

## STONE.

### INTRODUCTION.

The statistics presented in the following report are of especial value on account of the completeness of the canvass in collecting them. A large part of them were obtained by direct visits to the quarrymen, made necessary by the fact that statistics of labor, wages, and expenses required by the Census Office for the mining census, were collected at the same time. This extra work has delayed the publication of the report, but this office wishes to thank the various quarrymen for their cooperation and for the information given to the various agents of this office and of the Census Office.

In 1889-90, at the time of the last mining census, the value of the stone produced in the United States was \$53,035,620. In the census of 1902 the value of the stone produced was \$64,559,099, an increase of \$11,523,479. In the interval the yearly value of the output fluctuated, until in 1896 it decreased to \$31,343,171. Since then the output has steadily increased to its present status.

The stone industry for 1902, though showing a large increase in value of production, has not exhibited an unusual state of activity, not nearly so much so as in the year 1901. This is shown by the fact that though there was a large increase in value of the production for 1902, this increase was not so large as the increase of 1901 over 1900, or of 1900 over 1899.

The check given to the building trade by various builders' strikes all over the country is in part accountable for this, the contractors being unable to use the material contracted for, which material was therefore not taken out. In some places, also, there were strikes among the quarrymen, although this was not general, as the quarrymen themselves are not as a rule union men. The cutters, polishers, and skilled laborers, however, employed to work the stone after it leaves the quarry are usually union men.

The coal strike during 1902 influenced the stone production to some extent, in that some of the large producers were unable to get coal for their engines, and especially were the lime burners affected who depended upon coal as a fuel for their kilns.

The crushed-stone industry, influenced by the demand for good roads and by the use of crushed stone for concrete in masonry, has in



the last six or seven years given a strong impetus to the stone industry as a whole.

In the last year the export trade in stone has been more active than before.

A tendency toward combination has also been more or less felt during the last two or three years, and in several States large interests have combined to control the output of various quarries. This is the case in New York, Pennsylvania, Massachusetts, Minnesota, Wisconsin, Ohio, Indiana, Connecticut, Vermont, and other States.

#### CLASSIFICATION.

In this report stone is classified, as usual in the trade, under the general headings of granite, sandstone, limestone, slate, and marble.

Under the head of granite are included granite, gneiss, mica-schist, andesite, syenite, and quartz-porphry, which are used for all purposes for which granite is used, such as building stone, foundation work, monumental stone, paving blocks, curbstone and flagstone, rubble, and crushed stone for riprap, macadam roads, concrete, and railroad ballast. Besides these the following are also included: The diabase, trap rocks, basalts, diorites, and gabbros, quarried extensively in the New England and the Eastern States and in the far West, and used almost entirely for paving or as crushed stone for road metal.

Under sandstone are included all consolidated sands. The value of the stone depends upon the cementing material, quartz grains cemented by silica forming the hardest and most durable stone. The varieties of sandstone are often called by the quarrymen bluestone, freestone, and (when the grains composing the stone are of considerable size) conglomerates. As such they are classed as sandstone in this report. Some bituminous sandstone, quartzites used as refractory material in furnaces, the jasper stone of Minnesota and South Dakota, and the lava stone of Colorado are also included.

Limestone, when in its pure state, consists essentially of amorphous calcium carbonate, often cemented together by crystalline material and containing many impurities. In this report there is included with true limestone not only the calcium carbonate with the usual small amounts of impurities, such as the oxides of iron, aluminum, silica, etc., but stone containing calcium carbonate and magnesium carbonate in varying proportions. When the stone contains a considerable amount of magnesium carbonate it is called magnesium limestone, and when the stone is about equally composed of the carbonate of lime and of magnesia it is called dolomite. The limestones also include travertine, or the limestone deposited by running streams and springs in large compact masses, and fossiliferous, shell, and coral limestones. In composition there is no essential difference between limestone and



what is generally known as marble. Marble is, however, limestone that by action of heat has been transformed into a crystalline form. There is also included with the marble some onyx marble, which in composition is the same as marble, but which is deposited from solution in crystalline form at different intervals, thus giving it a banded appearance and variegated colors. There is also included a small amount of serpentine.

#### PRODUCTION.

The figures as given in the table which follows do not include values of stone quarried for the following purposes: Sandstone converted into grindstones, whetstones, and other abrasive materials; sandstone quarried and crushed into sand for the manufacture of glass; bituminous limestone and sandstone used in making asphalt pavements and asphalt blocks; limestone used in blast furnaces, although the statistics of the furnace flux are shown under the part of the report treating of limestone; and limestone used in the manufacture of Portland cement.

The statistics of stone used for abrasives is shown in the report on abrasives as published by this office.

In making the statements as to the value of the stone the values given represent as nearly as it was possible to obtain them the value of the stone as it left the hands of the producer exclusive of any shipment values. When the stone was sold by the producer to the manufacturers in the rough state, the value is so given; and when the producer dressed his own stone, the value given is the dressed value. This applies particularly to the rough and the dressed granite, sandstone, and marble used for building and for monumental work.

The total value of the stone reported to this office in 1902, exclusive of the products mentioned above, was \$64,559,099. The value in 1901 was \$55,615,926. This shows a gain in 1902 of \$8,943,173. The corresponding gain in 1901 over 1900, when the figures were \$44,321,345, was \$11,294,581, a larger increase in 1901 than in 1902.

Limestone, not including furnace flux, increased more in value of production than any other kind of stone, the figures for 1902 being \$24,959,751 and for 1901 \$21,747,061, a gain of \$3,212,690 for 1902. The value of limestone used for blast-furnace flux, and not included in the above, increased from \$4,659,836 in 1901 to \$5,271,252 in 1902, a gain of \$611,416.

Granite, including trap rock, increased from \$15,976,961 in 1901 to \$18,257,944 in 1902, or \$2,280,983. The trap-rock production increased from \$1,710,857 in 1901 to \$2,181,157 in 1902, a gain of \$470,300.

Sandstone, including bluestone, but not including grindstones and whetstones, increased from \$8,138,680 in 1901 to \$10,601,171 in 1902, a gain of \$2,462,491. The value of bluestone, included in the above



figures, was practically the same for 1901 and 1902, being \$1,164,481 in 1901 and \$1,163,525 in 1902.

The value of marble production increased slightly in 1902, the figures, however, being practically the same for both years—\$4,965,699 in 1901 and \$5,044,182 in 1902, an increase of \$78,483.

The slate production in 1902 increased in value from \$4,787,525 in 1901 to \$5,696,051 in 1902, a gain of \$908,526.

*Value of the different kinds of stone produced in the United States, 1890-1902.*

Year.	Granite.	Trap rock.	Marble.	Slate.	Sandstone.	Bluestone.	Limestone.	Total.
1890....	\$14,464,095	.....	\$3,488,170	\$3,482,513	\$10,816,057	\$1,689,606	\$19,095,179	\$53,035,620
1891....	13,867,000	.....	3,610,000	3,825,746	8,700,000	<sup>a</sup> 1,500,000	15,792,000	47,294,746
1892....	12,642,000	.....	3,705,000	4,117,125	8,315,500	<sup>a</sup> 1,600,000	18,342,000	48,721,625
1893....	8,808,934	.....	2,411,092	2,523,173	5,295,151	<sup>a</sup> 1,000,000	13,947,223	33,985,573
1894....	10,029,156	.....	3,199,585	2,790,324	3,955,847	<sup>a</sup> 900,000	16,190,118	37,065,030
1895....	8,894,328	.....	2,825,719	2,698,700	4,211,314	<sup>a</sup> 750,000	15,308,755	34,688,816
1896....	7,944,994	.....	2,859,136	2,746,205	4,023,199	<sup>a</sup> 750,000	13,022,637	31,346,171
1897....	8,905,075	.....	3,870,584	3,524,614	4,065,445	<sup>a</sup> 900,000	14,804,933	36,070,651
1898....	9,324,406	.....	3,629,940	3,723,540	4,724,412	<sup>a</sup> 1,000,000	16,039,056	38,441,354
1899....	10,343,298	\$1,275,041	4,011,681	3,962,733	<sup>b</sup> 4,924,670	815,284	18,757,963	44,090,670
1900....	10,969,417	1,706,200	4,267,253	4,240,466	<sup>b</sup> 5,272,865	1,198,519	<sup>c</sup> 16,666,625	44,321,345
1901....	14,266,104	1,710,857	4,965,699	4,787,525	<sup>b</sup> 6,974,199	1,164,481	<sup>c</sup> 21,747,061	55,615,926
1902....	16,076,787	2,131,157	5,044,182	5,696,051	<sup>b</sup> 9,407,646	1,163,525	<sup>c</sup> 24,959,751	64,559,099

<sup>a</sup> Estimated.

<sup>b</sup> Does not include value of grindstones and whetstones.

<sup>c</sup> Does not include value of limestone for flux.

The following tables show the value of stone produced in 1901 and 1902, by States:

*Value of various kinds of stone produced in 1901 and 1902, by States.*

1901.

State.	Granite.	Sandstone.	Slate.	Marble.	Limestone.	Total value.
Alabama.....	.....	\$8,680	.....	.....	\$619,423	\$628,103
Alaska.....	.....	.....	.....	\$4,500	.....	4,500
Arizona.....	.....	202,500	.....	300	300	203,100
Arkansas.....	\$23,554	62,825	.....	300	68,319	154,998
California.....	<sup>a</sup> 1,134,675	301,028	\$18,608	6,642	645,455	2,106,408
Colorado.....	138,996	237,331	.....	.....	245,799	622,126
Connecticut.....	<sup>a</sup> 616,654	146,814	.....	.....	140,424	903,892
Delaware.....	671,204	.....	.....	.....	.....	671,204
Florida.....	.....	.....	.....	.....	51,870	51,870
Georgia.....	761,646	.....	3,000	936,549	85,629	1,786,824
Idaho.....	5,100	20,843	.....	.....	21,251	47,194
Illinois.....	.....	12,884	.....	.....	2,793,837	2,806,721
Indiana.....	.....	28,334	.....	.....	2,993,186	3,028,145
Indian Territory.....	( <sup>b</sup> )	.....	.....	.....	.....	( <sup>b</sup> )
Iowa.....	.....	14,341	.....	.....	777,484	791,825
Kansas.....	<sup>c</sup> 48,530	49,901	.....	.....	478,986	577,417

<sup>a</sup> Includes trap rock.

<sup>b</sup> Included with Kansas.

<sup>c</sup> Includes Indian Territory.



*Value of various kinds of stone produced in 1901 and 1902, by States—Continued.*

## 1901—Continued.

State.	Granite.	Sandstone.	Slate.	Marble.	Limestone.	Total value.
Kentucky .....		\$108,259			\$199,567	\$307,826
Maine .....	\$2,703,116		\$202,325		715,272	3,620,713
Maryland .....	613,356	4,546	105,798	\$68,100	382,381	1,174,181
Massachusetts .....	<i>a</i> 2,216,258	147,428		126,546	244,039	2,834,153
Michigan .....	2,706	290,578			565,931	859,215
Minnesota .....	260,105	246,685	1,400		522,778	1,030,968
Missouri .....	95,806	42,170		2,100	1,362,272	1,502,348
Montana .....	15,200	58,439		1,500	143,866	221,285
Nebraska .....		515			154,717	155,232
Nevada .....	4,100					4,100
New Hampshire .....	935,494					935,494
New Jersey .....	<i>a</i> 894,167	244,512	30,000		309,738	1,478,417
New Mexico .....				10,600		10,600
New York .....	<i>a</i> 489,828	<i>b</i> 1,331,327	100,960	379,159	1,738,716	4,039,990
North Carolina .....	261,288	11,682			8,266	281,236
Ohio .....		1,999,180			2,606,502	5,188,225
Oklahoma Territory .....					32,497	32,497
Oregon .....	10,754	531		500	24,520	36,305
Pennsylvania .....	<i>a</i> 486,008	<i>b</i> 2,063,082	2,984,264	157,547	5,081,387	10,772,288
Rhode Island .....	501,698				38,030	539,728
South Carolina .....	996,084				28,500	1,024,584
South Dakota .....	99,941	17,647			53,780	171,368
Tennessee .....		10,342		494,637	330,927	835,906
Texas .....	27,005	111,568			209,658	348,231
Utah .....	5,588	38,919		320	78,900	123,727
Vermont .....	1,245,828		1,162,191	2,753,583	205,138	5,366,740
Virginia .....	275,701	5,303	178,979		539,128	1,446,160
Washington .....	43,808	89,174		22,816	234,587	390,385
West Virginia .....		103,010			447,049	106,710
Wisconsin .....	389,953	90,425			1,225,448	1,705,826
Wyoming .....	2,810	54,145			1,340	58,295
Total .....	<i>a</i> 15,976,961	<i>b</i> 8,138,680	4,787,525	4,965,699	<i>c</i> 26,406,897	60,982,060

## 1902.

Alabama .....		\$42,706		( <i>d</i> )	\$759,617	\$802,323
Arizona .....	\$3,000	107,910				110,910
Arkansas .....	12,115	85,917	( <i>e</i> )	( <i>d</i> )	113,163	211,195
California .....	<i>a</i> 1,137,679	462,328	( <i>e</i> )	\$92,298	496,843	2,189,148
Colorado .....	66,023	366,161			203,700	635,884
Connecticut .....	<i>a</i> 812,141	128,579		( <i>d</i> )	205,371	1,146,091
Delaware .....	276,753					276,753
Florida .....					63,571	63,571
Georgia .....	803,778	1,250	( <i>e</i> )	660,517	111,589	1,577,134
Hawaii .....		6,688				6,688
Idaho .....	940	13,777			15,074	29,791
Illinois .....		32,200			3,222,608	3,254,808
Indiana .....		37,593			2,865,691	2,903,284
Indian Territory .....	11,970					11,970

*a* Includes trap rock.

