....	15,000,000
19	Cement.....barrels.....	29,899,140	31,931,341
20	Stone.....	.....	72,945,908
21	Corundum and emery.....short tons..	2,542	64,102
22	Crystalline quartz.....do.....	8,938	76,908
23	Garnet for abrasive purposes.....do.....	3,950	132,500
24	Grindstones.....	.....	721,446
25	Infusorial earth and tripoli.....short tons..	9,219	76,273
26	Millstones.....	.....	52,552
27	Oilstones, etc.....	.....	366,857
28	Arsenious oxide.....short tons..	611	36,691
29	Borax (crude).....do.....	34,430	661,400
30	Bromine.....do.....	598,500	167,580
31	Fluorspar.....short tons..	42,523	213,617
32	Gypsum.....do.....	1,041,704	3,792,943
33	Lithium minerals.....do.....	1,155	23,425
34	Marls.....do.....	34,211	22,521
35	Phosphate rock.....long tons..	1,581,576	5,319,294
36	Pyrite.....do.....	233,127	1,109,818
37	Sulphur.....do.....	.....	.....
38	Salt.....barrels.....	18,968,089	5,286,988
39	Barytes (crude).....short tons..	50,397	152,150
40	Cobalt oxide.....pounds..	120,000	228,000
41	Mineral paints.....short tons..	63,687	635,557
42	Zinc white.....do.....	62,962	4,801,718
43	Asbestos.....short tons..	887	16,760
44	Asphaltum.....do.....	101,255	1,005,446
45	Bauxite.....long tons..	48,087	171,306
46	Chromic iron ore.....do.....	150	2,250
47	Clay (all other than brick).....short tons..	1,641,835	2,594,042
48	Feldspar.....do.....	41,891	256,733
49	Fibrous talc.....do.....	60,230	421,600
50	Flint.....do.....	55,233	156,947
51	Fuller's earth.....do.....	20,693	190,277
52	Glass sand.....do.....	823,044	855,828
53	Graphite {Crystalline.....pounds..	4,538,155	225,554
	Amorphous.....short tons..	16,591	
54	Magnesite.....do.....	3,744	10,595
55	Manganese ore.....long tons..	2,825	25,335
56	Mica {Sheet.....pounds..	619,000	118,088
	{Scrap.....short tons..	1,659	25,040
57	Mineral waters.....gallons sold..	51,242,757	9,041,078
58	Monazite.....pounds..	862,000	64,630
59	Zircon.....do.....	3,000	570
60	Precious stones.....	.....	307,900
61	Pumice stone.....short tons..	885	2,665
62	Rutile.....pounds..	.....	.....
63	Sand, molding, building, etc.....short tons..	.....	.....
64	Talc and soapstone.....do.....	26,671	418,460
65	Uranium and vanadium.....do.....	30	6,625
66	Total value of nonmetallic mineral products.....	.....	793,962,609
67	Total value of metallic products.....	.....	624,318,008
68	Estimated value of mineral products unspecified.....	.....	1,000,000
69	Grand total.....	.....	1,419,280,617

^a Of 76½ avoirdupois pounds net; 75 avoirdupois pounds net after June, 1904.
^b Consumption in 1904.

States in 1903 and 1904.

1904.		Increase (+) or decrease (-) in 1904.		Per cent of increase (+) or decrease (-).		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
16,497,033	\$233,025,000	- 1,512,219	-\$111,325,000	- 8.40	- 32.33	1
55,999,864	72,402,224	+ 1,699,864	+ 2,196,164	+ 3.13	+ 3.13	2
3,910,729	80,855,648	+ 350,729	+ 7,243,948	+ 9.85	+ 9.85	3
812,537,267	105,629,845	+114,492,750	+ 14,123,839	+ 16.40	+ 15.43	4
307,000	26,402,000	+ 25,000	+ 2,882,000	+ 8.87	+ 12.25	5
186,702	18,670,200	+ 27,483	+ 1,952,205	+ 17.26	+ 11.68	6
34,570	1,503,795	- 1,050	- 41,139	- 2.95	- 2.66	7
b 8,600,000	b 2,477,000	+ 1,100,000	+ 192,100	+ 14.67	+ 8.41	8
3,057	505,524	- 71	- 42,909	- 2.27	- 7.82	9
24,000	11,400	- 90,200	- 34,500	- 78.98	- 75.16	10
(c)						11
200	4,160	+ 90	+ 2,080	+ 81.82	+100.00	12
	541,466,796		- 82,851,212		- 13.27	13
279,153,718	305,842,268	- 3,595,630	- 45,845,665	- 1.27	- 13.04	14
65,318,490	138,974,020	- 1,294,964	- 13,062,428	- 1.94	- 8.59	15
	38,496,760		+ 2,688,900		+ 7.51	16
117,063,421	101,170,466	+ 16,602,084	+ 6,476,416	+ 16.53	+ 6.84	17
	13,000,000		- 2,000,000		- 13.33	18
31,675,257	26,031,920	+ 1,776,117	+ 5,899,421	+ 5.94	- 18.48	19
	74,200,361		+ 1,254,453		+ 1.72	20
1,932	57,235	- 610	- 6,867	- 24.00	- 10.71	21
31,924	74,600	+ 22,986	+ 2,308	+257.17	- 3.00	22
3,854	117,581	- 96	- 14,919	- 2.43	- 11.26	23
	881,527		+ 160,081		+ 22.19	24
6,274	44,164	- 2,945	- 32,109	- 31.94	- 42.10	25
	37,338		- 15,214		- 28.95	26
	188,985		- 177,872		- 48.49	27
36	2,185	- 575	- 34,506	- 94.11	- 94.04	28
45,647	698,810	+ 11,217	+ 37,410	+ 32.58	+ 5.66	29
897,100	269,130	+ 298,600	+ 101,550	+ 49.89	+ 60.60	30
36,452	234,755	- 6,071	- 21,138	- 14.28	+ 9.90	31
940,917	2,784,325	- 100,787	- 1,008,618	- 9.68	- 26.59	32
577	5,155	- 578	- 18,270	- 50.04	- 77.99	33
18,989	13,145	- 15,222	- 9,376	- 44.49	- 41.63	34
1,874,428	6,873,625	+ 292,852	+ 1,554,331	+ 18.52	+ 29.22	35
333,542	3,460,863	+ 100,415	+ 2,351,045	+ 43.07	+211.84	36
22,030,002	6,021,222	+ 3,061,913	+ 734,234	+ 16.14	+ 13.89	37
65,727	174,958	+ 15,330	+ 22,808	+ 30.42	+ 14.99	38
22,000	42,600	- 98,000	- 185,400	- 81.67	- 81.32	39
59,785	691,171	- 3,902	- 4,386	- 6.13	- .69	40
63,363	4,808,482	+ 401	+ 6,764	+ .64	+ .14	41
1,480	25,740	+ 593	+ 8,980	+ 66.85	+ 53.58	42
81,572	903,741	- 19,683	- 101,705	- 19.44	- 10.12	43
47,661	235,704	- 426	- 64,898	- .89	+ 37.59	44
123	1,845	- 27	- 405	- 18.00	- 18.00	45
1,508,752	2,320,162	- 133,083	- 273,880	- 8.11	- 10.56	46
45,188	266,326	+ 3,297	+ 9,593	+ 7.87	+ 3.74	47
64,005	507,400	+ 3,775	+ 85,800	+ 6.27	+ 20.35	48
52,270	100,590	- 2,963	- 56,357	- 5.36	- 35.91	49
29,480	168,500	+ 8,787	+ 21,777	+ 42.46	- 11.44	50
858,719	796,492	+ 35,675	+ 59,336	+ 4.33	- 6.93	51
5,681,177		+ 1,143,022		+ 25.19		52
19,115	341,372	+ 2,524	+ 115,818	+ 15.21	+ 51.35	53
2,850	9,298	- 894	- 1,297	- 23.88	- 12.24	54
3,146	29,466	+ 321	+ 4,131	+ 11.36	+ 16.31	55
668,358	109,462	+ 48,758	+ 8,626	+ 7.87	- 7.80	56
1,096	10,854	- 593	- 14,186	- 33.94	- 56.65	57
67,718,500	10,398,450	+ 16,475,743	+ 1,357,372	+ 32.15	+ 15.01	58
745,999	85,038	- 119,001	- 19,838	- 13.76	+ 30.43	59
	324,300		+ 16,400		+ 5.33	60
1,530	5,421	+ 645	+ 2,756	+ 72.88	+103.41	61
	7,000		+ 7,000			62
	4,951,607		+ 4,951,607			63
27,184	433,331	+ 513	+ 14,871	+ 1.92	+ 3.55	64
45	10,600	+ 15	+ 4,975	+ 50.00	+ 88.44	65
	747,180,350		- 46,782,259		- 5.89	66
	541,466,796		- 82,851,212		- 13.27	67
	400,000		- 600,000		- 60.00	68
	1,289,047,146		- 130,233,471		- 9.18	69

