ABRASIVE MATERIALS.

Buhrstones.—The total value of the buhrstones produced during the year 1888 is estimated at $81,000.

A noticeable decline in this industry continued during the year 1888, and while it is difficult to procure exact figures of production at the various localities, it is evident that the demand for domestic millstones is steadily decreasing. At the quarries near Kyserike, New York, where the so-called Esopus stone is quarried, there was a slight decrease in production, the value of that product being $60,000, or $1,500 less than in 1887. About fifty men are employed at this locality. The Cocalico millstone quarries, near Durlach, Pennsylvania, showed also a decrease in production, the value being $1,000, against $5,000 for the previous year. These quarries are owned by private individuals, and are worked only when orders for stones are received. The statements from Parkewood, North Carolina, indicate that the quarrying of the stone known as North Carolina grit progressed without any noteworthy change, the value of the product being $20,000.

Buhrstones and millstones imported and entered for consumption in the United States 1868 *to* 1888, *inclusive.*

Years ending—	Rough.	Made into millstones.	Total.	Years ending—	Rough.	Made into millstones.	Total.
June 30, 1868	$74,224	.....	$74,224	June 30, 1878	$87,679	$1,928	$89,607
1869	57,942	$2,419	60,361	1879	101,484	5,088	106,572
1870	58,601	2,297	60,898	1880	120,441	4,631	125,072
1871	35,406	3,698	39,104	1881	100,417	3,495	103,912
1872	69,062	5,967	75,029	1882	103,287	747	104,034
1873	60,463	8,115	68,578	1883	73,413	272	73,685
1874	36,540	42,170	79,710	1884	45,837	263	46,100
1875	48,068	66,991	115,059	1885	35,022	455	35,477
1876	37,759	46,328	84,087	Dec. 31, 1886	29,273	662	29,935
1877	60,857	23,068	83,925	1887	23,816	191	24,007
				1888	36,523	705	37,228

Grindstones.—During 1888 the product of grindstones in the United States amounted to 41,000 long tons, valued at $281,000, being a slight increase over that for the previous year. Of the above amount, about three-fifths was produced by the Cleveland Stone Company of Ohio and Michigan, and the balance by eight or nine companies operating in Ohio.

The following table shows the value of the importations:

Grindstones imported and entered for consumption in the United States, 1868 to 1888, inclusive.

Years ending—	Finished.		Unfinished or rough.		Total value.
	Quantity.	Value.	Quantity.	Value.	
	Long tons.		*Long tons.*		
June 30, 1868	.....	$25,640	.....	$35,215	$60,855
1869	.....	15,878	.....	99,715	115,593
1870	.....	29,161	.....	96,444	125,605
1871	385	43,781	3,957.15	60,935	104,716
1872	1,202	13,453	10,774.80	100,494	113,947
1873	1,437	17,033	8,376.84	94,900	111,933
1874	1,443	18,485	7,721.44	87,525	106,010
1875	1,373	17,642	7,656.17	90,172	107,814
1876	1,681	20,262	6,679.34	69,927	90,189
1877	1,245	18,546	4,979.75	58,575	77,121
1878	1,463	21,688	3,669.41	46,441	68,129
1879	1,603	24,904	4,584.16	52,343	77,247
1880	1,573	24,375	4,578.59	51,899	76,274
1881	2,064	30,288	5,044.71	56,840	87,128
1882	1,705	30,286	5,945.61	66,939	97,225
1883	1,755	28,055	6,945.63	77,797	105,852
1884	.....	.....	.....	.....	86,286
1885	.....	.....	.....	.....	50,579
Dec. 31, 1886	.....	.....	.....	.....	(*a*)39,149
1887	.....	.....	.....	.....	(*a*)50,312
1888	.....	.....	.....	.....	(*a*)51,755

a Classed as unfinished.

Corundum.—During 1888 the product of corundum amounted to 589 short tons, valued at $91,620. The mines at Laurel creek, Georgia, and at Cullasaja, North Carolina, remain the sources of supply.

Emery imported and entered for consumption in the United States, 1867 to 1888, inclusive.