*b* Includes bluestone.

*c* Includes blast-furnace flux.

*d* Includes Alabama, Arkansas, Connecticut, Iowa, Maryland, Montana, New Mexico, and Utah.

*e* Included in other States.



Value of various kinds of stone produced in 1901 and 1902, by States—Continued.

1902—Continued.

State.	Granite.	Sandstone.	Slate.	Marble.	Limestone.	Total value.
Iowa.....		\$15,061		(b)	\$649,984	\$665,045
Kansas.....		105,509			670,536	776,045
Kentucky.....		128,470			593,747	722,217
Maine.....	\$2,659,450		\$206,558		745,132	3,611,140
Maryland.....	758,203	15,405	118,084	(b)	453,030	1,344,722
Massachusetts.....	a 3,451,397	487,366		\$165,489	339,349	4,443,601
Michigan.....		188,073			621,380	809,453
Minnesota.....	478,989	347,472			830,857	1,657,318
Missouri.....	157,708	56,990			1,697,139	1,911,837
Montana.....	77,050	85,152		(b)	104,725	266,927
Nebraska.....		168			145,473	145,641
Nevada.....	2,090	6,115			2,800	11,005
New Hampshire.....	1,147,097					1,147,097
New Jersey.....	a 948,474	406,726	(c)		181,650	1,536,850
New Mexico.....		12,291		(b)		12,291
New York.....	a 651,014	d 1,408,699	126,718	577,298	2,419,121	5,182,850
North Carolina.....	338,750	4,825			23,153	366,728
Ohio.....		2,078,754			3,201,718	5,280,472
Oklahoma.....		24,200			50,541	74,741
Oregon.....	38,429	1,109			20,133	59,671
Pennsylvania.....	a 661,062	d 2,800,108	3,547,322	160,423	5,420,287	12,589,202
Rhode Island.....	734,623				33,814	768,437
South Carolina.....	598,848				37,850	636,698
South Dakota.....		110,789			86,605	197,394
Tennessee.....		7,670		518,256	482,033	1,007,959
Texas.....	60,003	165,565			228,662	454,230
Utah.....	1,479	105,011		(b)	186,663	293,153
Vermont.....	1,570,423		1,464,918	2,628,164	225,703	5,889,208
Virginia.....	282,046	2,500	160,951		534,113	979,610
Washington.....	147,273	30,725		61,176	213,814	452,988
West Virginia.....		423,532			616,366	1,039,898
Wisconsin.....	369,137	207,086			1,351,058	1,927,281
Wyoming.....		90,691			6,340	97,031
Other States.....			e 71,500	e 180,561		252,061
Total.....	a 18,257,944	d 10,601,171	5,696,051	b 5,044,182	f 30,231,063	f 69,830,351

a Includes trap rock.

b Includes Alabama, Arkansas, Connecticut, Iowa, Maryland, Montana, New Mexico, and Utah.

c Included in other States.

d Includes bluestone.

e Includes Arkansas, California, Georgia, and New Jersey.

f Includes blast-furnace flux.

From the table for 1902 it will be seen that Pennsylvania, producing every kind of stone, ranks first in the total valuation of the stone produced. Vermont is second in rank; and Ohio, producing, however, only limestone and sandstone, is third. New York is fourth, followed by Massachusetts, Maine, Illinois, Indiana, and California, in the order named. Each of these States has a product of over \$2,000,000. The drop from the value of the Pennsylvania product to the value of the Vermont product, the second State, is noticeable. Pennsylvania's



entire stone product is valued at \$12,589,202, and Vermont's product at \$5,889,208.

In 1901 the rank of the States was Pennsylvania, Vermont, Ohio, New York, Maine, Indiana, Massachusetts, Illinois, and California.

The following table is given to show the total values of the stone used for various purposes in 1901 and 1902. Only those values are given which are for uses common to two or more varieties of stone.

*Value of granite, sandstone, limestone, and marble used for various purposes in 1901 and 1902.*

## 1901.

Kind.	Building (rough and dressed).	Monument- al (rough and dressed).	Flagstone and curb- stone.	Paving.	Crushed stone.
Granite.....	\$5,660,129	\$2,715,225	\$670,703	\$1,821,431	\$3,003,443
Sandstone.....	4,875,973	.....	1,663,221	358,910	285,347
Limestone.....	5,219,310	.....	463,925	.....	5,271,642
Marble.....	1,080,969	2,019,474	.....	.....	.....
Total.....	16,836,381	4,734,699	2,797,849	2,180,341	8,560,432

## 1902.

Granite.....	\$7,034,832	\$3,998,911	\$876,726	1,523,776	\$3,211,780
Sandstone.....	6,007,484	.....	1,815,353	527,617	1,116,449
Limestone.....	5,563,084	.....	573,656	.....	7,152,730
Marble.....	2,184,941	1,942,674	.....	.....	.....
Total.....	20,790,341	5,941,585	3,265,735	2,051,393	11,480,959

This table is of interest as showing the total value of stone that went for different purposes. The stone used for building showed an increase of \$3,953,960 in 1902, the figures for 1901 being \$16,836,381, and for 1902, \$20,790,341. In 1901 the increase in value was from \$10,672,598 in 1900 to \$15,112,600 in 1901, or \$4,440,002, a larger increase for 1901 than for 1902.

The stone for monumental use was valued at \$5,941,585 in 1902, and at \$4,734,699 in 1901, an increase of \$1,206,886. In 1901 this value decreased slightly as compared with 1900. This does not include any limestone or sandstone, a small amount of which was used for this purpose.

Flagstone and curbstone increased from \$2,797,849 in 1901 to \$3,265,735 in 1902, or \$467,886, and the value of paving stone decreased from \$2,180,341 in 1901 to \$2,051,393 in 1902, or \$128,948.

Crushed stone increased in value from \$8,560,432 in 1901 to \$11,480,959 in 1902, a gain of \$2,920,527.

As the crushed-stone industry has become such a decided factor in the quarry trade, the following table is given, showing the production



of crushed stone in 1901 and 1902 according to the variety of stone, and showing also the purpose for which this stone was used:

*Value of crushed stone in the United States in 1901 and 1902.*

## 1901.

Kind.	Railroad ballast.	Road making.	Concrete.	Total value.
Limestone .....	\$1,758,541	\$2,298,286	\$1,214,815	\$5,271,642
Sandstone.....	30,887	130,503	123,957	285,347
Granite .....	516,768	2,008,966	477,709	3,003,443
Total.....	2,306,196	4,437,755	1,816,481	8,560,432

## 1902.

Limestone .....	\$2,661,081	\$2,890,985	\$1,600,664	\$7,152,730
Sandstone.....	347,869	442,113	326,467	1,116,449
Granite .....	574,780	1,902,439	734,561	3,211,780
Total.....	3,583,730	5,235,537	2,661,692	11,480,959

In the following tables is shown the total value of the crushed stone produced in the United States in 1901 and 1902, by States.

*Value of crushed stone produced in the United States in 1901 and 1902, by States.*

## 1901.

State.	Granite.	Limestone.	Sandstone.	Total value.
Alabama .....		\$2,500		\$2,500
Arkansas.....	\$5,877	1,000	\$36,204	43,081
California.....	375,941	211,148	24,000	611,089
Colorado.....	2,190	100	15,500	17,790
Connecticut.....	216,306			216,306
Delaware.....	87,263			87,263
Florida.....		6,420		6,420
Georgia.....	98,170	13,581		111,751
Idaho.....		25		25
Illinois.....		1,155,746	20	1,155,766
Indiana.....		225,740		225,740
Indian Territory.....	450			450
Iowa.....		183,902	275	184,177
Kansas.....	37,333	137,283	450	175,066
Kentucky.....		99,415		99,415
Maine.....	90,499			90,499
Maryland.....	101,458	53,663		155,121
Massachusetts.....	191,823	150	65,400	257,373
Michigan.....	2,706	125,448		128,154
Minnesota.....	2,085	20,268	9,515	31,868
Missouri.....	27,862	295,470	2,896	326,228
Montana.....			2,300	2,300
Nebraska.....		67,309		67,309
New Hampshire.....	25,223			25,223
New Jersey.....	721,126	1,925	831	723,882
New York.....	320,610	627,884	18,715	967,209
North Carolina.....	85,083	4,668		89,751
Ohio.....		853,886	15,005	868,891
Oklahoma.....		24,534		24,534



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*Value of crushed stone produced in the United States in 1901 and 1902, by States—Cont'd.*

1901—Continued.

State.	Granite.	Limestone.	Sandstone.	Total value.
Oregon.....		\$12,100	\$49	\$12,149
Pennsylvania.....	\$369,078	746,895	56,942	1,172,915
Rhode Island.....	6,676			6,676
South Carolina.....	79,091	1,000		80,091
South Dakota.....	3,000			3,000
Tennessee.....		42,120	50	42,170
Texas.....		9,250	10,000	19,250
Utah.....		23		23
Vermont.....	2,107	610		2,717
Virginia.....	60,008	77,985		137,993
Washington.....	9,868	840	240	10,948
West Virginia.....			1,730	1,730
Wisconsin.....	81,610	268,729	1,519	351,858
Wyoming.....		25	23,706	23,731
Total.....	3,003,443	5,271,642	285,347	8,560,432

1902.

Alabama.....		\$12,890	\$200	\$13,090
Arkansas.....	\$11,000	22,510	44,746	78,256
California.....	266,103	26,900	187,750	480,753
Colorado.....	3,750		71,008	74,758
Connecticut.....	295,063			295,063
Delaware.....	109,462			109,462
Florida.....		11,008		11,008
Georgia.....	43,910	12,310		56,220
Hawaii.....			6,688	6,688
Illinois.....		1,220,772	25	1,220,797
Indiana.....		274,491	1,000	275,491
Indian Territory.....	320			320
Iowa.....		153,372	785	154,157
Kansas.....		383,904	42,050	425,954
Kentucky.....		327,217	55,000	382,217
Maine.....	9,944			9,944
Maryland.....	155,761	95,966	5,965	257,692
Massachusetts.....	427,035	1,093	296,529	724,657
Michigan.....		146,501		146,501
Minnesota.....	15,660	128,244	21,099	165,003
Missouri.....	38,044	502,741	1,350	542,135
Montana.....			750	750
Nebraska.....		52,742	43	52,785
New Hampshire.....	26,550			26,550
New Jersey.....	753,005	580	30,930	784,515
New York.....	318,003	1,084,594	50,552	1,462,149
North Carolina.....	67,196	21,063		88,259
Ohio.....		951,751	8,304	960,055
Oklahoma.....		9,000	800	9,800
Oregon.....	14,150		228	14,378
Pennsylvania.....	386,774	1,149,355	179,305	1,715,434
Rhode Island.....	15,410			15,410
South Carolina.....	60,233	350		60,583
South Dakota.....		9,600	168	9,768
Tennessee.....		70,713		70,713
Texas.....		18,993	42,207	61,200



*Value of crushed stone produced in the United States in 1901 and 1902, by States—Cont'd.*

1902—Continued.