c No metallic tin; concentrates shipped.

d Sulphur included under pyrite since 1901.

Mineral products of the United States

		1880.	
Product.		Quantity.	Value.
METALLIC.			
1	Pig iron, value at Philadelphia.....long tons..	3,375,912	\$89,315,569
2	Silver, coining value.....troy ounces..	30,320,000	39,200,000
3	Gold, coining value.....do.....	1,741,500	36,000,000
4	Copper, value at New York City.....pounds..	60,480,000	11,491,200
5	Lead, value at New York City.....short tons..	97,825	9,782,500
6	Zinc, value at New York City.....do.....	23,239	2,277,432
7	Quicksilver, value at San Francisco.....flasks..	59,926	1,797,780
8	Nickel, value at Philadelphia.....pounds..	233,893	257,282
9	Aluminum, value at Pittsburg.....do.....		
10	Antimony, value at San Francisco.....short tons..	50	10,000
11	Platinum (crude), value at San Francisco.....troy ounces..	100	400
12	Total value of metallic products.....		190,132,163
NONMETALLIC (SPOT VALUES).			
13	Bituminous coal.....short tons..	38,242,641	53,443,718
14	Pennsylvania anthracite.....long tons..	25,580,189	42,196,678
15	Stone.....		18,356,055
16	Petroleum.....barrels..	26,286,123	24,183,233
17	Lime.....do.....	28,000,000	19,000,000
18	Natural gas.....		
19	Cement.....barrels..	2,072,943	1,852,707
20	Salt.....do.....	5,961,060	4,829,566
21	Phosphate rock.....long tons..	211,377	1,123,823
22	Limestone for iron flux.....do.....	4,500,000	3,800,000
23	Mineral waters.....gallons sold..	2,000,000	500,000
24	Zinc white.....short tons..	10,107	763,738
25	Potters' clay.....do.....	28,877	200,457
26	Mineral paints.....do.....	3,604	135,840
27	Borax.....pounds..	3,692,443	277,233
28	Gypsum.....short tons..	90,000	400,000
29	Grindstones.....		500,000
30	Fibrous talc.....short tons..	4,210	54,730
31	Pyrite.....long tons..	2,000	5,000
32	Soapstone.....short tons..	8,441	66,665
33	Manganese ore.....long tons..	5,761	86,415
34	Asphaltum.....short tons..	444	4,440
35	Precious stones.....		100,000
36	Bromine.....pounds..	404,690	114,752
37	Corundum.....short tons..	1,044	29,280
38	Barytes (crude).....do.....	20,000	80,000
39	Graphite.....pounds..		49,800
40	Millstones.....		200,000
41	Oilstones, etc. a.....pounds..	420,000	8,000
42	Marls.....short tons..	1,000,000	500,000
43	Flint.....long tons..	20,000	80,000
44	Fluorspar.....short tons..	4,000	16,000
45	Chromic iron ore.....long tons..	2,288	27,808
46	Infusorial earth.....short tons..	1,833	45,660
47	Feldspar.....long tons..	12,600	60,000
48	Mica.....pounds..	81,669	127,825
49	Cobalt oxide.....do.....	7,251	24,000
50	Slate ground as a pigment.....short tons..	1,000	10,000
51	Sulphur.....do.....	600	21,000
52	Asbestos.....do.....	150	4,312
53	Rutile.....pounds..	100	400
54	Lithographic stone.....short tons..		
55	Total value of nonmetallic mineral products.....		173,279,135
56	Total value of metallic products.....		190,132,163
57	Estimated value of mineral products unspecified.....		6,000,000
58	Grand total.....		369,411,298

a Prior to 1889 quantity and value are for rough stone quarried; since 1890 they are for finished product.

SUMMARY.

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for the calendar years 1880-1904.

1881.		1882.		1883.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
4,144,254	\$87,029,334	4,623,323	\$106,336,429	4,595,510	\$91,910,200	1
33,077,300	43,000,000	36,197,695	46,800,000	35,733,622	46,200,000	2
1,676,300	34,700,000	1,572,186	32,500,000	1,451,249	30,000,000	3
71,680,000	12,175,600	91,646,232	16,038,091	117,151,795	18,064,807	4
117,085	11,240,160	132,890	12,624,550	143,957	12,322,719	5
26,800	2,680,000	33,765	3,646,620	36,872	3,311,106	6
60,851	1,764,679	52,732	1,487,042	46,725	1,253,632	7
265,668	292,235	281,616	309,777	58,800	52,920	8
				83	875	9
50	10,000	60	12,000	60	12,000	10
100	400	200	600	200	600	11
	192,892,408		219,755,109		203,128,859	12
48,179,475	60,224,344	60,861,190	76,076,487	68,531,500	82,237,800	13
28,500,016	64,125,036	31,358,264	70,556,094	34,336,469	77,257,055	14
	20,000,000		21,000,000		20,000,000	15
27,661,238	25,448,339	30,510,830	24,065,988	23,449,633	25,790,252	16
30,000,000	20,000,000	31,000,000	21,700,000	32,000,000	19,200,000	17
			215,000		475,000	18
2,500,000	2,000,000	3,250,000	3,672,750	4,190,000	4,293,500	19
6,200,000	4,200,000	6,412,373	4,320,140	6,192,231	4,211,042	20
266,734	1,980,259	332,077	1,992,462	378,380	2,270,280	21
6,000,000	4,100,000	3,850,000	2,310,000	3,814,273	1,907,136	22
3,700,000	700,000	5,000,000	800,000	7,529,423	1,119,603	23
10,000	700,000	10,000	700,000	12,000	840,000	24
28,000	200,000	33,600	240,000	35,840	250,000	25
6,000	100,000	7,000	105,000	7,000	84,000	26
4,046,000	304,461	4,236,291	338,903	6,500,000	585,000	27
85,000	350,000	100,000	450,000	90,000	420,000	28
	500,000		700,000		600,000	29
5,000	60,000	6,000	75,000	6,000	75,000	30
10,000	60,000	12,000	72,000	25,000	137,500	31
7,000	75,000	6,000	90,000	8,000	150,000	32
4,835	73,425	4,532	67,980	6,155	92,325	33
2,000	8,000	3,000	10,500	3,000	10,500	34
	110,000		150,000		207,050	35
300,000	75,000	250,000	75,000	301,100	72,264	36
500	80,000	500	80,000	550	100,000	37
20,000	80,000	20,000	80,000	27,000	108,000	38
400,000	30,000	425,000	34,000	575,000	46,000	39
	150,000		200,000		150,000	40
500,000	8,580	600,000	10,000	600,000	10,000	41
1,000,000	500,000	1,080,000	540,000	972,000	486,000	42
25,000	100,000	25,000	100,000	25,000	100,000	43
4,000	16,000	4,000	20,000	4,000	20,000	44
2,000	30,000	2,500	50,000	3,000	60,000	45
1,000	10,000	1,000	8,000	1,000	5,000	46
14,000	70,000	14,000	70,000	14,100	71,112	47
100,000	250,000	100,000	250,000	114,000	285,000	48
8,280	25,000	11,653	32,046	1,096	2,795	49
1,000	10,000	2,000	24,000	2,000	24,000	50
600	21,000	600	21,000	1,000	27,000	51
200	7,000	1,200	36,000	1,000	30,000	52
200	700	500	1,800	550	2,000	53
50	1,000					54
	206,783,144		231,340,150		243,812,214	55
	192,892,408		219,755,109		203,128,859	56
	6,500,000		6,500,000		6,500,000	57
	406,175,552		457,595,259		453,441,073	58