Years ending—	Grains.		Ore or rock.		Pulverized or ground.		Other manufactures.	Total.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
	Pounds.		*Tons.*		*Pounds.*			
June 30, 1867	.....	.....	428	$14,373	924,431	$38,131	.....	$52,504
1868	.....	.....	85	4,531	834,286	33,549	.....	38,080
1869	.....	.....	964	35,205	924,161	42,711	.....	77,916
1870	.....	.....	742	25,335	644,080	29,531	.....	54,866
1871	.....	.....	615	15,870	613,624	28,941	.....	44,811
1872	.....	.....	1,641	41,321	804,977	36,103	.....	77,424
1873	610,117	$29,706	755	26,065	343,828	15,041	$107	70,919
1874	331,580	16,216	1,281	43,886	69,890	2,167	97	62,366
1875	487,725	23,345	961	31,972	85,853	2,990	20	58,327
1876	385,246	18,999	1,395	40,027	77,382	2,533	94	61,653
1877	343,697	16,615	852	21,964	96,351	3,603	.....	42,182
1878	334,291	16,359	1,475	38,454	65,068	1,754	34	56,601
1879	496,633	24,456	2,478	58,065	133,556	4,985	.....	87,506
1880	411,340	20,066	3,400	76,481	223,855	9,202	145	105,894
1881	454,790	22,101	2,884	67,781	177,174	7,497	53	97,432
1882	520,214	25,314	2,765	69,432	117,008	3,708	241	98,695
1883	474,105	22,767	2,447	59,282	93,010	3,172	269	85,490
1884	143,267	5,802	4,145	121,719	513,161	21,181	188	148,890
1885	228,329	9,886	2,445	55,368	194,314	8,789	757	74,800
Dec. 31, 1886	161,297	6,910	3,782	88,925	365,947	24,952	851	121,638
1887	367,239	14,290	2,078	45,033	*a* 144,380	6,796	2,090	68,209
1888	430,397	16,216	5,175	93,287	.....	.....	8,743	118,246

a To June 30 only; since classed with grains.

Exports of manufactured emery from 1878 to 1888, inclusive.

Years ending—	Value.	Years ending—	Value.
June 30, 1878	$813	June 30, 1884	$3,565
1879	1,608	1885	99,232
1880	1,265	Dec. 31, 1886	39,616
1881	1,312	1887	39,668
1882	1,242	1888	25,108
1883	1,857		

INFUSORIAL EARTH.

The deposit of infusorial earth near Dunkirk, Calvert county, Maryland, known as the Lyons Creek mine, continues to be the principal source from which infusorial earth is obtained; in fact, it might be called the only producing locality in the United States, as the reports indicate that the deposits elsewhere have either been abandoned or have come to a standstill, on account of a limited demand for the product and the lack of transportation facilities. About $35,000 have been invested in the Lyons Creek plant, which is operated by the New York Silicate Company, employing 20 to 25 men. The product is shipped by water, principally to New York City, at a cost of $1.66 per ton by sailing vessels, and $2 per ton by steamers. The amount produced during the year 1888 was 1,500 short tons, at a spot value of $7,500.

Norwegian infusorial earths.—Recent discoveries of siliceous earths have been made on the south coast of Norway, in the upland lakes surrounding the several fjords in the neighborhood of the town and shipping port at Farsund. Numerous analyses of both German and Norwegian infusorial earths show that they contain from 77 to 91 per cent. of silica in their raw state, and when washed and calcined, up to 96.40 per cent., with from 1 per cent. to 2 per cent. of alumina, the remainder being harmless alkalies and lime, with less than 1 per cent. ferric oxide. Owing to their scarcity, it is only within the last few years that infusorial earths have been employed to any appreciable extent except in the manufacture of dynamite, lithofracteur, and the other nitro-glycerine class of explosives, 25 per cent. of which is infusorial earth. They are now, however, coming rapidly into extensive use for a variety of purposes in the arts and manufactures. That the demand is likely to increase will be readily understood from a short description of their composition and the state in which these siliceous earths are found.

In the trade pamphlets of the Hamburg houses dealing in this commodity in 1884 these earths are specified as being employed in 39 different manufactures. Two years later (1886) they had increased to 54, while in 1887 circulars gave 61 leading uses to which they are applied. The raw material ranges in price at Hamburg from 50*s.* to 120*s.* per ton, according to quantity and color. The discoveries which have been made in the lakes mentioned, under the exceptional circumstances referred

to, must unquestionably, not only cause a revolution in the existing business in this commodity, but, owing to the great abundance in which the material is found and the trifling price at which it can be put free on board in vessels of any size, are destined to capture the entire trade, hitherto monopolized by Germany. These lakes also afford almost unlimited water power for any purpose to which it can be made available for the mechanical manipulation and manufacture of their product. These earths are so abundant, and the facilities for getting, manufacturing, and shipping are so great, that in conjunction with their peculiarly valuable properties they will no doubt be obtained so cheaply as to enable all kinds of fire-resisting articles—enamel bricks, terra-cotta, fancy tiles and quarries, and glazed ware goods—to be manufactured on the spot at a highly remunerative rate.