State.	Granite.	Limestone.	Sandstone.	Total value.
Utah.....		\$400		\$400
Vermont.....	\$6,373	1,387		7,760
Virginia.....	78,275	19,455		97,730
Washington.....	22,974			22,974
West Virginia.....		157,351	\$25,041	182,392
Wisconsin.....	86,785	285,477	764	373,026
Wyoming.....			34,162	34,162
Total.....	3,211,780	7,152,730	1,116,449	11,480,959

The division of this product, according to the uses to which the stone was put, is shown in the table giving the values of the different varieties of stone by States and uses.

#### IMPORTS AND EXPORTS.

The figures following, giving statistics of the imports and exports of stone for the United States, are taken from data collected by the Bureau of Statistics of the Department of Commerce and Labor. These statistics are collected by fiscal years, and when the figures for a special year are given in this report, the year ending June 30 of the year mentioned is meant.

The value of the stone imported into this country for the fiscal year ending June 30, 1902, was \$1,641,388. The corresponding figures for previous years were \$1,276,602 for 1901, \$1,028,550 for 1900, \$883,852 for 1899. This shows an increase of \$144,698 in 1900; \$248,052 in 1901, and \$364,786 in 1902.

These values include rough and manufactured marble to the amount of \$680,533 in 1899, \$812,606 in 1900, \$1,024,687 in 1901, and in 1902 \$1,408,885. This shows an increase of \$132,073 in 1900, \$212,081 in 1901, and \$384,168 in 1902. The largest feature of the marble importation was rough and manufactured marble from Italy, which was valued at \$573,871 in 1899, \$665,221 in 1900, \$823,488 in 1901, and \$1,127,688 in 1902. This shows an increase of \$91,350 in 1900, \$158,267 in 1901, and \$304,200 in 1902, a notable increase in the last year. The other countries exporting to this country any considerable amount of marble are in order of importance, France, Mexico, Greece, United Kingdom, Belgium, Germany, and Denmark.

The rest of the stone, rough and manufactured, including slate imported to this country was valued at \$203,319 in 1899, \$215,944 in 1900, \$251,915 in 1901, and \$232,533 in 1902.

Besides the above, there was imported, chiefly from the Dominion of Canada, lime valued at \$58,066 in 1899, \$63,900 in 1900, \$65,399 in 1901, and \$91,785 in 1902.



The total value of the stone exported from the United States in 1902 was \$1,716,696. In comparison with exports in previous years, valued at \$1,886,756 in 1899, \$1,677,169 in 1900, and \$1,638,314 in 1901, there was a decrease of \$209,587 in 1900, a decrease of \$38,855 in 1901, and an increase of \$78,382 in 1902, as compared with the previous years.

Roofing slate is the largest factor of the exported stone, and amounted in value to \$1,363,617 in 1899, \$950,543 in 1900, \$898,262 in 1901, and \$945,352 in 1902. This shows a decrease of \$413,074 in 1902, a decrease of \$52,281 in 1901, and an increase of \$47,090 in 1900. The value of other manufactured stone exported in 1902 was \$644,071. In comparison with exports, valued at \$454,236 in 1899, \$606,229 in 1900, and \$646,332 in 1901, there was an increase of \$151,993 in 1900, an increase of \$40,103 in 1901, and a decrease of \$2,261 in 1902.

The unmanufactured stone exported was valued at \$172,273 in 1902, as compared with \$68,903 in 1899, \$120,397 in 1900, and \$93,720 in 1901. Most of the unmanufactured product is sent to the Dominion of Canada and the United Kingdom, the same being true of the manufactured product; but considerable quantities of unmanufactured were also shipped to Germany, Cuba, British Australasia, France, Mexico, Belgium, and the British West Indies, named in order of importance.

In addition to the stone, lime valued at \$39,447 was exported in 1902 chiefly to the Dominion of Canada. The value of the lime exported in previous years is given as \$73,385 in 1899, \$81,647 in 1900, and \$30,216 in 1901.

#### GRANITE.

The value of granite, including gneiss, mica-schist, lava, andesite, syenite, quartz-porphry, trap rock, basalt, and allied igneous rocks, quarried in the United States in 1902 was \$18,257,944. This, in comparison with the value of this stone produced in 1901, \$15,976,961, shows an increase of \$2,280,983. The increase in value of the stone quarried in 1901, \$15,976,961, over that quarried in 1900, \$12,675,617, was \$3,301,344, which shows that the increase for the year 1902, although considerable, did not equal the increase for 1901; and the increase in the value for 1900 as compared with 1899 was \$1,057,278.

In 1902 Massachusetts still held first place in the production of granite in the United States. Maine, Vermont, New Hampshire, and California followed in the order named.

In 1902 Maine showed the largest value for building stone, with Massachusetts second and New Hampshire third. Vermont showed the largest value for monumental stone, with Massachusetts second and Rhode Island third. The largest value for paving blocks was from Massachusetts followed closely by Maine, and third, by Georgia. The value of crushed stone was largest in New Jersey, Massachusetts, and California following.



The greatest increase was in the value of stone used for building purposes. In 1901 the value of this product, including dressed and rough stone sold by the quarrymen was \$5,660,129. In 1902 the value of this product was \$7,034,832, a gain of \$1,374,703. The rough building stone increased from a value of \$1,878,835 in 1901, to \$2,175,082 in 1902, a gain of \$296,247. The stone quarried and dressed by the producer for building purposes increased from \$3,781,294 in 1901 to \$4,859,750 in 1902, a gain of \$1,078,456.

The stone sold for monumental work in 1902, including the rough stock sold by the quarrymen for this purpose and the stone quarried and dressed for this purpose by the quarrymen was \$3,998,911. In 1901 this value was \$2,715,225, a gain of \$1,283,686. The rough monumental stock was valued at \$1,714,156 in 1902, and \$1,257,668 in 1901, an increase for 1902 of \$456,488. The dressed stone was valued at \$2,284,755 in 1902 and \$1,457,557 in 1901, an increase for 1902 of \$827,198.

The value of the paving blocks decreased from a value of \$1,821,431 in 1901, to a value of \$1,523,776 in 1902, a decrease of \$297,655.

The crushed stone increased from a value of \$3,003,443 in 1901 to a value of \$3,211,780 in 1902, an increase of \$208,337.

The following tables give the value of the granite produced in the United States in 1901 and 1902, by States and uses:

*Value of granite produced in the United States in 1901 and 1902, by States and uses.*

## 1901.

State.	Sold in the rough.			Dressed for building.	Dressed for monumental work.	Made into paving blocks.
	Building.	Monumental.	Other.			
Arkansas .....						\$2,627
California .....	\$24,057	\$38,755	\$6,815	\$358,832	\$72,257	46,300
Colorado .....	45,650	7,562		60,835	1,787	5,750
Connecticut .....	108,959	26,267	24,384	94,611	70,894	29,533
Delaware .....	9,069		2,678	1,750	400	32,191
Georgia .....	54,321	22,315	2,725	57,207	14,526	328,087
Idaho .....	100	5,000				
Indian Territory .....	2,340			7,800		
Kansas .....						
Maine .....	407,418	24,475	27,447	1,501,797	76,276	401,189
Maryland .....	181,608	20,180	1,500	188,568	7,800	51,637
Massachusetts .....	333,047	236,327	118,567	455,535	236,273	364,721
Michigan .....						
Minnesota .....	13,215	42,197	1,550	55,017	96,902	20,002
Missouri .....	550	17,406	2,095			40,651
Montana .....				15,600	3,500	
Nevada .....						
New Hampshire .....	156,832	52,231	9,797	363,957	171,239	112,581
New Jersey .....	60,905	2,515		19,888		87,933
New York .....	24,312	1,325	6,150	97,350	6,283	33,025
North Carolina .....	27,464	4,105	2,212	68,975	6,813	10,862
Oregon .....	3,748	250	1,590	3,900	1,116	
Pennsylvania .....	63,568	1,050	4,538	18,916	227	15,712



## STONE.

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Value of granite produced in the United States in 1901 and 1902, by States and uses—  
Continued.

1901—Continued.

State.	Sold in the rough.			Dressed for building.	Dressed for monumental work.	Made into paving blocks.
	Building.	Monumental.	Other.			
Rhode Island.....	\$9,722	\$92,974	\$110	\$160,190	\$198,831	\$27,666
South Carolina.....	56,831	23,433	5,730	165,594	12,789	8,276
South Dakota.....	25,106	.....	2,159	1,650	.....	52,089
Texas.....	2,652	11,521	.....	243	10,400	.....
Utah.....	2,288	3,300	.....	.....	.....	.....
Vermont.....	208,825	534,755	101,779	16,343	354,563	16,304
Virginia.....	40,763	8,300	230	45,737	52,404	17,253
Washington.....	9,100	2,250	.....	3,000	.....	3,360
Wisconsin.....	3,575	79,175	28,015	17,999	62,277	113,682
Wyoming.....	2,810	.....	.....	.....	.....	.....
Total.....	1,878,835	1,257,668	350,071	3,781,294	1,457,557	1,821,431

  

State.	Curbing and flagging.	Crushed stone.			Riprap, rubble, etc.	Total.
		Railroad ballast.	Road making.	Concrete.		
Arkansas.....	\$12,496	.....	\$3,500	\$2,377	\$2,554	\$23,554
California.....	22,200	\$62,103	110,871	202,967	189,518	1,134,675
Colorado.....	397	.....	750	1,440	14,825	138,996
Connecticut.....	14,358	.....	213,672	2,634	31,342	616,654
Delaware.....	2,853	a 87,263	.....	.....	535,000	671,204
Georgia.....	155,920	25,700	35,545	36,925	28,375	761,646
Idaho.....	.....	.....	.....	.....	.....	5,100
Indian Territory.....	62	37,333	.....	450	545	48,530
Kansas.....	.....	.....	.....	.....	.....	.....
Maine.....	124,535	25,325	59,714	5,460	49,480	2,703,116
Maryland.....	42,045	13,092	37,962	50,404	18,560	613,356
Massachusetts.....	146,325	5,455	135,775	50,593	133,640	2,216,258
Michigan.....	.....	.....	2,706	.....	.....	2,706
Minnesota.....	18,155	40	1,025	1,020	10,982	260,105
Missouri.....	3,142	.....	27,862	.....	4,100	95,806
Montana.....	200	.....	.....	.....	.....	19,300
Nevada.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	28,708	3,615	7,140	14,468	14,926	935,494
New Jersey.....	.....	43,500	677,176	450	1,800	894,167
New York.....	773	40,000	262,410	18,200	.....	489,828
North Carolina.....	51,733	64,660	17,223	3,200	4,041	261,288
Oregon.....	150	.....	.....	.....	.....	10,754
Pennsylvania.....	7,611	48,686	294,986	25,406	5,308	486,008
Rhode Island.....	2,456	.....	5,676	1,000	3,073	501,698
South Carolina.....	2,723	46,835	21,806	10,450	641,617	996,084
South Dakota.....	795	.....	.....	3,000	15,142	99,941
Texas.....	2,189	.....	.....	.....	.....	27,005
Utah.....	.....	.....	.....	.....	.....	5,588
Vermont.....	10,400	400	1,707	.....	752	1,245,828
Virginia.....	7,977	7,841	9,850	42,317	43,029	275,701
Washington.....	9,000	4,920	.....	4,948	7,230	43,808
Wisconsin.....	3,500	.....	81,610	.....	120	389,953
Wyoming.....	.....	.....	.....	.....	.....	2,810
Total.....	670,703	516,768	2,008,966	477,709	1,755,959	15,976,961

a Includes roadmaking.



*Value of granite produced in the United States in 1901 and 1902, by States and uses—*  
Continued.

1902.