Mineral products of the United States for

Product.		1884.	
		Quantity.	Value.
METALLIC.			
1	Pig iron, value at Philadelphia.....long tons..	4,097,868	\$78,761,624
2	Silver, coining value.....troy ounces..	37,744,605	48,800,000
3	Gold, coining value.....do.....	1,489,949	30,800,000
4	Copper, value at New York City.....pounds..	145,221,934	17,789,687
5	Lead, value at New York City.....short tons..	139,897	10,537,042
6	Zinc, value at New York City.....do.....	38,544	3,422,707
7	Quicksilver, value at San Francisco.....flasks..	31,913	936,327
8	Nickel, value at Philadelphia.....pounds..	64,550	48,412
9	Aluminum, value at Pittsburg.....do.....	150	1,350
10	Antimony, value at San Francisco.....short tons..	60	12,000
11	Platinum (crude), value at San Francisco.....troy ounces..	150	450
12	Total value of metallic products.....		186,109,599
NONMETALLIC (SPOT VALUES).			
13	Bituminous coal.....short tons..	73,730,539	77,417,066
14	Pennsylvania anthracite.....long tons..	33,175,756	66,351,512
15	Stone.....		19,000,000
16	Petroleum.....barrels..	24,218,438	20,595,966
17	Lime.....do.....	37,000,000	18,500,000
18	Natural gas.....		1,460,000
19	Brick clay.....		
20	Clay (all other than brick).....short tons..	39,200	270,000
21	Cement.....barrels..	4,000,000	3,720,000
22	Salt.....do.....	6,514,937	4,197,734
23	Phosphate rock.....long tons..	431,779	2,374,784
24	Limestone for iron flux.....do.....	3,401,930	1,700,965
25	Mineral waters.....gallons sold..	10,215,328	1,459,143
26	Zinc white.....short tons..	13,000	910,000
27	Mineral paints.....do.....	7,000	84,000
28	Borax.....pounds..	7,000,000	490,000
29	Gypsum.....short tons..	90,000	390,000
30	Grindstones.....		570,000
31	Fibrous talc.....short tons..	10,000	110,000
32	Pyrite.....long tons..	35,000	175,000
33	Soapstone.....short tons..	10,000	200,000
34	Manganese ore.....long tons..	10,180	122,160
35	Asphaltum.....short tons..	3,000	10,500
36	Precious stones.....		222,975
37	Bromine.....pounds..	281,100	67,464
38	Corundum.....short tons..	600	108,000
39	Barytes (crude).....do.....	25,000	100,000
40	Graphite.....pounds..		
41	Millstones.....		150,000
42	Oilstones, etc. <i>a</i>.....pounds..	800,000	12,000
43	Marls.....short tons..	875,000	437,500
44	Flint.....long tons..	30,000	120,000
45	Fluorspar.....short tons..	4,000	20,000
46	Chromic iron ore.....long tons..	2,000	35,000
47	Infusorial earth.....short tons..	1,000	5,000
48	Feldspar.....long tons..	10,900	55,112
49	Mica.....pounds..	147,410	368,525
50	Cobalt oxide.....do.....	2,000	5,100
51	Slate ground as a pigment.....short tons..	2,000	20,000
52	Sulphur.....do.....	500	12,000
53	Asbestos.....do.....	1,000	30,000
54	Rutile.....pounds..	600	2,000
55	Lithographic stone.....short tons..		
56	Total value of nonmetallic mineral products.....		221,879,506
57	Total value of metallic products.....		186,109,599
58	Estimated value of mineral products unspecified.....		5,000,000
59	Grand total.....		412,989,105

^a Prior to 1889 quantity and value are for rough stone quarried; since 1890 they are for finished product.

SUMMARY.

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the calendar years 1880-1904—Continued.

1885.		1886.		1887.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
4,044,425	\$64,712,400	5,683,329	\$95,195,760	6,417,148	\$121,925,800	1
39,910,279	51,000,000	39,445,312	51,000,000	41,269,240	53,350,000	2
1,638,376	31,800,000	1,881,250	35,000,000	1,596,500	33,000,000	3
170,962,607	13,292,999	161,235,381	16,527,651	185,227,331	21,115,916	4
129,412	10,469,431	130,629	12,200,749	145,700	13,113,000	5
40,688	3,539,856	42,641	3,752,408	50,340	4,782,300	6
32,073	979,189	29,981	1,060,000	33,825	1,429,000	7
277,904	179,975	214,992	127,157	205,566	193,200	8
283	2,550	3,000	27,000	18,000	59,000	9
50	10,000	35	7,000	75	15,000	10
250	187	50	100	448	1,838	11
	181,586,587		214,897,825		248,925,054	12
64,840,668	82,347,648	73,707,957	78,481,056	87,887,360	98,004,656	13
34,228,548	76,671,948	34,853,077	76,119,120	37,578,747	84,552,181	14
	19,000,000		19,000,000		25,000,000	15
21,847,205	19,198,243	28,064,841	19,996,313	28,278,866	18,877,094	16
40,000,000	20,000,000					17
	4,857,200		10,012,000		15,817,500	18
			6,200,000		7,000,000	19
40,320	275,000	44,800	925,000	48,160	340,000	20
4,150,000	3,492,500	4,500,000	3,990,000	6,692,744	5,674,377	21
7,088,653	4,825,345	7,707,081	4,736,585	7,831,962	4,093,846	22
437,856	2,846,064	430,549	1,872,936	480,558	1,836,818	23
3,356,956	1,678,478	4,717,163	2,830,297	5,377,000	3,226,200	24
9,148,401	1,312,845	8,950,317	1,284,070	8,259,609	1,261,463	25
15,000	1,050,000	18,000	1,440,000	18,000	1,440,000	26
3,950	43,575	18,800	315,000	22,000	330,000	27
8,000,000	480,000	9,778,290	488,915	11,000,000	550,000	28
90,405	405,000	95,250	428,625	95,000	425,000	29
	500,000		250,000		224,400	30
10,000	110,000	12,000	125,000	15,000	160,000	31
49,000	220,500	55,000	220,000	52,000	210,000	32
10,000	200,000	12,000	225,000	12,000	225,000	33
23,258	190,281	30,193	277,636	34,524	333,844	34
3,000	10,500	3,500	14,000	4,000	16,000	35
	209,900		119,056		163,600	36
310,000	89,900	428,334	141,350	199,087	61,717	37
600	108,000	645	116,190	600	108,000	38
15,000	75,000	10,000	50,000	15,000	75,000	39
327,888	26,231	415,525	33,242	416,000	34,000	40
	100,000		140,000		100,000	41
1,000,000	15,000	1,160,000	15,000	1,200,000	16,000	42
875,000	437,500	800,000	400,000	600,000	300,000	43
30,000	120,000	30,000	120,000	32,000	128,000	44
5,000	22,500	5,000	22,000	5,000	20,000	45
2,700	40,000	2,000	30,000	3,000	40,000	46
1,000	5,000	1,200	6,000	3,000	15,000	47
13,600	68,000	14,900	74,500	10,200	61,200	48
92,000	161,000	40,000	70,000	70,000	142,250	49
68,723	65,373	35,000	36,878	18,340	18,774	50
1,975	24,687					51
715	17,875	2,500	75,000	3,000	100,000	52
300	9,000	200	6,000	150	4,500	53
600	2,000	600	2,000	1,000	3,000	54
						55
	241,312,093		230,088,769		270,989,420	56
	181,586,587		214,897,825		248,925,054	57
	5,000,000		800,000		800,000	58
	427,898,680		445,786,594		520,714,474	59

Mineral products of the United States for

		1888.	
Product.		Quantity.	Value.
METALLIC.			
1	Pig iron, value at Philadelphia.....long tons..	6,489,738	\$107,000,000
2	Silver, coining value.....troy ounces..	45,783,632	59,195,000
3	Gold, coining value.....do.....	1,604,927	33,175,000
4	Copper, value at New York City.....pounds..	231,270,622	33,833,954
5	Lead, value at New York City.....short tons..	151,919	13,399,256
6	Zinc, value at New York City.....do.....	55,903	5,500,855
7	Quicksilver, value at San Francisco.....flasks..	33,250	1,413,125
8	Aluminum, value at Pittsburg.....pounds..	19,000	65,000
9	Antimony, value at San Francisco.....short tons..	100	20,600
10	Nickel, value at Philadelphia.....pounds..	204,328	127,632
11	Tin.....do.....		
12	Platinum (crude), value at San Francisco.....troy ounces..	500	2,000
13	Total value of metallic products.....		253,731,822
NONMETALLIC (SPOT VALUES).			
14	Bituminous coal.....short tons..	102,039,838	101,860,529
15	Pennsylvania anthracite.....long tons..	41,624,611	89,020,483
16	Stone.....do.....		25,500,000
17	Petroleum.....barrels..	27,612,025	17,947,620
18	Natural gas.....do.....		22,629,875
19	Brick clay.....do.....		7,500,000
20	Clay (all other than brick).....short tons..	41,160	300,000
21	Cement.....barrels..	6,503,295	5,021,139
22	Mineral waters.....gallons sold..	9,578,648	1,679,302
23	Phosphate rock.....long tons..	448,567	2,018,552
24	Salt.....barrels..	8,055,881	4,374,203
25	Limestone for iron flux.....long tons..	5,438,000	2,719,000
26	Zinc white.....short tons..	20,000	1,600,000
27	Gypsum.....do.....	110,000	550,000
28	Borax.....pounds..	7,589,000	455,340
29	Mineral paints.....short tons..	26,500	405,000
30	Grindstones.....do.....		281,800
31	Fibrous talc.....short tons..	20,000	210,000
32	Asphaltum.....do.....	53,800	331,500
33	Soapstone.....do.....	15,000	250,000
34	Precious stones.....do.....		139,850
35	Pyrite.....long tons..	54,331	167,658
36	Corundum.....short tons..	589	91,620
37	Oilstones, etc. a.....pounds..	1,500,000	13,000
38	Mica.....do.....	48,000	70,000
39	Barytes (crude).....short tons..	20,000	110,000
40	Bromine.....pounds..	307,386	95,290
41	Fluorspar.....short tons..	6,000	30,000
42	Feldspar.....long tons..	8,700	50,000
43	Manganese ore.....do.....	29,198	279,571
44	Flint.....do.....	30,000	127,500
45	Graphite.....pounds..	400,000	33,000
46	Bauxite.....long tons..		
47	Sulphur.....short tons..		
48	Marls.....do.....	300,000	150,000
49	Infusorial earth.....do.....	1,500	7,500
50	Millstones.....do.....		81,000
51	Chromic iron ore.....long tons..	1,500	20,000
52	Cobalt oxide.....pounds..	8,491	15,782
53	Magnesite.....short tons..		
54	Asbestos.....do.....	100	3,000
55	Rutile.....pounds..	1,000	3,000
56	Ozocerite (refined).....do.....	43,500	3,000
57	Total value of nonmetallic mineral products.....		286,150,114
58	Total value of metallic products.....		253,731,822
59	Estimated value of mineral products unspecified.....		900,000
60	Grand total.....		540,781,936

a Prior to 1889 quantity and value are for rough stone quarried; since 1890 they are for finished product.

SUMMARY.

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the calendar years 1880-1904—Continued.

1889.		1890.		1891.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
7,603,642	\$120,000,000	9,202,703	\$151,200,410	8,279,870	\$128,337,985	1
51,354,851	66,396,686	54,500,000	70,464,645	58,330,000	75,416,565	2
1,590,869	32,886,180	1,588,880	32,845,000	1,604,840	33,175,000	3
231,246,214	26,907,809	265,115,133	30,848,797	295,812,076	38,455,300	4
156,397	13,794,235	143,630	12,668,166	178,554	15,594,198	5
58,860	5,791,821	63,683	6,266,407	80,873	8,033,700	6
26,484	1,190,500	22,926	1,203,615	22,904	1,036,386	7
47,468	97,335	61,281	61,281	150,000	100,000	8
115	28,000	938	177,508	1,289	217,957	9
252,663	151,598	223,488	134,093	118,498	71,099	10
500	2,000	600	2,500	125,289	25,058	11
				100	500	12
	267,246,167		305,872,422		300,403,748	13
95,685,543	94,504,745	111,320,016	110,420,801	117,901,237	117,188,400	14
40,714,721	65,879,514	41,489,858	66,383,772	45,236,992	73,944,735	15
	42,809,706		47,000,000		47,294,746	16
35,163,513	26,963,340	45,822,672	35,865,105	54,291,980	30,526,553	17
	21,097,099		18,742,725		15,500,084	18
	8,000,000		8,500,000		9,000,000	19
329,665	635,578	392,000	756,000	448,000	900,000	20
7,000,000	5,000,000	8,000,000	6,000,000	8,222,792	6,680,951	21
12,780,471	1,748,458	13,907,418	2,600,750	18,392,732	2,996,259	22
550,245	2,937,776	510,499	3,213,795	587,988	3,651,150	23
8,005,565	4,195,412	8,776,991	4,752,286	9,987,945	4,716,121	24
6,318,000	3,159,000	5,521,622	2,760,811	5,000,000	2,300,000	25
16,970	1,357,600		1,600,000	23,700	1,600,000	26
267,769	764,118	182,995	574,523	208,126	628,051	27
8,000,000	500,000	9,500,000	617,500	13,380,000	869,700	28
34,307	483,766	47,732	681,992	49,652	678,478	29
	439,587		450,000		476,113	30
23,746	244,170	41,354	389,196	58,054	493,068	31
51,735	171,537	40,841	190,416	45,054	242,264	32
12,715	231,708	13,670	252,309	16,514	243,981	33
	188,807		118,833		235,300	34
93,705	202,119	90,854	273,745	106,536	338,880	35
2,245	105,565	1,970	89,395	2,265	90,230	36
5,382,000	32,980		69,909	1,375,000	150,000	37
49,500	50,000	60,000	75,000	75,000	100,000	38
19,161	106,313	21,911	86,505	31,069	118,363	39
418,891	125,667	387,847	104,719	343,000	54,880	40
9,500	45,835	8,250	56,328	10,044	78,330	41
6,970	39,370	8,000	45,200	10,000	50,000	42
24,197	240,559	25,684	219,050	23,416	239,129	43
21,113	89,730	13,000	57,400	15,000	60,000	44
	72,662		77,500		110,000	45
728	2,366	1,844	6,012	3,593	11,675	46
1,150	7,850			1,200	39,600	47
139,522	63,956	153,620	69,880	135,000	67,500	48
3,466	23,372	2,532	50,240		21,088	49
	35,155		23,720		16,587	50
2,000	30,000	3,599	58,985	1,372	20,580	51
13,955	31,092	6,788	16,291	7,200	18,000	52
				459	4,390	53
30	1,800	71	4,560	66	3,960	54
1,000	3,000	400	1,000	300	800	55
50,000	2,500	350,000	26,250	50,000	7,000	56
	282,623,812		312,776,503		321,767,846	57
	267,246,167		305,872,422		300,403,748	58
	1,000,000		1,000,000		1,000,000	59
	550,869,979		619,648,925		623,171,594	60