State.	Sold in the rough.			Dressed for building.	Dressed for mon- umental work.	Made into pav- ing blocks.	Curbing.	Flag- ging.
	Building.	Monu- mental.	Other.					
Arkansas .....	\$50	\$215	.....	\$600	.....	.....	\$75	.....
Arizona .....	.....	.....	.....	.....	\$3,000	.....	.....	.....
California .....	230,988	34,992	\$8,455	133,574	43,855	\$144,160	28,205	\$495
Colorado .....	47,752	8,770	.....	1,800	1,513	.....	.....	.....
Connecticut .....	117,802	28,862	3,929	200,262	66,899	34,579	23,080	371
Delaware .....	20,640	.....	4,593	2,407	.....	9,675	4,701	.....
Georgia .....	30,159	45,814	12,330	99,213	18,565	151,779	317,164	12,533
Idaho .....	840	.....	.....	7,700	1,800	.....	850	.....
Indian Territory .....		.....	.....	.....	.....	.....	.....	.....
Maine .....	485,217	52,836	12,720	1,435,803	155,305	354,530	112,290	10,238
Maryland .....	139,856	15,825	4,150	323,239	17,500	30,521	35,955	7,301
Massachusetts .....	400,842	412,172	123,399	965,342	381,872	358,398	111,184	15,614
Minnesota .....	17,154	80,656	2,700	181,089	154,825	3,280	15,340	480
Missouri .....	3,000	27,051	.....	29,283	2,185	42,359	6,900	.....
Montana .....	16,600	100	.....	16,000	250	.....	300	.....
Nevada .....	.....	.....	.....	150	1,800	.....	140	.....
New Hampshire .....	148,579	57,335	8,564	471,337	289,400	101,548	22,328	340
New Jersey .....	70,884	2,940	450	43,761	.....	72,404	.....	.....
New York .....	131,549	1,500	975	175,904	7,180	6,562	827	640
North Carolina .....	26,490	820	1,250	131,525	8,804	6,986	79,332	3,283
Oregon .....	3,931	2,750	1,000	5,460	2,000	6,400	.....	375
Pennsylvania .....	121,198	1,650	525	78,678	450	44,411	6,799	.....
Rhode Island .....	18,798	111,752	750	120,767	438,967	14,657	5,478	160
South Carolina .....	70,580	20,986	333,728	71,000	24,290	4,547	7,059	500
Texas .....	10,345	17,135	.....	3,439	29,084	.....	.....	.....
Utah .....	495	534	.....	.....	450	.....	.....	.....
Vermont .....	28,845	756,007	23,896	289,567	453,187	2,855	5,770	.....
Virginia .....	21,158	12,500	.....	28,840	51,612	14,845	29,796	550
Washington .....	9,870	4,304	.....	12,057	11,953	5,000	10,273	.....
Wisconsin .....	1,460	16,650	500	30,953	118,009	114,280	.....	.....
Other States .....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	2,175,082	1,714,156	543,914	4,859,750	2,284,755	1,523,776	823,846	52,880

State.	Crushed stone.			Rubble.	Riprap.	Other.	Total.
	Road mak- ing.	Railroad ballast.	Concrete.				
Arkansas .....	\$9,000	\$2,000	.....	\$175	.....	.....	\$12,115
Arizona .....	.....	.....	.....	.....	.....	.....	3,000
California .....	135,842	13,861	\$116,400	24,635	\$48,099	\$174,118	1,137,679
Colorado .....	3,750	.....	.....	2,438	.....	.....	66,023
Connecticut .....	238,261	2,250	54,552	8,468	32,426	400	812,141
Delaware .....	41,237	57,291	10,934	61,066	63,300	909	276,753
Georgia .....	26,741	10,122	7,047	50,870	.....	21,441	803,778
Idaho .....	.....	.....	320	1,400	.....	.....	12,910
Indian Territory .....		.....	.....	.....	.....	.....	.....
Maine .....	8,070	90	1,784	6,318	13,077	11,172	2,659,450
Maryland .....	74,522	26,535	54,704	9,055	2,250	16,790	758,203
Massachusetts .....	278,656	50,795	97,584	224,187	26,460	4,892	3,451,397
Minnesota .....	12,635	1,525	1,500	6,605	1,200	.....	478,989
Missouri .....	18,803	.....	19,241	.....	3,451	5,435	157,703



*Value of granite produced in the United States in 1901 and 1902, by States and uses—*  
Continued.

1902—Continued.

State.	Crushed stone.			Rubble.	Riprap.	Other.	Total.
	Road mak- ing.	Railroad ballast.	Concrete.				
Montana .....					\$43,800		\$77,050
Nevada .....							2,090
New Hampshire .....	\$16,788	\$1,750	\$8,012	\$810	17,056	\$3,250	1,147,097
New Jersey .....	578,424	59,546	115,035	700	4,330		948,474
New York .....	193,435	30,126	94,442	6,874	1,000		651,014
North Carolina .....	4,910	54,080	8,206	6,888	3,676	2,500	338,750
Oregon .....	11,500	1,550	1,100	1,550	813		38,429
Pennsylvania .....	140,166	188,129	58,479	16,769	3,488	320	661,062
Rhode Island .....	12,808	42	2,560	2,974	621	4,289	734,623
South Carolina .....	650	23,510	36,073	5,685		340	598,848
Texas .....							60,003
Utah .....							1,479
Vermont .....	3,348	3,025		2,000	108	1,815	1,570,423
Virginia .....	6,133	25,554	46,588	26,255	17,215	1,000	282,046
Washington .....		22,974		34,054	36,788		147,273
Wisconsin .....	86,760	25		500			369,137
Other States .....							
Total .....	1,902,439	574,780	734,561	500,176	319,158	248,671	18,257,944

The following table shows the value of the production of granite in the United States from 1898 to 1902, inclusive:

*Value of granite produced in the United States, 1898-1902.*

State.	1898.	1899.	1900.	1901.	1902.
Arkansas .....		\$39,470	\$62,500	\$23,554	\$12,115
Arizona .....					3,000
California .....	\$247,429	471,665	738,993	1,134,675	1,137,679
Colorado .....	25,923	78,261	143,054	138,996	66,023
Connecticut .....	682,768	516,886	507,754	616,654	812,141
Delaware .....	677,754	1,039,349	608,028	671,204	276,753
Georgia .....	339,311	411,344	380,434	761,646	803,778
Idaho .....			2,450	5,100	12,910
Indian Territory .....				48,530	
Kansas .....			30,000		
Maine .....	1,032,621	1,321,082	1,568,573	2,703,116	2,659,450
Maryland .....	317,258	423,823	486,822	613,356	758,203
Massachusetts .....	1,650,508	1,798,294	1,698,605	2,216,258	3,451,397
Michigan .....			3,957	2,706	
Minnesota .....	79,309	159,459	221,684	260,105	478,989
Missouri .....	78,423	151,688	139,103	95,806	157,708
Montana .....		9,950	9,091	19,300	77,050
Nevada .....					2,090
New Hampshire .....	683,595	802,636	870,646	935,494	1,147,097
New Jersey .....	753,513	779,822	1,170,555	894,167	948,474
New York .....	516,847	306,711	446,171	489,828	651,014
North Carolina .....	79,969	225,544	257,962	261,288	338,750
Oregon .....		3,012	5,313	10,754	38,429



*Value of granite produced in the United States, 1898-1902—Continued.*

State.	1898.	1899.	1900.	1901.	1902.
Pennsylvania.....	\$237,780	\$385,101	\$396,271	\$486,008	\$661,062
Rhode Island.....	320,242	400,128	444,316	501,698	734,623
South Carolina.....	169,518	361,034	500,802	996,084	598,848
South Dakota.....	17,443	91,049	114,115	99,941	(a)
Texas.....	4,685	84,945	76,069	27,005	60,003
Utah.....	3,545	4,735	2,170	5,588	1,479
Vermont.....	1,084,218	1,212,967	1,113,788	1,245,828	1,570,423
Virginia.....	136,180	223,380	211,080	275,701	282,046
Washington.....	9,700	42,766	48,900	43,808	147,273
Wisconsin.....	175,867	270,538	407,711	389,953	369,137
Wyoming.....		2,700	8,700	2,810	.....
Total.....	9,324,406	11,618,339	12,675,617	15,976,961	18,257,944

a Value of quartzite included in sandstone for 1902.

The following tables show the value of the trap rock produced in the United States in 1901 and 1902, by States and uses:

*Value of trap rock produced in the United States in 1901 and 1902, by States and uses.*

## 1901.

State.	Sold in rough.	Made into paving blocks.	Crushed for roads or ballast.	Other purposes.	Total.
California.....		\$1,250	\$121,120	\$4,627	\$126,997
Connecticut.....		193	202,006	11,784	213,983
Massachusetts.....			128,079	2,469	130,548
New Jersey.....		83,922	633,129	44,286	761,337
New York.....		22,750	161,248	5,985	189,983
Pennsylvania.....		1,890	281,706	4,413	288,009
Total.....		110,005	1,527,288	73,564	1,710,857

## 1902.

State.	Build- ing.	Paving.	Crushed stone.			Other.	Total.
			Road mak- ing.	R. R. bal- last.	Concrete.		
California.....			\$95,409	\$1,065	\$115,000	\$316	\$211,790
Connecticut.....	\$1,057	\$274	235,743	2,250	48,188	.....	287,512
Massachusetts.....	13,675		239,552	47,131	70,182	.....	370,540
New Jersey.....	34,640	66,727	532,128	59,546	80,835	3,496	777,372
New York.....			164,723	26,126	19,151	.....	210,000
Pennsylvania.....	4,080	13,244	121,194	152,649	32,456	320	823,943
Total.....	53,452	80,245	1,888,749	288,767	365,812	4,132	2,181,157



## SANDSTONE.

The value of the sandstone quarried in 1902 in the United States was \$10,601,171. This shows an increase of \$2,462,491 over the value for 1901, which was \$8,138,680.

The bluestone production of New York and Pennsylvania, although practically it forms an industry by itself, is included in the above sandstone total.

The entire value of the bluestone produced in these two States was valued at \$1,163,525 in 1902, as compared with \$1,164,481 in 1901, the values for the two years being almost identical. Deducting the value of the bluestone, we have the sandstone production for 1902 valued at \$9,437,646, as compared with \$6,974,199 in 1901; an increase of \$2,463,447. In the figures for 1901 and 1902 no attempt is made to show the value of stone used for abrasives, such as grindstones, whetstones, buhrstones, etc., as these are included in the report on abrasive materials published by this office.

The States showing an increased production were Alabama, Arkansas, California, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Texas, Utah, West Virginia, Wisconsin, and Wyoming. Arizona, Connecticut, Idaho, Nebraska, North Carolina, South Dakota, Tennessee, Virginia, and Washington showed a decrease in value of production. Georgia, Hawaii, Nevada, and Oklahoma, were added to the list of States producing, and made the States and Territories producing sandstone in the United States number forty-one.

Pennsylvania, Ohio, and New York are the largest producers and show values of production of \$2,800,108, \$2,078,754, and \$1,408,699, respectively. The next State approaching these States in production is Massachusetts, with a value of \$487,366. The production of the three principal States in 1901 was: Pennsylvania, \$2,063,082; Ohio, \$1,999,180; and New York, \$1,331,327.

Pennsylvania, Ohio, and New York, in the order named, produced the largest quantities of building sandstone in 1902, the values for these States being \$1,916,959 for Pennsylvania, \$1,279,910 for Ohio, and \$550,439 for New York. In Ohio most of the stone is sold by the quarrymen as rough stone, in Pennsylvania as dressed stone, while in New York it is about evenly divided between the two. New York gives the greatest value for stone for curbing and also for paving, and Ohio for flagstones.

In 1901 the total value of the sandstone sold by the quarrymen for building purposes was \$4,875,973; in 1902 the dressed and rough building stone sold by the quarrymen amounted to \$6,007,484, an increase



of \$1,131,511, which accounted for \$1,000,000 of the entire increase in the value of the sandstone production. The value of the crushed-stone product increased from \$285,347 in 1901 to \$1,116,449 in 1902, an increase of \$831,102.

The value of stone used for paving increased from \$358,910 in 1901 to \$527,617 in 1902, or \$167,707; flagstones increased in value from \$1,026,499 in 1901 to \$1,142,699 in 1902, or \$116,200; curbing increased from \$636,722 to \$672,654, or \$35,932.

The following tables show the values of the sandstone production of the United States in 1901 and 1902, by States and uses:

*Value of sandstone produced in the United States in 1901 and 1902, by States and uses.*

## 1901.

State.	Building purposes.	Crushed stone.			Paving.
		Railroad ballast.	Road making.	Concrete.	
Alabama .....	\$1,880				
Arizona .....	202,500				
Arkansas .....	10,805	\$700	\$15,136	\$20,368	\$2,000
California .....	230,521		23,000	1,000	29,594
Colorado .....	93,534		15,500		
Connecticut .....	114,795				
Idaho .....	20,843				
Illinois .....	8,720	20			523
Indiana .....	23,475				650
Iowa .....	13,491		275		251
Kansas .....	15,981	450			1,775
Kentucky .....	100,569				6,000
Maryland .....	4,546				
Massachusetts .....	176,850		14,600	50,800	
Michigan .....	128,909				
Minnesota .....	85,800		3,015	6,500	82,500
Missouri .....	32,899		2,884	12	1,890
Montana .....	39,135			2,300	
Nebraska .....	515				
New Jersey .....	211,318		756	75	64
New York .....	512,352	6,125	9,560	3,030	168,596
North Carolina .....	11,100				
Ohio .....	986,650	2,000	5,230	7,775	
Oregon .....	482		49		
Pennsylvania .....	1,544,621	20,157	28,919	7,866	65,067
South Dakota .....	13,325				
Tennessee .....	10,180			50	
Texas .....	39,605		10,000		
Utah .....	32,636				
Virginia .....	4,703				
Washington .....	67,480			240	
West Virginia .....	95,406	1,435	60	235	
Wisconsin .....	72,229		1,519		
Wyoming .....	18,118			23,706	
Total .....	4,875,973	30,887	130,503	123,957	358,910



*Value of sandstone produced in the United States in 1901 and 1902, by States and uses—*  
Continued.

1901—Continued.

State.	Riprap, rubble, etc.	Curbing.	Flagstones.	Other purposes.	Total value.
Alabama .....	\$2,000			\$4,800	\$8,680
Arizona .....					202,500
Arkansas .....	3,278	\$10,256	\$232	50	62,825
California .....	16,633		280		301,028
Colorado .....	24,406		85,491	18,400	237,331
Connecticut .....	1,470			30,549	146,814
Idaho .....					20,843
Illinois .....	355		2,042	1,224	12,884
Indiana .....	4,098		111		28,334
Iowa .....	178		71	75	14,341
Kansas .....	125		31,370	200	49,901
Kentucky .....			830	860	108,259
Maryland .....					4,546
Massachusetts .....	400			4,660	247,310
Michigan .....	26,519			19,000	174,428
Minnesota .....	52,870			16,000	246,685
Missouri .....	3,278	146	464	597	42,170
Montana .....	15,684		200	1,120	58,439
Nebraska .....					515
New Jersey .....	18,705			13,594	244,512
New York .....	12,579	281,679	269,790	67,616	1,331,327
North Carolina .....	582				11,682
Ohio .....	95,563	233,965	510,568	207,429	1,999,180
Oregon .....					531
Pennsylvania .....	78,243	85,676	113,508	119,025	2,063,082
South Dakota .....	4,272			50	17,647
Tennessee .....				112	10,342
Texas .....	28,918	25,000	8,000	45	111,568
Utah .....	3,224		3,000	59	38,919
Virginia .....	600				5,303
Washington .....	20,050			1,404	89,174
West Virginia .....	5,660		214		103,010
Wisconsin .....	15,509		328	840	90,425
Wyoming .....	12,321				54,145
Total .....	447,520	636,722	1,026,499	507,709	8,138,680



*Value of sandstone produced in the United States in 1901 and 1902, by States and uses—*  
Continued.

1902.

State.	Rough building.	Dressed building.	Crushed stone.			Ganister.	Riprap.
			Road- making.	Railroad ballast.	Concrete.		
Alabama .....		\$14,252			\$200		\$8,727
Arizona .....	\$9,570	75,000					4,800
Arkansas .....	8,374	1,420		\$38,475	6,271		415
California .....	80,038	123,240	\$37,750	4,000	146,000		71,090
Colorado .....	93,116	15,267		65,000	6,008		2,347
Connecticut .....	123,634	4,945					
Georgia .....	1,250						
Hawaii .....			6,688				
Idaho .....	7,823	434					
Illinois .....	21,185	4,100	25				1,000
Indiana .....	24,565	5,564	1,000				450
Iowa .....	9,044	775	750		35		
Kansas .....	10,157	2,080		42,050			
Kentucky .....	47,775	5,600	5,000	50,000			
Maryland .....	7,210		10	4,500	1,455		545
Massachusetts .....	93,197	96,595	256,273		40,256		
Michigan .....	136,280	23,600					800
Minnesota .....	30,796	70,935	5,400		15,699		4,061
Missouri .....	32,880	15,323		900	450		345
Montana .....	4,822	61,158			750		3,795
Nebraska .....	96	24	18		25		
Nevada .....	2,383						
New Jersey .....	232,051	81,145	50		30,880		
New Mexico .....	6,800	2,125					
New York .....	279,009	271,430	50,447	3,795	5,310		5,452
North Carolina .....	750	4,000					
Ohio .....	1,067,938	211,972	1,554	75	6,675	\$1,595	21,853
Oklahoma .....	24,281		1,028				
Oregon .....							
Pennsylvania .....	491,235	1,425,724	30,742	129,591	18,972	92,471	62,927
South Dakota .....	19,970	22,192		168			3,652
Tennessee .....	6,950	600					
Texas .....	4,832	28,000	16,300		25,907		59,919
Utah .....	63,529	265					
Virginia .....	2,200	300					
Washington .....	2,500	15,225					8,000
West Virginia .....	104,601	193,157	3,995	8,685	12,361		3,323
Wisconsin .....	54,392	85,353	83	630	51	18,534	5,436
Wyoming .....	14,003	26,448	25,000		9,162		332
Total .....	3,119,236	2,888,248	442,113	347,869	326,467	112,600	269,269

State.	Rubble.	Paving.	Flagstone.	Curbing.	Other.	Total value.
Alabama .....	\$16,675				\$2,852	\$42,706
Arizona .....	18,300				240	107,910
Arkansas .....	3,115	\$9,810	\$2,979	\$14,878	180	85,917
California .....	210					462,328
Colorado .....	37,998	718	101,486	42,607	1,614	366,161
Connecticut .....						128,579
Georgia .....						1,250
Hawaii .....						6,688



*Value of sandstone produced in the United States in 1901 and 1902, by States and uses—*  
Continued.

1902—Continued.

State.	Rubble.	Paving.	Flagstone.	Curbing.	Other.	Total value.
Idaho .....	\$5,520					\$13,777
Illinois .....	2,925	\$2,400	\$160		\$405	32,200
Indiana .....	1,069	240	120	\$4,585		37,593
Iowa .....	3,157		75		1,225	15,061
Kansas .....	6,162	275	21,124	23,561	100	105,509
Kentucky .....		1,075	7,420	4,900	6,700	128,470
Maryland .....	1,035				650	15,405
Massachusetts .....	1,000			45		487,366
Michigan .....	27,393					188,073
Minnesota .....	29,351	140,726	225	43,659	6,620	347,472
Missouri .....	3,001		881	1,710	1,500	56,990
Montana .....	4,462		390	2,435	7,340	85,152
Nebraska .....	5					168
Nevada .....	3,657			75		6,115
New Jersey .....	59,777		2,200		623	406,726
New Mexico .....	50	360	756	950	1,250	12,291
New York .....	18,583	264,858	230,158	272,831	6,826	1,408,699
North Carolina .....	75					4,825
Ohio .....	44,471	750	664,659	43,077	14,135	2,078,754
Oklahoma .....						25,309
Oregon .....						
Pennsylvania .....	202,295	26,985	104,521	174,184	40,461	2,800,108
South Dakota .....	24,447	39,260		500	600	110,789
Tennessee .....					120	7,670
Texas .....	7,000			22,850	757	165,565
Utah .....		35,000	2,200	4,010	7	105,011
Virginia .....						2,500
Washington .....	5,000					30,725
West Virginia .....	79,030		2,745	15,635		423,532
Wisconsin .....	29,760	160		112	12,575	207,086
Wyoming .....	10,096	5,000	600	50		90,691
Total .....	645,619	527,617	1,142,699	672,654	106,780	10,601,171

The following table shows the value of the sandstone production in the United States from 1898 to 1902, inclusive, by States:

*Value of sandstone production in the United States, 1898-1902, by States.*

State.	1898.	1899.	1900.	1901.	1902.
Alabama .....	\$27,882	\$71,676	\$7,132	\$8,680	\$42,706
Arizona .....	57,444	4,168	64,000	202,500	107,910
Arkansas .....	24,825	73,616	104,923	62,825	85,917
California .....	358,908	261,193	200,090	301,023	462,328
Colorado .....	89,637	129,815	119,658	237,331	366,161
Connecticut .....	215,733	271,623	192,593	146,814	128,579
Georgia .....			600		1,250
Hawaii .....					6,688
Idaho .....			438	20,843	13,777
Illinois .....	13,758	16,133	19,141	12,884	32,200
Indiana .....	45,342	35,636	45,063	28,834	37,593



*Value of sandstone production in the United States, 1898-1902, by States—Continued.*

State.	1898.	1899.	1900.	1901.	1902.
Iowa .....	\$7,102	\$24,348	\$19,063	\$14,341	\$15,061
Kansas .....	19,528	49,629	55,173	49,901	105,509
Kentucky .....	72,525	119,982	56,178	108,259	128,470
Louisiana .....	200,500	<sup>a</sup> 226,503	<sup>b</sup> 118,192		
Maryland .....	13,646	24,426	6,655	4,546	15,405
Massachusetts .....	91,287	131,877	153,427	247,310	487,366
Michigan .....	222,376	320,192	238,650	174,428	188,073
Minnesota .....	175,810	294,615	267,000	246,685	347,472
Missouri .....	48,795	57,662	53,401	42,170	56,990
Montana .....	3,682	26,160	59,630	58,439	85,152
Nebraska .....				515	168
Nevada .....					6,115
New Jersey .....	257,217	147,768	198,234	244,512	406,726
New Mexico .....	3,500	1,829	2,500		12,291
New York .....	566,133	<sup>c</sup> 1,218,053	<sup>c</sup> 1,467,496	<sup>c</sup> 1,331,327	<sup>c</sup> 1,408,699
North Carolina .....	9,100	10,300	27,210	11,682	4,825
Ohio .....	1,494,746	1,775,642	2,233,596	1,999,180	2,078,754
Oklahoma .....					
Oregon .....	7,864	4,153	5,450	531	25,309
Pennsylvania .....	478,451	<sup>c</sup> 717,053	<sup>c</sup> 1,050,248	<sup>c</sup> 2,063,082	<sup>c</sup> 2,800,108
South Dakota .....	9,000	18,325	12,675	17,647	110,789
Tennessee .....			11,300	10,342	7,670
Texas .....	77,190	35,738	37,038	111,568	165,565
Utah .....	15,752	29,091	66,733	38,919	105,011
Virginia .....		8,000	6,000	5,303	2,500
Washington .....	15,575	58,395	68,133	89,174	30,725
West Virginia .....	14,381	33,860	72,438	103,010	423,532
Wisconsin .....	80,341	132,901	81,571	90,425	207,086
Wyoming .....	6,382	32,583	27,671	54,145	90,691
Total .....	4,724,412	6,362,944	7,149,300	8,138,680	10,601,171

<sup>a</sup>Includes small amounts for Idaho and Nevada.

<sup>b</sup>Includes Mississippi.

<sup>c</sup>Includes bluestone.

The following table shows the value and uses of the bluestone produced in New York and Pennsylvania in 1901 and 1902:

*Value and uses of bluestone produced in New York and Pennsylvania in 1901 and 1902.*

1901.

State.	Building purposes.	Flagging.	Curbing.	Gutter and crossings.	Coping, steps, sills, and lintels.	Other purposes.	Total value.
New York .....	\$156,091	\$230,453	\$206,455	\$32,466	\$164,296	\$48,363	\$838,124
Pennsylvania .....	103,718	87,008	42,747	12,189	35,044	45,651	326,357
Total .....	259,809	317,461	249,202	44,655	199,340	94,014	1,164,481

1902.