Mineral products of the United States for

	Product.	1892.		
		Quantity.	Value.	
	METALLIC.			
1	Pig iron, spot value.....long tons..	9,157,000	\$131,161,039	
2	Silver, coining value.....troy ounces..	63,500,000	82,101,000	
3	Gold, coining value.....do.....	1,596,375	33,000,000	
4	Copper, value at New York City.....pounds..	352,971,744	37,977,142	
5	Lead, value at New York City.....short tons..	173,654	13,892,320	
6	Zinc, value at New York City.....do.....	87,260	8,027,920	
7	Quicksilver, value at San Francisco.....flasks..	27,993	1,245,689	
8	Aluminum, value at Pittsburg.....pounds..	259,885	172,824	
9	Antimony, value at San Francisco.....short tons..	1,790	276,416	
10	Nickel, value at Philadelphia.....pounds..	92,252	50,739	
11	Tin.....do.....	162,000	32,400	
12	Platinum, value (crude) at San Francisco.....troy ounces..	80	550	
13	Total value of metallic products.....		307,938,039	
	NONMETALLIC (SPOT VALUES).			
14	Bituminous coal.....short tons..	126,856,567	125,124,381	
15	Pennsylvania anthracite.....long tons..	46,850,450	82,442,000	
16	Natural gas.....		14,800,714	
17	Petroleum.....barrels..	50,509,136	26,034,196	
18	Brick clay.....		9,000,000	
19	Cement.....barrels..	8,758,621	7,152,750	
20	Stone.....		48,706,625	
21	Corundum and emery.....short tons..	1,771	181,300	
22	Crystalline quartz.....do.....			
23	Garnet for abrasive purposes.....do.....			
24	Grindstones.....		272,244	
25	Infusorial earth and tripoli.....short tons..		43,655	
26	Millstones.....		23,417	
27	Oilstones, etc.....		116,730	
28	Borax.....pounds..	13,500,000	900,000	
29	Bromine.....do.....	379,480	64,502	
30	Fluorspar.....short tons..	12,250	89,000	
31	Gypsum.....do.....	256,259	695,492	
32	Marls.....do.....	125,000	65,000	
33	Phosphate rock.....long tons..	681,571	3,296,227	
34	Pyrite.....do.....	109,788	305,191	
35	Salt.....barrels..	11,698,890	5,654,915	
36	Sulphur.....short tons..	2,688	80,640	
37	Barytes (crude).....do.....	32,108	130,025	
38	Cobalt oxide.....pounds..	7,869	15,738	
39	Mineral paints.....short tons..	51,704	767,766	
40	Zinc white.....do.....	27,500	2,200,000	
41	Asbestos.....do.....	104	6,416	
42	Asphaltum.....do.....	87,680	445,375	
43	Bauxite.....long tons..	10,518	34,183	
44	Chromic iron ore.....do.....	1,500	25,000	
45	Clay (all other than brick).....short tons..	470,400	1,000,000	
46	Feldspar.....do.....	16,800	75,000	
47	Fibrous talc.....do.....	41,925	472,485	
48	Flint.....do.....	22,400	80,000	
49	Fuller's earth.....do.....			
50	Graphite.....pounds..		104,000	
51	Limestone for iron flux.....long tons..	5,172,114	3,620,480	
52	Magnesite.....short tons..	1,004	10,040	
53	Manganese ore.....long tons..	13,613	129,586	
54	Mica.....pounds..	75,000	100,000	
55	Mineral waters.....gallons sold..	21,876,604	4,905,970	
56	Monazite.....pounds..			
57	Ozocerite (refined).....do.....	60,000	8,000	
58	Precious stones.....		312,050	
59	Pumice stone.....short tons..			
60	Rutile.....pounds..	100	300	
61	Soapstone.....short tons..	23,908	437,449	
62	Total value of nonmetallic mineral products.....		339,958,842	
63	Total value of metallic products.....		307,938,039	
64	Estimated value of mineral products unspecified.....		1,000,000	
65	Grand total.....		648,896,881	

SUMMARY.

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the calendar years 1880-1904—Continued.

1893.		1894.		1895.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
7,124,502	\$84,810,426	6,657,888	\$65,007,247	9,446,308	\$105,198,550	1
60,000,000	77,576,000	49,501,122	64,000,000	55,727,000	72,051,000	2
1,739,081	35,955,000	1,910,816	39,500,000	2,254,760	46,610,000	3
339,785,972	32,054,601	364,866,808	33,141,142	^a 385,913,404	38,012,470	4
163,982	11,839,590	159,331	9,942,254	170,000	11,220,000	5
78,832	6,306,560	75,328	5,288,026	89,686	6,278,020	6
30,164	1,108,527	30,416	934,000	36,104	1,337,131	7
339,629	266,903	550,000	316,250	920,000	464,600	8
1,508	270,540	1,887	249,706	2,013	304,169	9
49,399	22,197	9,616	3,269	10,302	3,091	10
8,938	1,788	.....	.....	.....	.....	11
75	517	100	600	150	900	12
.....	250,212,649	.....	218,382,494	.....	281,479,931	13
128,385,231	122,751,618	118,820,405	107,653,501	135,118,193	115,779,771	14
48,185,306	85,687,078	46,358,144	78,488,063	51,785,122	82,019,272	15
.....	14,346,250	.....	13,954,400	.....	13,006,650	16
48,412,666	28,932,326	49,344,516	35,522,095	52,892,276	57,632,296	17
.....	9,000,000	.....	9,000,000	.....	9,000,000	18
8,002,467	6,262,841	8,362,245	5,030,081	8,731,401	5,482,254	19
.....	33,885,573	.....	36,534,788	.....	33,319,131	20
1,713	142,325	.....	95,936	2,102	106,256	21
.....	.....	6,024	18,054	9,000	27,000	22
.....	.....	.....	.....	3,825	95,050	23
.....	338,787	.....	223,214	.....	205,768	24
.....	22,582	2,584	11,718	4,954	20,514	25
.....	16,645	.....	13,887	.....	22,542	26
.....	135,173	.....	136,873	.....	155,881	27
8,699,000	652,425	14,680,130	974,445	11,918,000	596,900	28
348,399	104,520	379,444	102,450	517,421	134,343	29
12,400	84,000	7,500	47,500	4,000	24,000	30
253,615	696,615	239,312	761,719	265,503	797,447	31
75,000	40,000	75,000	40,000	60,000	30,000	32
941,368	4,136,070	996,949	3,479,547	1,038,551	3,606,094	33
75,777	256,552	105,940	363,134	99,549	322,845	34
11,816,772	4,054,668	12,967,417	4,739,285	13,669,649	4,423,084	35
1,200	42,000	500	20,000	1,800	42,000	36
28,970	88,506	23,335	86,983	21,529	68,321	37
8,422	10,346	6,763	10,145	14,458	20,675	38
37,724	530,384	41,926	498,093	50,695	621,552	39
24,059	1,804,420	19,987	1,399,090	20,710	1,449,700	40
50	2,500	325	4,463	795	13,525	41
47,779	372,232	60,570	353,400	68,163	348,281	42
9,079	29,507	11,066	35,818	17,069	44,000	43
1,450	21,750	3,680	53,231	1,740	16,795	44
448,000	900,000	403,200	800,000	403,200	800,000	45
20,578	68,307	19,264	167,000	8,523	30,000	46
35,861	403,436	39,906	435,060	39,240	370,897	47
33,231	63,792	42,560	319,200	13,747	21,038	48
.....	.....	.....	.....	6,900	41,400	49
843,103	63,232	918,000	64,010	.....	52,582	50
3,958,055	2,374,833	3,698,550	1,849,275	5,247,949	2,623,974	51
704	7,040	1,440	10,240	2,220	17,000	52
7,718	66,614	6,308	53,635	9,547	71,769	53
66,971	88,929	.....	52,388	.....	55,831	54
23,544,495	4,246,734	21,569,608	3,741,846	21,463,543	4,254,237	55
130,000	7,600	546,855	36,193	1,573,000	137,150	56
.....	.....	.....	.....	.....	.....	57
.....	264,041	.....	132,250	.....	113,621	58
.....	.....	150	450	100	350	59
21,071	255,067	23,144	401,325	21,495	266,495	60
.....	.....	.....	.....	.....	.....	61
.....	323,257,318	.....	307,714,785	.....	338,287,291	62
.....	250,212,649	.....	218,382,494	.....	281,479,931	63
.....	1,000,000	.....	1,000,000	.....	1,000,000	64
.....	.....	.....	.....	.....	.....	65
.....	574,469,967	.....	527,097,279	.....	620,767,222	65