State.	Building purposes.	Flagging.	Curbing.	Crushed stone.	Other purposes.	Total value.
New York .....	\$302,947	\$203,743	\$152,241	\$28,847	\$9,935	\$697,713
Pennsylvania .....	177,296	92,469	69,556	90,209	36,282	465,812
Total .....	480,243	296,212	221,797	119,056	46,217	1,163,525



## SLATE.

The production of slate in 1902 increased in value from \$4,787,525 in 1901 to \$5,696,051, a gain of \$908,526. This increase was principally in Pennsylvania and Vermont. California, Georgia, Maine, Maryland, and New York also increased, while New Jersey and Virginia decreased in value of production. Minnesota reported no production in 1902, and Arkansas was added to the list of producers.

The increase in production was from 1,304,379 squares, valued at \$4,114,410, in 1901, to 1,435,168 squares, valued at \$4,950,428, in 1902, an increase in quantity of 130,789 squares, and in value of \$836,018. The increase in value of mill stock was from \$673,115 in 1901 to \$745,623 in 1902, or a gain of \$72,508.

The increase in the average value per square of roofing slate produced in 1902 over that produced in 1901 is quite noticeable, the average value per square in 1902 being \$3.45, while in 1901 the average value per square was \$3.15. The highest average value in 1902 for a State production was \$8 per square in Arkansas, and the lowest was \$3.30 per square in Pennsylvania.



The following tables show the value of roofing and milled slate produced in the United States in 1901 and 1902, by States:

*Value of roofing and mill slate produced in the United States in 1901 and 1902, by States.*

## 1901.

State.	Roofing slate.		Value of milled stock.	Total value.
	Number of squares.	Value.		
California.....	2,500	\$18,608	.....	\$18,608
Georgia.....	800	3,000	.....	3,000
Maine.....	20,791	111,295	\$91,030	202,325
Maryland.....	20,153	104,781	1,017	105,798
Minnesota.....	.....	.....	1,400	1,400
New Jersey.....	7,500	30,000	.....	30,000
New York.....	15,786	91,805	9,155	100,960
Pennsylvania.....	853,028	2,591,625	392,639	2,984,264
Vermont.....	330,191	984,317	177,874	1,162,191
Virginia.....	53,630	178,979	.....	178,979
Total.....	1,304,379	4,114,410	673,115	4,787,525

## 1902.

Arkansas.....	(a)	(a)	.....	(a)
California.....	(a)	(a)	.....	(a)
Georgia.....	(a)	(a)	.....	(a)
Maine.....	26,468	\$143,832	\$62,726	\$206,558
Maryland.....	22,569	117,155	929	118,084
New Jersey.....	(a)	(a)	.....	(a)
New York.....	21,165	116,628	10,090	126,718
Pennsylvania.....	908,206	3,001,545	545,777	3,547,322
Vermont.....	400,029	1,338,817	126,101	1,464,918
Virginia.....	42,731	160,951	.....	160,951
Other States <sup>b</sup> .....	14,000	71,500	.....	71,500
Total.....	1,435,168	4,950,428	745,623	5,696,051

<sup>a</sup> Included in the statement for Other States.

<sup>b</sup> Includes Arkansas, California, Georgia, and New Jersey.

The following table shows the average value of roofing slate per square since 1890:

*Average annual price per square of roofing slate for the entire country.*

1890.....	\$3.34	1897.....	\$3.09
1891.....	3.49	1898.....	3.42
1892.....	3.56	1899.....	3.14
1893.....	3.55	1900.....	3.01
1894.....	3.11	1901.....	3.15
1895.....	3.23	1902.....	3.45
1896.....	3.36		



*Value of slate produced in the United States, 1898-1902.*

State.	1898.	1899.	1900.	1901.	1902.
Arkansas .....					(a)
California .....	\$2,700	\$6,642	\$26,500	\$18,608	(a)
Georgia .....	13,125		9,375	3,000	(a)
Maine .....	199,237	181,766	177,342	202,325	\$206,558
Maryland .....	82,240	93,595	128,673	105,798	113,084
Massachusetts .....	958				
Minnesota .....	400		700	1,400	
New Jersey .....	800	(a)	13,600	30,000	(a)
New York .....	48,694	76,675	62,755	100,960	126,718
Pennsylvania .....	2,491,756	2,537,022	2,713,598	2,984,264	3,547,322
Tennessee .....		(a)	250		
Utah .....		(a)			
Vermont .....	732,684	872,673	917,462	1,162,191	1,464,918
Virginia .....	150,946	183,110	190,211	178,979	160,951
Other States .....		11,250			b 71,500
Total .....	3,723,540	3,962,733	4,240,466	4,787,525	5,696,051

<sup>a</sup> Included in Other States.<sup>b</sup> Includes Arkansas, California, Georgia, and New Jersey.**EXPORTS.**

The export trade in roofing slate, which rose so precipitately in value from \$780,112 in 1897 to \$1,370,075 in 1898, and which had decreased up to 1901, showed a slight increase in 1902. In 1902 the value of roofing slate exported, as shown in the figures of the Bureau of Statistics of the Department of Commerce and Labor, was \$945,352, an increase of \$47,090 over the value, \$898,262, given for 1901. The chief exportation is to Great Britain, to which slate to the value of \$731,556 was sent in 1902. In 1898 the value of roofing slate exported to Great Britain was \$1,213,377. Exports of slate to British Australasia, which have been increasing for the last four years, are next in value, amounting to \$79,319 in 1901 and to \$121,921 in 1902. The exportation to Denmark is next. Beginning in 1898 with \$8,150, the value of roofing slate exported to this country has since risen to \$47,957 in 1902.

Most of this slate is shipped from New York, Philadelphia, Baltimore, and Boston.



The following table shows the ports and customs districts from which and to which slate has been exported since 1893:

*Exports of slate from the United States, showing ports and customs districts from which and to which sent, from 1893 to 1901.*

Port and customs district.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Baltimore, Md .....				\$9,860	\$101,581	\$170,916	\$99,083	\$110,049	\$135,571	\$240,734
Bangor, Me .....		\$445		350				577	1,144	449
Belfast, Me .....										375
Boston and Charlestown, Mass .....	\$1,086		\$443	609	1,020	385	40,622	65,531	93,972	48,299
Newport News, Va .....					18,170	65,290	42,220	19,950	12,910	6,650
New York, N. Y .....	36,306	19,684	31,092	242,559	557,099	986,638	968,395	592,288	388,590	374,264
Passamaquoddy, Me .....			192		120					164
Philadelphia, Pa .....				2,300	94,865	136,916	205,779	150,254	236,090	243,701
Portland and Falmouth, Me .....					270					
Brazos de Santiago, Tex. ....	5						14			
Corpus Christi, Tex .....			105	174		1,761				44
New Orleans, La .....		587								
Paso del Norte, Tex .....		621								20
Puget Sound, Wash .....						22	67		1,436	1,343
San Diego, Cal .....							7			
Arizona .....									20	790
Buffalo Creek, N. Y .....	13,428	13,696	4,748	5,903	2,378	4,141	6,364	6,584	19,193	18,014
Champlain, N. Y .....	869	1,869	1,961	1,617	613	3,015	937	2,320	2,446	6,561
Detroit, Mich .....			65	2,874	2,427	854	129	1,441	380	
Huron, Mich .....	200							424		
Memphremagog, Vt .....									644	246
North and South Dakota .....	94	160				137		612	942	
Oswegatchie, N. Y .....								487	4,915	3,702
Vermont .....	24	133	200	139	1,569			26	9	
<b>Total .....</b>	<b>52,012</b>	<b>37,195</b>	<b>33,806</b>	<b>266,385</b>	<b>780,112</b>	<b>1,370,075</b>	<b>1,363,617</b>	<b>950,543</b>	<b>898,262</b>	<b>945,352</b>
Belgium .....							524			
France .....				12,000						
Germany .....			25	910	5,850	82,916	65,974	17,921	5,180	1,555
Netherlands .....					2,087	25	520		600	1,400
United Kingdom .....	1,400	4,800	3,000	197,440	695,980	1,213,377	1,188,962	813,918	727,088	731,556
Denmark .....						8,150	25,323	25,437	43,344	47,957
Norway and Sweden .....						270	669	859	1,857	25
Bermuda .....	1,046	336	1,550	2,312	1,395	157	230	202	3,222	443
Dominion of Canada:										
Nova Scotia, New Brunswick, etc. ....	119	445	406	1,278	730		288	798	1,209	532
Quebec, Ontario, etc. ....	14,615	15,858	6,974	10,533	6,977	8,147	7,430	11,894	27,587	28,600
British Columbia .....						22	67		2,378	1,343
Newfoundland and Labrador .....	32		13					30		
Central American States:										
Costa Rica .....										1,268
Guatemala .....						1,755				
Honduras .....		587								
Mexico .....	22	621	488	821	150	1,872	330		20	854
Miquelon, Langley, etc. ....						35			60	
West Indies:										
British .....		3,803	4,419	1,159	1,860	2,356	1,400	2,049	1,067	6,609
Haiti .....		330				26		332		



*Exports of slate from the United States, showing ports and customs districts from which and to which sent, from 1893 to 1901—Continued.*

Port and customs district.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Santo Domingo .....			\$10							
Cuba .....		\$2,643	3,258	\$90		\$673	\$16			
Colombia .....				259	\$100			\$285		
Guianas:										
British .....		712	702	440	165	600				
Dutch .....	\$3,145		340		1,640	1,325	2,275	650		\$365
Peru .....	405							1,000		
Uruguay .....				417		807	760	829	\$424	195
China .....						110				
East Indies—British .....				1,628	810	550				50
British Australasia .....	30,362	7,060	17,363	34,970	60,604	44,642	64,434	71,881	79,319	121,921
Hawaiian Islands .....				245	166		77			
British Africa .....	866		258	1,883	1,598	2,218	4,335	2,458	4,847	679
Portuguese Africa .....						42	3			
<b>Total.....</b>	<b>52,012</b>	<b>37,195</b>	<b>38,806</b>	<b>266,385</b>	<b>780,112</b>	<b>1,370,075</b>	<b>1,363,617</b>	<b>950,543</b>	<b>898,262</b>	<b>945,352</b>



## MARBLE.

The marble production of 1902 was valued at \$5,044,182. This is \$78,483 more than the value of the production of 1901, which was \$4,965,699. The production in Arkansas, California, Maryland, Massachusetts, Montana, New York, Oregon, Pennsylvania, Tennessee, Utah, and Washington increased in value, while the production of Georgia, New Mexico, and Vermont decreased slightly. Alabama and Connecticut, reporting no production in 1901, showed an output in 1902; and Alaska and Arizona reported no production in 1902. The production of Missouri and Oregon was small, and is included with the limestone figures for those States.

The following tables show the purposes for which the marble of the various producing States was sold by the quarrymen in 1901 and 1902:

*Value of the marble product, by uses and States, 1901 and 1902.*

## 1901.

State.	Rough.	Building.	Orna- mental.	Monu- mental.	Interior.	Other.	Total.
Alabama .....							
Alaska .....	\$4,500						\$4,500
Arizona .....	300						300
Arkansas .....	200		\$100				300
California .....	3,280	\$1,550	1,812				6,642
Connecticut .....							
Georgia .....	268,761	241,688	16,500	\$207,305	\$166,300	\$36,000	936,549
Iowa .....							
Maryland .....	8,100	45,000		15,000			68,100
Massachusetts .....	63,556	26,220	3,700	9,560	15,051	8,459	126,546
Missouri .....				2,100			2,100
Montana .....				1,500			1,500
New Mexico .....	4,200	3,000	300	3,100			10,600
New York .....	2,367	132,943	4,900	204,289	28,000	6,660	379,159
Oregon .....				500			500
Pennsylvania .....	18,078	111,069		25,060	400	2,940	157,547
Tennessee .....	162,513	13,000		14,000	305,124		494,637
Utah .....	320						320
Vermont .....	53,892	659,200	94,450	1,452,434	493,607		2,753,583
Washington .....	1,600	2,358	4,814	14,044			22,816
Total .....	591,667	1,236,023	126,576	1,948,892	1,008,482	54,059	4,965,699



*Value of the marble product, by uses and States, 1901 and 1902—Continued.*

1902.