^aIncluding copper made from imported pyrites.

Mineral products of the United States for

		1896.	
Product.		Quantity.	Value.
METALLIC.			
1	Pig iron, spot value.....long tons..	8,623,127	\$90,250,000
2	Silver, coining value.....troy ounces..	58,834,800	76,069,236
3	Gold, coining value.....do.....	2,568,132	53,088,000
4	Copper, value at New York City.....pounds..	460,061,430	49,456,603
5	Lead, value at New York City.....short tons..	188,000	10,528,000
6	Zinc, value at New York City.....do.....	81,499	6,519,920
7	Quicksilver, value at San Francisco.....flasks..	30,765	1,075,449
8	Aluminum, value at Pittsburg.....pounds..	1,300,000	520,000
9	Antimony, value at San Francisco.....short tons..	2,478	347,539
10	Nickel, value at Philadelphia.....pounds..	17,170	4,464
11	Tin.....do.....		
12	Platinum, value (crude) at San Francisco.....troy ounces..	163	944
13	Total value of metallic products.....		287,860,155
NONMETALLIC (SPOT VALUES).			
14	Bituminous coal.....short tons..	137,640,276	114,891,515
15	Pennsylvania anthracite.....long tons..	48,523,287	81,748,651
16	Natural gas.....		13,002,512
17	Petroleum.....barrels..	60,960,361	58,518,709
18	Brick clay.....		9,000,000
19	Cement.....barrels..	9,513,473	6,473,213
20	Stone.....		32,202,661
21	Corundum and emery.....short tons..	2,120	113,246
22	Crystalline quartz.....do.....	6,000	18,000
23	Garnet for abrasive purposes.....do.....	2,686	68,877
24	Grindstones.....		326,826
25	Infusorial earth and tripoli.....short tons..	3,846	26,792
26	Millstones.....		22,567
27	Oilstones, etc.....		127,098
28	Borax.....pounds..	13,508,000	675,400
29	Bromine.....do.....	546,580	144,501
30	Fluorspar.....short tons..	6,500	52,000
31	Gypsum.....do.....	224,254	573,344
32	Marls.....do.....	60,000	30,000
33	Phosphate rock.....long tons..	980,779	2,803,372
34	Pyrite.....do.....	115,483	320,163
35	Salt.....barrels..	13,850,726	4,040,839
36	Sulphur.....short tons..	5,260	87,200
37	Barytes (crude).....do.....	17,068	46,513
38	Cobalt oxide.....pounds..	10,700	15,301
39	Mineral paints.....short tons..	48,032	552,955
40	Zinc white.....do.....	20,000	1,400,000
41	Asbestos.....do.....	504	6,100
42	Asphaltum.....do.....	80,503	577,563
43	Bauxite.....long tons..	18,364	47,338
44	Chromic iron ore.....do.....	786	6,667
45	Clay (all other than brick).....short tons..	403,200	800,000
46	Feldspar.....do.....	10,203	35,200
47	Fibrous talc.....do.....	46,089	399,443
48	Flint.....do.....	12,458	24,226
49	Fuller's earth.....do.....	9,872	59,360
50	Graphite (crystalline).....pounds..	535,858	48,460
51	Graphite (amorphous).....short tons..	760	
52	Magnesite.....do.....	1,500	11,000
53	Manganese ore.....long tons..	10,088	90,727
54	Mica (sheet).....pounds..	49,156	65,441
55	Mica (scrap).....short tons..	222	1,750
56	Mineral waters.....gallons sold..	25,795,312	4,136,192
57	Monazite.....pounds..	30,000	1,500
58	Ozocerite (refined).....do.....		
59	Precious stones.....		97,850
60	Pumice stone.....short tons..		
61	Rutile.....pounds..	100	330
62	Soapstone.....short tons..	22,183	354,065
63	Total value of nonmetallic mineral products.....		334,045,487
64	Total value of metallic products.....		287,860,155
65	Estimated value of mineral products unspecified.....		1,000,000
66	Grand total.....		622,905,642

the calendar years 1880-1904—Continued.

1897.		1898.		1899.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
9,652,680	\$95,122,299	11,773,934	\$116,557,000	13,620,703	\$245,172,654	1
53,860,000	69,637,172	54,438,000	70,384,485	54,764,500	70,806,626	2
2,774,935	57,363,000	3,118,398	64,463,000	3,437,210	71,053,400	3
494,078,274	54,080,180	526,512,987	61,865,276	568,666,921	101,222,712	4
212,000	14,885,728	222,000	16,650,000	210,500	18,945,000	5
99,980	8,498,300	115,399	10,385,910	129,051	14,840,865	6
26,648	993,445	31,092	1,188,627	30,454	1,452,745	7
4,000,000	1,500,000	5,200,000	1,716,000	6,500,000	1,716,000	8
3,061	442,300	3,238	532,101	2,861	559,189	9
23,707	7,823	11,145	3,956	22,541	8,566	10
150	900	225	1,913	300	1,800	11
	302,531,147		343,748,268		525,779,557	12
						13
147,617,519	119,595,224	166,593,623	132,608,713	193,323,187	167,952,104	14
46,974,714	79,301,954	47,663,076	75,414,537	53,944,647	88,142,130	15
	13,826,422		15,296,813		20,074,873	16
60,475,516	40,874,072	55,364,233	44,193,359	57,070,850	64,603,904	17
	8,000,000		9,000,000		11,250,000	18
10,989,463	8,178,283	12,111,208	9,859,501	15,520,445	12,889,142	19
	36,791,772		39,245,264		48,785,875	20
2,165	106,574	4,064	275,064	4,900	150,600	21
7,500	22,500	8,312	23,990	13,600	39,000	22
2,554	80,853	2,967	86,850	2,765	98,325	23
	268,058		489,769		675,586	24
3,833	22,835	2,733	16,691	4,334	37,032	25
	25,932		25,934		28,115	26
	149,970		180,486		208,283	27
16,000,000	1,080,000	16,000,000	1,120,000	40,714,000	1,139,882	28
487,149	129,094	486,979	126,614	433,004	108,251	29
5,062	37,159	7,675	63,050	15,900	96,650	30
288,982	755,864	291,638	755,280	486,235	1,287,080	31
60,000	30,000	60,000	30,000	60,000	30,000	32
1,039,345	2,673,202	1,308,885	3,453,460	1,515,702	5,084,076	33
143,201	391,541	193,364	593,801	174,734	543,249	34
15,973,202	4,920,020	17,612,634	6,212,554	19,708,614	6,867,467	35
2,275	45,590	1,200	32,960	4,830	107,500	36
26,042	58,295	31,306	108,339	41,894	139,523	37
19,520	31,232	6,247	9,371	10,230	18,512	38
60,913	795,793	58,850	695,856	63,111	728,389	39
25,000	1,750,000	33,000	2,310,000	40,146	3,211,680	40
580	6,450	605	10,300	681	11,740	41
75,945	664,632	76,337	675,649	75,085	553,904	42
20,590	57,652	25,149	75,437	35,280	125,598	43
						44
563,115	978,448	585,450	1,384,766	843,279	1,645,328	45
12,516	43,100	13,440	32,395	24,202	211,545	46
57,009	396,936	54,356	411,430	54,655	438,150	47
13,466	26,227	21,425	42,670	29,852	180,345	48
17,113	112,272	14,860	106,500	12,381	79,644	49
1,361,706		2,360,000		2,900,732		50
1,070	65,730	890	75,200	2,324	167,106	51
1,143	13,671	1,263	19,075	1,280	18,480	52
11,108	95,505	15,957	129,185	9,935	82,278	53
82,676	80,774	129,520	103,534	108,570	70,587	54
740	14,452	3,999	27,564	1,505	50,878	55
23,255,911	4,599,106	28,853,464	8,051,833	39,562,136	6,948,030	56
44,000	1,980	250,776	13,542	350,000	20,700	57
						58
	130,675		160,320		185,770	59
158		600	13,200	400	10,000	60
100	350	140	700	230	1,030	61
21,923	365,629	22,231	287,112	24,765	330,805	62
						63
	327,695,828		353,849,268		445,428,451	64
	302,531,147		343,748,268		525,779,557	65
	1,000,000		1,000,000		1,000,000	66
						67
	631,226,975		698,597,536		972,208,008	68

Mineral products of the United States for

Product.		1900.	
		Quantity.	Value.
METALLIC.			
1	Pig iron, value at Philadelphia.....long tons..	13,789,242	\$259,944,000
2	Silver, coining value.....troy ounces..	57,647,000	74,583,495
3	Gold, coining value.....do.....	3,829,897	79,171,000
4	Copper, value at New York City.....pounds..	606,117,166	98,494,039
5	Lead, value at New York City.....short tons..	270,824	23,561,688
6	Zinc, value at New York City.....do.....	123,886	10,654,196
7	Quicksilver, value at San Francisco.....flasks..	28,317	1,302,586
8	Aluminum, value at Pittsburg.....pounds..	7,150,000	1,920,000
9	Antimony, value at San Francisco.....short tons..	4,226	837,896
10	Nickel, value at Philadelphia.....pounds..	9,715	3,886
11	Tin.....do.....		
12	Platinum, value (crude) at San Francisco.....troy ounces..	400	2,500
13	Total value of metallic products.....		550,425,286
NONMETALLIC (SPOT VALUES).			
14	Bituminous coal.....short tons..	212,316,112	220,930,313
15	Pennsylvania anthracite.....long tons..	51,221,353	85,757,851
16	Natural gas.....		23,698,674
17	Petroleum.....barrels..	63,620,529	75,989,313
18	Brick clay.....		12,000,000
19	Cement.....barrels..	17,231,150	13,283,581
20	Stone.....		48,008,739
21	Corundum and emery.....short tons..	4,305	102,715
22	Crystalline quartz.....do.....	14,461	40,705
23	Garnet for abrasive purposes.....do.....	3,185	123,475
24	Grindstones.....		710,026
25	Infusorial earth and tripoli.....short tons..	3,615	24,207
26	Millstones.....		32,858
27	Oilstones, etc.....		174,087
28	Arsenious oxide.....short tons..		
29	Borax.....do.....	b 1,602	170,036
30	Bromine.....pounds..	c 24,235	848,215
31	Fluorspar.....short tons..	521,444	140,790
32	Gypsum.....do.....	18,450	94,500
33	Lithium.....do.....	594,462	1,627,203
34	Marls.....do.....	520	
35	Phosphate rock.....long tons..	60,000	30,000
36	Pyrite.....do.....	1,491,216	5,359,248
37	Sulphur.....do.....	204,615	749,991
38	Salt.....short tons..	3,525	88,100
39	Barytes (crude).....barrels..	20,869,342	6,944,603
40	Cobalt oxide.....short tons..	67,680	188,089
41	Mineral paints.....pounds..	6,471	* 11,648
42	Zinc white.....short tons..	72,222	881,363
43	Asbestos.....do.....	48,840	3,667,210
44	Asphaltum.....do.....	1,054	16,310
45	Bauxite.....do.....	54,389	415,958
46	Chromic iron ore.....long tons..	23,184	89,676
47	Clay (all other than brick).....do.....	140	1,400
48	Feldspar.....short tons..	1,221,660	1,840,377
49	Fibrous talc.....do.....	24,821	180,971
50	Flint.....do.....	63,500	499,500
51	Fuller's earth.....do.....	32,495	86,351
52	Glass sand.....do.....	9,698	67,535
53	Graphite (crystalline).....pounds..	5,507,855	
54	Graphite (amorphous).....short tons..	611	197,579
55	Magnesite.....do.....	2,252	19,333
56	Manganese ore.....long tons..	11,771	100,289
57	Mica (sheet).....pounds..	466,283	92,758
58	Mica (scrap).....short tons..	5,497	— 55,202
59	Mineral waters.....gallons sold	47,558,784	6,245,172
60	Monazite.....pounds..	908,000	48,805
61	Zircon.....do.....		
62	Precious stones.....		233,170
63	Pumice stone.....short tons..		
64	Rutile.....pounds..	300	1,300
65	Talc and soapstone.....short tons..	27,943	383,541
66	Uranium and vanadium.....do.....		
67	Total value of nonmetallic mineral products.....		512,252,767
68	Total value of metallic products.....		550,425,286
69	Estimated value of mineral products unspecified.....		1,000,000
70	Grand total.....		1,063,678,053

* No metallic tin; about 20 tons of high-grade concentrates shipped to England from South Carolina.

the calendar years 1880-1904—Continued.