State.	Rough.			Dressed.					Other purposes	Total.
	Build- ing.	Monu- men- tal.	Other.	Building.	Monu- men- tal.	Orna- men- tal.	Inter- ior deco- ration.	Other pur- poses.		
Alabama.....										(a)
Alaska.....										
Arizona.....										
Arkansas.....										(a)
California.....	\$13,400	\$98	\$19,700		\$4,000	\$100	\$55,000			\$92,298
Connecticut.....										(a)
Georgia.....	350,000	166,017	81,000	\$50,000	7,500		6,000			660,517
Maryland.....										(a)
Massachusetts.....	51,695			81,394		6,000	15,056		\$11,344	165,489
Missouri <sup>b</sup> .....										
Montana.....										(a)
New Mexico.....										(a)
New York.....	83,230	75,342	8,433	267,013	143,080	200				577,298
Oregon <sup>b</sup> .....										
Pennsylvania.....	22,446			110,977	24,000				3,000	160,423
Tennessee.....	227,337	26,000	4,500		9,000		240,419	\$11,000		518,256
Utah.....										(a)
Vermont.....	353,534	677,528	25,070	433,265	758,390		321,689	58,688		2,628,164
Washington.....	7,000			31,873			19,200	1,000		61,176
Other States <sup>c</sup> .....	36,997	40,819	2,103	63,780	10,900	1,000	22,549	336	1,000	180,561
Total.....	1,146,639	985,804	3,180	1,038,302	956,870	7,300	679,913	71,024	15,244	5,044,182

<sup>a</sup> Includes Alabama, Arkansas, Connecticut, Maryland, Montana, New Mexico, and Utah.

<sup>b</sup> Production of Missouri and Oregon included under report on limestone.

<sup>c</sup> Included in Other States.

The following table shows the value of the marble produced in the United States from 1898 to 1902, inclusive, by States:

*Value of marble, by States, from 1898 to 1902, inclusive.*

State.	1898.	1899.	1900.	1901.	1902.
Alabama.....			\$500		(a)
Alaska.....				\$4,500	
Arizona.....			5,000	300	
Arkansas.....		\$3,410		300	(a)
California.....	\$40,200	6,500	17,500	6,642	\$92,298
Colorado.....		10,776			
Connecticut.....					(a)
Georgia.....	656,808	742,554	631,241	936,549	660,517
Idaho.....	4,400		1,250		
Maryland.....	120,525	77,000	70,000	68,100	(a)
Massachusetts.....	38,210	59,416	130,735	126,546	165,489
Missouri.....			900	2,100	
Montana.....			1,200	1,500	(a)
New Mexico.....			4,500	10,600	(a)
New York.....	342,072	338,816	332,518	379,159	577,298
Oregon.....				500	

<sup>a</sup> Included in Other States.



*Value of marble, by States, from 1898 to 1902, inclusive—Continued.*

State.	1898.	1899.	1900.	1901.	1902.
Pennsylvania .....	\$39,373	\$139,506	\$151,167	\$157,547	\$160,423
Tennessee .....	316,814	<sup>a</sup> 884,705	424,054	494,637	518,256
Utah .....		2,355		320	( <sup>b</sup> )
Vermont .....	2,067,938	2,241,806	2,484,852	2,753,583	2,628,164
Washington .....	3,600	4,837	11,836	22,816	61,176
Other States .....					<sup>c</sup> 180,561
Total .....	3,629,940	4,011,681	4,267,253	4,965,699	5,044,182

<sup>a</sup> Contains small amount from North Carolina.<sup>b</sup> Included in Other States.<sup>c</sup> Includes Alabama, Arkansas, Connecticut, Maryland, Montana, New Mexico, and Utah.

The following table shows the various uses to which the marble quarried in 1898, 1899, 1900, 1901, and 1902 was put:

*Distribution and value of output of marble in 1898, 1899, 1900, 1901, and 1902 among various uses.*

Use.	1898.	1899.	1900.	1901.	1902.
Sold by producers in rough state .....	\$690,240	\$640,535	\$491,813	\$591,667	\$2,276,629
Dressed for building .....	963,353	1,176,208	1,080,969	1,236,023	1,038,102
Ornamental purposes .....	23,904	92,942	13,754	126,576	7,300
Dressed for monumental work .....	1,613,742	1,650,155	2,019,474	1,948,892	956,870
Interior decoration in buildings .....	304,714	389,040	555,092	1,008,482	679,913
Other uses .....	28,987	62,801	106,151	54,059	85,268
Total .....	3,629,940	4,011,681	4,267,253	4,965,699	5,044,182



## LIMESTONE.

The limestone production in the United States in 1902, including limestone for blast-furnace flux, was valued at \$30,231,003. In 1901 the value was \$26,406,897, a gain in 1902 of \$3,824,106. In 1901 the increase over the value for 1900, which was \$20,354,019, was \$6,052,878. This shows that, although there was a considerable gain in the production for 1902, the increase was very much less than the increase for the previous year.

Of the 42 States reporting a production in 1902, 29 showed an increase in value of output, and 13 a decrease. In 1901, 41 States reported, 35 with increased production, and 6 with decreased production. In order of importance Pennsylvania, Illinois, Ohio, Indiana, New York, Missouri, and Wisconsin give the largest value of production. The output of these States for 1902 was as follows: Pennsylvania, \$5,420,287; Illinois, \$3,222,608; Ohio, \$3,201,718; Indiana, \$2,865,691; New York, \$2,419,121; Missouri, \$1,697,139; and Wisconsin, \$1,351,058.

In 1901 the rank and production was: Pennsylvania, \$5,081,387; Indiana, \$2,993,186; Illinois, \$2,793,837; Ohio, \$2,606,502; New York, \$1,738,716; Missouri, \$1,362,272, and Wisconsin, \$1,225,448. From this it will be seen that while Pennsylvania kept first rank for both years, Indiana went from second place in 1901 to fourth place in 1902, Illinois from third to second, Ohio from fourth to third, and that the other States remained the same, New York fifth, Missouri sixth, and Wisconsin seventh.

The State next to these in rank in 1902 was Minnesota, with a production of \$830,857, and in 1901 Iowa with a production of \$777,484.

According to the uses to which the stone was put in 1902, the ranking States and the values of production were: Building stone, Indiana, \$1,813,577, and Illinois, \$640,443; flagstone, Indiana, \$75,659, and Illinois, \$70,491; curbstone, Indiana, \$117,077, and Wisconsin, \$50,251; lime, Pennsylvania, \$1,329,095, and Ohio, \$1,082,277; crushed stone, Illinois, \$1,220,772; Pennsylvania, \$1,136,832, and New York, \$1,085,458; limestone for flux, Pennsylvania, \$2,461,426; Ohio, \$630,325, and West Virginia, \$268,059.

Under stone used for "other purposes" is included stone for chemical purposes, marble dust, paving stone, monumental stone, limestone used by glass factories and by sugar factories, and for various purposes not enumerated.

The total value of the limestone used for building stone increased from \$5,219,310 in 1901 to \$5,563,084 in 1902, or \$343,774; the value of lime increased from \$8,204,054 in 1901 to \$9,335,618, or \$1,131,564; the value of crushed stone increased from \$5,271,642 in 1901 to \$7,152,730 in 1902, or \$1,881,088; the value of blast-furnace flux from



9,319,672 long tons (estimated), valued at \$4,659,836 in 1901 to 12,139,248 long tons, valued at \$5,271,252 in 1902, a gain in value of \$611,416.

The following tables show the value of the production of limestone in the United States in 1901 and 1902, by States and uses:

*Value of the production of limestone in the United States in 1901 and 1902, by States and uses.*

## 1901.

State or Territory.	Building purposes.	Flagging and curbing.	Riprap rubble, etc.	Crushed stone.		
				Road making.	Railroad ballast.	Concrete.
Alabama .....	\$42,695		\$225			\$2,500
Arkansas .....	3,466	\$1,020	320	\$1,000		
California .....	1,500		6,366	145,225	\$60,900	5,023
Colorado .....			3,141	100		
Florida .....			6,250	3,670	2,750	
Georgia .....	3,000				9,860	3,721
Idaho .....	100		520			25
Illinois .....	384,949	101,410	477,435	452,143	478,452	225,151
Indiana .....	2,123,237	149,363	61,526	181,696	29,042	15,002
Iowa .....	272,501	8,117	85,342	83,055	30,562	70,285
Kansas .....	290,730	16,872	27,147	14,329	107,904	15,050
Kentucky .....	59,425	10,697	5,500	60,423	29,622	9,370
Maryland .....	14,138	1,796	420	43,887	8,000	1,776
Massachusetts .....	7,224		453			150
Michigan .....	47,785	380	5,098	31,605	18,200	75,643
Minnesota .....	375,308	20,773	39,477	17,918	200	2,150
Missouri .....	377,146	73,197	56,345	105,435	116,293	73,742
Montana .....	7,336	30	1,000			
Nebraska .....	44,015	810	26,312	10,904	5,025	51,380
New Jersey .....	2,460	61	750	1,275	650	
New York .....	265,024	5,055	13,997	188,277	146,077	293,530
North Carolina .....				4,668		
Ohio .....	341,389	13,869	41,451	489,940	299,599	64,347
Oklahoma .....	4,147	2,716	600	9	24,525	
Oregon .....				12,000		100
Pennsylvania .....	192,972	7,321	29,291	221,032	273,260	252,603
South Carolina .....				1,000		
South Dakota .....	225					
Tennessee .....	40,258	775	2,915	1,760	35,425	4,935
Texas .....	45,630	3,117	7,215	3,900		5,350
Utah .....	6,629			23		
Vermont .....	64			610		
Virginia .....	2,270		27,650	100	695	2,065
Washington .....						840
West Virginia .....		25		125	75,000	
Wisconsin .....	263,687	46,571	97,213	222,177	6,500	40,052
Wyoming .....			100			25
Total .....	5,219,310	463,975	1,024,059	2,298,286	1,758,541	1,214,815



*Value of the production of limestone in the United States in 1901 and 1902, by States and uses—Continued.*

1901—Continued.

State or Territory.	Lime.	Sold to lime burners.	Flux.	Other purposes.	Total.
Alabama .....	\$201,586	\$150	\$354,267	\$18,000	\$619,423
Arizona .....	300				300
Arkansas .....	62,163	350			68,319
California .....	343,625	2,836	47,830	32,150	645,455
Colorado .....	102,466	4,480	121,839	13,773	245,799
Connecticut .....	139,374	38	1,012		140,424
Florida .....	39,150	50			51,870
Georgia .....	65,888		3,160		85,629
Idaho .....	20,606				21,251
Illinois .....	504,018		103,729	66,550	2,793,837
Indiana .....	223,340	1,200	193,469	15,311	2,993,186
Iowa .....	221,760			5,862	777,484
Kansas .....	6,350			604	478,986
Kentucky .....	12,290		6,998	5,242	199,567
Maine .....	709,251	500	5,521		715,272
Maryland .....	307,657	4,007	700		382,381
Massachusetts .....	234,261		1,843	108	244,039
Michigan .....	136,160	136,173	13,488	101,399	565,931
Minnesota .....	57,277			9,675	522,778
Missouri .....	546,549		7,607	5,958	1,362,272
Montana .....	22,250		113,250		143,866
Nebraska .....	500	4,281	10,640	850	154,717
New Jersey .....	62,707	1,708	40,587	199,540	309,738
New York .....	631,358	46,327	16,190	132,881	1,738,716
North Carolina .....	3,598				8,266
Ohio .....	726,883	24,822	550,346	53,856	2,606,502
Oklahoma .....				500	32,497
Oregon .....	12,420				24,520
Pennsylvania .....	1,249,996	151,104	2,243,692	460,116	5,081,387
Rhode Island .....	37,798		232		38,030
South Carolina .....	27,500				28,500
South Dakota .....	13,830		39,725		53,780
Tennessee .....	181,219		62,640	1,000	330,927
Texas .....	93,587		50,294	565	209,658
Utah .....	36,910		34,588	750	78,900
Vermont .....	204,400		64		205,158
Virginia .....	220,013		243,585	42,750	539,128
Washington .....	210,341	6,192	16,514	700	234,587
West Virginia .....	10,797		352,344		447,049
Wisconsin .....	522,661		23,682	2,905	1,225,448
Wyoming .....	1,215				1,340
Total .....	8,204,054	392,976	4,659,836	1,171,045	26,406,897



*Value of the production of limestone in the United States in 1901 and 1902, by States and uses—Continued.*

1902.