1901.		1902.		1903.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
15,878,354	\$242,174,000	17,821,307	\$372,775,000	18,009,252	\$344,350,060	1
55,214,000	71,387,800	55,500,000	71,757,575	54,800,000	70,206,060	2
3,805,500	78,666,700	3,870,000	80,000,000	3,560,000	73,591,700	3
602,072,519	87,300,515	659,508,644	76,568,954	698,044,517	91,506,006	4
270,700	23,280,200	270,000	22,140,000	282,000	23,520,000	5
140,822	11,265,760	156,927	14,625,596	159,219	16,717,995	6
29,727	1,382,305	34,291	1,467,848	35,620	1,544,934	7
7,150,000	2,238,000	7,300,000	2,284,590	7,500,000	2,284,900	8
2,639	539,902	3,561	634,506	3,128	548,433	9
6,700	3,551	5,748	2,701	114,200	45,900	10
1,408	27,526	94	1,814	(a) 110	2,080	11
	518,266,259		642,258,584		624,318,008	12
						13
225,828,149	226,422,049	260,216,844	290,858,483	282,749,348	351,687,933	14
60,242,560	112,504,020	36,940,710	76,178,586	66,613,454	152,036,448	15
	27,066,077		30,867,863		35,807,860	16
69,389,194	66,417,335	88,766,916	71,178,910	100,461,337	94,694,050	17
	13,800,000		15,000,000		15,000,000	18
20,068,737	15,786,789	25,753,504	25,366,380	29,899,140	31,931,341	19
	60,275,762		69,830,351		72,945,908	20
4,305	146,040	4,251	104,605	2,542	64,102	21
14,050	41,500	15,104	84,335	8,938	76,908	22
4,444	158,100	3,926	132,820	3,950	132,500	23
	580,703		667,431		721,446	24
4,020	52,950	5,665	53,244	9,219	76,273	25
	57,179		59,808		52,552	26
	158,300		221,762		366,857	27
300	18,000	1,353	81,180	611	36,691	28
b 5,344	697,307	17,404	2,447,614	c 34,430	661,400	29
c 17,887	314,811	2,600	91,000		167,580	30
552,043	154,572	513,893	128,472	598,500	213,617	31
19,586	113,803	48,018	271,832	42,523	3,792,943	32
633,791	1,506,641	816,478	2,089,841	1,041,704	23,425	33
1,750	43,200	1,245	25,750	1,155	22,521	34
99,880	124,880	12,439	12,741	34,211	5,319,294	35
1,483,723	5,316,403	1,490,314	4,693,444	1,581,576	1,109,818	36
241,691	1,257,879	207,874	947,089	d 233,127	5,286,988	37
(d)	(d)	(d)	(d)		152,150	38
20,566,661	6,617,449	23,849,231	5,668,636	18,968,089	228,000	39
49,070	157,844	61,668	203,154	50,397	635,557	40
13,360	24,048	3,730	6,714	120,000	4,801,718	41
61,460	789,962	73,049	944,332	63,687	16,760	42
46,500	3,720,000	52,645	4,016,499	62,962	1,005,446	43
747	13,498	1,005	16,200	887	171,306	44
63,134	555,335	105,458	765,048	101,255	2,250	45
18,905	79,914	27,322	120,366	48,087	2,594,042	46
368	5,790	315	4,567	150	256,733	47
1,367,170	2,576,932	1,455,357	2,061,072	1,641,835	421,600	48
34,741	220,422	45,287	250,424	41,891	156,947	49
69,200	483,600	71,100	615,350	60,230	190,277	50
34,420	149,297	36,365	144,209	55,253	855,828	51
14,112	96,835	11,492	98,144	20,693	225,554	52
		943,135	807,797	823,044	10,595	53
3,967,612	167,714	3,936,824	182,108	4,538,155	25,335	54
809		4,739	16,591		118,088	55
3,500	10,500	2,830	8,490	3,744	25,040	56
11,995	116,722	7,477	60,911	2,825	9,041,078	57
360,060	98,859	373,266	83,843	619,600	64,630	58
2,171	19,719	1,400	35,006	1,659	570	59
55,771,188	7,586,962	64,859,451	8,793,761	51,242,757	307,900	60
748,736	59,262	802,000	64,160	862,000	2,665	61
	289,050		328,450	3,000		62
		(e) 700	2,750	885		63
44,250	5,710		525,157	e 26,671	418,460	64
28,643	424,888	26,854	48,125	30	5,025	65
375		3,810				66
	567,284,612		617,243,314		793,962,609	67
	518,266,259		642,258,584		624,318,008	68
	1,000,000		1,000,000		1,000,000	69
	1,086,550,871		1,260,501,898		1,419,280,617	70

b Refined. c Crude. d Included under pyrite. e Included under estimated unspecified products.

Mineral products of the United States for the calendar years 1880-1904—Continued.

Product.	1904.	
	Quantity.	Value.
METALLIC.		
Pig iron (spot value).....long tons..	16,497,033	\$238,025,000
Silver, coining value.....troy ounces..	55,999,864	72,402,224
Gold, coining value.....do.....	3,910,729	80,835,648
Copper, value at New York City.....pounds..	812,537,267	105,629,845
Lead, value at New York City.....short tons..	307,000	26,402,000
Zinc, value at New York City.....do.....	186,702	18,670,200
Quicksilver, value at San Francisco.....do.....	34,570	1,503,795
Aluminum, value at Pittsburg.....pounds..	b 8,600,000	b 2,477,000
Antimony, value at San Francisco.....short tons..	3,067	505,524
Nickel, value at Philadelphia.....pounds..	24,000	11,400
Tin.....do.....	(c)	
Platinum, value (crude) at San Francisco.....troy ounces..	200	4,160
Total value of metallic products.....		541,466,796
NONMETALLIC (spot values).		
Bituminous coal.....short tons..	279,153,718	305,842,268
Pennsylvania anthracite.....long tons..	65,318,490	138,974,020
Natural gas.....do.....		38,496,760
Petroleum.....barrels..	117,063,421	101,170,466
Brick clay.....do.....		13,000,000
Cement.....barrels..	31,675,257	26,031,920
Stone.....do.....		74,200,361
Corundum and emery.....short tons..	1,932	57,235
Crystalline quartz.....do.....	31,924	74,600
Garnet for abrasive purposes.....do.....	3,854	117,581
Grindstones.....do.....		881,527
Infusorial earth and tripoli.....short tons..	6,274	44,164
Millstones.....do.....		37,338
Oilstones, etc.....do.....		188,985
Arsenious oxide.....short tons..	36	2,185
Borax (crude).....do.....	45,647	698,810
Bromine.....do.....	897,100	269,130
Fluorspar.....do.....	36,452	234,755
Gypsum.....do.....	940,917	2,784,325
Lithium minerals.....do.....	577	5,155
Marls.....do.....	18,989	13,145
Phosphate rock.....long tons..	1,874,428	6,873,625
Pyrite.....do.....	333,542	3,460,863
Sulphur.....do.....		
Salt.....barrels..	22,030,002	6,021,222
Barytes (crude).....short tons..	65,727	174,958
Cobalt oxide.....pounds..	22,000	42,600
Mineral paints.....short tons..	59,785	631,171
Zinc white.....do.....	63,363	4,808,482
Asbestos.....do.....	1,480	25,740
Asphaltum.....do.....	81,572	903,741
Bauxite.....long tons..	47,661	235,704
Chromic iron ore.....do.....	123	1,845
Clay (all other than brick).....short tons..	1,508,752	2,320,162
Feldspar.....do.....	45,188	266,326
Fibrous talc.....do.....	64,005	507,400
Flint.....do.....	52,270	100,590
Fuller's earth.....do.....	29,480	168,500
Glass sand.....do.....	858,719	796,492
Graphite.....pounds..	5,681,177	341,372
Amorphous.....short tons..	19,115	
Magnesite.....do.....	2,850	9,298
Manganese ore.....long tons..	3,146	29,466
Mica.....pounds..	668,358	109,462
Sheet.....do.....		
Scrap.....short tons..	1,096	10,854
Mineral waters.....gallons sold..	67,718,500	10,398,450
Monazite.....pounds..		
Zircon.....do.....	745,999	85,038
Precious stones.....do.....		324,300
Pumice stone.....short tons..	1,530	5,421
Rutile.....pounds..		7,000
Sand, molding, building, etc.....short tons..		4,951,607
Talc and soapstone.....do.....	27,184	493,331
Uranium and vanadium.....do.....	45	10,600
Total value of nonmetallic mineral products.....		747,180,350
Total value of metallic products.....		541,466,796
Estimated value of mineral products unspecified.....		400,000
Grand total.....		1,289,047,146

^a Of 76½ avoirdupois pounds net; of 75 avoirdupois pounds net after June, 1904.

^b Consumption in 1904.

^c About 159 short tons of concentrates from South Carolina, South Dakota, and Alaska shipped to England in 1904.

^d Included under pyrite since 1901.