State or Territory.	Building purposes.	Flagging.	Curbing.	Lime made.	Stone sold to lime burners.	Crushed stone.		
						Road making.	Railroad ballast.	Concrete.
Alabama.....	\$37,358	.....	\$1,275	\$235,568	.....	\$7,890	\$2,500	\$2,500
Arkansas.....	1,900	.....	1,500	82,853	.....	15,510	7,000	.....
California.....	17,250	.....	250	395,995	.....	900	1,625	24,375
Colorado.....	.....	.....	.....	46,345	\$521	.....	.....	.....
Connecticut.....	.....	.....	.....	203,899	.....	.....	.....	.....
Florida.....	11,000	.....	.....	37,963	.....	9,658	1,350	.....
Georgia.....	4,295	\$17,500	.....	71,724	.....	.....	12,310	.....
Idaho.....	.....	.....	.....	13,049	.....	.....	.....	.....
Illinois.....	640,443	70,491	39,296	485,644	.....	588,796	399,537	232,439
Indiana.....	1,813,577	75,659	117,077	312,189	.....	180,188	55,740	38,563
Iowa.....	195,009	6,893	2,374	114,051	95	103,074	21,298	29,000
Kansas.....	175,374	7,315	5,675	7,358	.....	18,598	354,721	10,585
Kentucky.....	124,467	1,305	45,773	15,893	.....	125,048	176,062	26,137
Maine.....	.....	.....	.....	742,132	.....	.....	.....	.....
Maryland.....	16,953	.....	1,575	326,417	5,834	74,205	17,161	4,600
Massachusetts.....	12,378	.....	.....	324,480	.....	.....	.....	1,093
Michigan.....	58,707	200	489	208,232	98,000	56,261	40,810	49,430
Minnesota.....	451,368	25,481	7,260	75,870	1,344	65,744	.....	62,500
Missouri.....	429,115	536	32,444	515,780	.....	193,327	141,185	168,229
Montaña.....	6,375	1,400	.....	8,775	.....	.....	.....	.....
Nebraska.....	46,910	150	85	150	400	15,050	12,510	25,182
Nevada.....	.....	.....	.....	2,800	.....	.....	.....	.....
New Jersey.....	4,450	.....	.....	123,478	.....	.....	.....	580
New York.....	480,141	3,420	857	561,228	43,531	514,916	267,189	302,489
North Carolina.....	.....	.....	.....	2,090	.....	21,063	.....	.....
Ohio.....	329,808	5,604	4,718	1,082,277	62,218	454,170	317,281	180,300
Oklahoma.....	22,562	7,783	4,540	25	.....	.....	9,000	.....
Oregon.....	.....	.....	.....	20,133	.....	.....	.....	.....
Pennsylvania.....	209,215	3,971	4,572	1,429,643	16,690	215,533	575,244	358,578
Rhode Island.....	.....	.....	.....	70,124	.....	.....	350	.....
South Carolina.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	775	.....	.....	21,300	.....	.....	.....	9,600
Tennessee.....	57,399	180	3,257	235,615	.....	8,878	56,317	5,518
Texas.....	69,327	6,620	8,700	82,500	.....	.....	400	18,593
Utah.....	3,960	.....	.....	99,463	.....	400	.....	.....
Vermont.....	4,500	.....	.....	219,306	.....	1,387	.....	.....
Virginia.....	41,355	.....	.....	241,984	.....	.....	7,875	11,580
Washington.....	.....	.....	.....	186,070	.....	.....	.....	.....
West Virginia.....	25	400	.....	181,608	8,760	1,455	153,696	2,200
Wisconsin.....	296,998	6,780	50,251	549,357	.....	218,934	29,950	36,593
Wyoming.....	90	.....	.....	2,250	.....	.....	.....	.....
Total.....	5,563,084	241,688	331,968	9,335,618	237,393	2,890,985	2,661,081	1,600,664



*Value of the production of limestone in the United States in 1901 and 1902, by States and uses—Continued.*

1902—Continued.

State or Territory.	Rubble.	Riprap.	Flux.	Other purposes.	Total.
Alabama .....	\$1,735	\$5,726	\$465,065	.....	\$759,617
Arkansas .....	.....	4,350	.....	\$50	113,163
California .....	5,250	1,400	5,250	44,548	496,843
Colorado .....	.....	.....	155,484	1,350	203,700
Connecticut .....	.....	.....	1,472	.....	205,371
Florida .....	.....	3,600	.....	.....	63,571
Georgia .....	.....	.....	5,760	.....	111,589
Idaho .....	.....	.....	2,025	.....	15,074
Illinois .....	353,699	154,624	214,881	42,758	3,222,608
Indiana .....	37,916	15,346	187,265	32,171	2,865,691
Iowa .....	144,339	32,588	.....	1,263	649,984
Kansas .....	79,769	9,292	.....	1,849	670,536
Kentucky .....	.....	22,500	15,487	41,105	593,747
Maine .....	.....	.....	1,000	2,000	745,132
Maryland .....	.....	22	3,263	3,000	453,030
Massachusetts .....	.....	.....	1,398	.....	339,349
Michigan .....	3,101	5,740	32,246	68,164	621,380
Minnesota .....	106,693	33,447	.....	1,150	830,857
Missouri .....	147,151	43,998	14,065	11,309	1,697,139
Montana .....	175	.....	88,000	.....	104,725
Nebraska .....	24,114	16,515	4,407	.....	145,473
Nevada .....	.....	.....	.....	.....	2,800
New Jersey .....	.....	.....	53,142	.....	181,650
New York .....	95,026	5,806	92,849	51,669	2,419,121
North Carolina .....	.....	.....	.....	.....	23,153
Ohio .....	32,163	46,786	630,325	56,068	3,201,718
Oklahoma .....	4,570	.....	.....	2,061	50,541
Oregon .....	.....	.....	.....	.....	20,133
Pennsylvania .....	4,419	42,092	2,461,426	98,904	5,420,287
Rhode Island .....	.....	.....	1,190	.....	71,664
South Carolina .....	.....	.....	.....	.....	.....
South Dakota .....	180	.....	54,750	.....	86,605
Tennessee .....	3,045	2,264	108,860	700	482,033
Texas .....	8,765	2,325	23,432	8,000	228,662
Utah .....	.....	.....	82,840	.....	186,663
Vermont .....	385	.....	125	.....	225,703
Virginia .....	.....	.....	220,001	11,318	534,113
Washington .....	.....	.....	22,239	5,505	213,814
West Virginia .....	.....	163	268,059	.....	616,366
Wisconsin .....	44,234	59,573	50,946	7,442	1,351,058
Wyoming .....	.....	.....	4,000	.....	6,340
Total .....	1,096,729	508,157	5,271,252	492,384	30,231,003



The following table shows the production of limestone in the United States from 1898 to 1902, by States:

*Value of limestone, 1898-1902, by States.*

State.	1898.	1899.	1900.	1901.	1902.
Alabama .....	\$242,295	\$364,636	\$533,608	\$619,423	\$759,617
Arizona .....	1,782	960	165	300	.....
Arkansas .....	54,373	71,965	71,407	68,319	113,163
California .....	229,729	287,295	407,489	645,455	496,843
Colorado .....	109,310	96,456	160,587	245,799	203,700
Connecticut .....	142,057	162,388	148,060	140,424	205,371
Florida .....	91,330	44,002	128,381	51,870	63,571
Georgia .....	57,803	29,786	54,451	85,629	111,589
Idaho .....	3,080	3,325	34,587	21,251	15,074
Illinois .....	1,421,072	2,065,483	1,881,151	2,793,837	3,222,608
Indiana .....	1,686,572	2,173,833	2,344,818	2,993,186	2,865,691
Iowa .....	524,546	785,576	586,410	777,484	649,984
Kansas .....	305,605	379,001	339,466	478,986	670,536
Kentucky .....	83,960	178,861	178,252	199,567	593,747
Maine .....	1,283,468	1,028,375	691,312	715,272	745,132
Maryland .....	433,653	235,225	317,207	382,381	453,030
Massachusetts .....	174,822	168,147	209,359	244,039	339,349
Michigan .....	271,523	371,210	425,636	565,931	621,380
Minnesota .....	345,685	496,462	441,554	522,778	830,857
Missouri .....	735,275	977,399	1,079,343	1,362,272	1,697,139
Montana .....	63,196	113,718	141,093	143,866	104,725
Nebraska .....	78,493	125,017	107,305	154,717	145,473
Nevada .....	.....	.....	.....	.....	2,800
New Jersey .....	146,611	153,025	170,006	309,738	181,650
New York .....	1,533,936	1,545,699	1,730,162	1,738,716	2,419,121
North Carolina .....	1,605	.....	.....	8,266	23,153
Ohio .....	1,673,160	1,793,604	1,969,387	2,606,502	3,201,718
Oklahoma .....	3,000	50,550	25,586	32,497	50,541
Oregon .....	7,480	8,000	10,900	24,520	20,133
Pennsylvania .....	2,746,256	3,088,583	3,800,318	5,081,387	5,420,287
Rhode Island .....	10,215	18,239	16,828	38,030	71,664
South Carolina .....	34,000	17,650	38,415	28,500	
South Dakota .....	26,858	45,808	47,762	53,780	86,605
Tennessee .....	182,402	208,097	238,505	330,927	482,033
Texas .....	70,321	100,025	124,728	209,658	228,662
Utah .....	11,721	6,381	12,749	78,900	186,663
Vermont .....	174,150	282,173	188,100	205,138	225,703
Virginia .....	182,852	256,640	403,318	539,128	534,113
Washington .....	140,239	139,339	249,163	234,587	213,814
West Virginia .....	56,167	58,802	53,701	447,049	616,366
Wisconsin .....	698,454	826,486	989,685	1,225,448	1,351,058
Wyoming .....	.....	742	3,065	1,340	6,340
Total .....	16,039,056	18,757,963	20,354,019	26,406,897	30,231,003



The following table shows the quantity and value of the blast-furnace flux produced in 1902, by States:

*Production of blast-furnace flux in 1902, by States.*

State.	Quantity.	Value.	State.	Quantity.	Value.
	<i>Long tons.</i>			<i>Long tons.</i>	
Alabama .....	1,001,884	\$465,065	New York .....	178,019	92,849
California .....	3,500	5,250	Ohio .....	1,559,933	630,325
Colorado .....	402,735	155,484	Pennsylvania .....	5,645,857	2,461,426
Connecticut .....	2,942	1,472	Rhode Island .....	950	1,190
Georgia .....	14,400	5,760	South Dakota .....	97,768	54,750
Idaho .....	2,025	2,025	Tennessee .....	284,895	108,860
Illinois .....	483,348	214,881	Texas .....	33,393	23,432
Indiana .....	438,717	187,265	Utah .....	113,194	82,840
Kentucky .....	36,354	15,487	Vermont .....	250	125
Maine .....	2,000	1,000	Virginia .....	565,704	220,001
Maryland .....	3,654	3,263	Washington .....	23,917	22,239
Massachusetts .....	2,732	1,398	West Virginia .....	740,901	268,059
Michigan .....	58,567	32,246	Wisconsin .....	89,309	50,946
Missouri .....	25,115	14,065	Wyoming .....	10,000	4,000
Montana .....	198,000	88,000			
Nebraska .....	8,814	4,407	Total .....	12,139,248	5,271,252
New Jersey .....	110,371	53,142			

This is the first attempt that has been made to collect the statistics of the quantity of stone used by blast furnaces; the estimates formerly used were based on an average value of 50 cents per ton. This value has, however, been found to be rather high for some localities. The figures here given were obtained directly from the quarry, whether the quarries were owned by the blast-furnace operator or whether the stone was sold to the furnace. The value given is the value of the stone at the quarry.