A little lime is mixed with the roasted pyrites, which tends to keep the quicksilver clean and in a better state for amalgamation. Any flowered quicksilver that is collected is put into a revolving cast-iron barrel, globular in shape, into which there is a jet of steam, and by this means it is brought back to its original condition. Mr. R. H. Bland, the manager of this company, has kept very accurate returns, which are made monthly, of the quantity of quartz crushed, the percentage of gold that is obtained in each process, the duty done by each description of stamps, and the quantity of fuel consumed in working the crushing-battery. The first battery of stamps was completed and got to work in May, 1857, which consisted of 20 heads of square stamps driven by a 12-in. cylinder steam engine. These have from time to time been increased, until in 1877 the plant consisted of 80 head of stamps, two stone-breaking machines, and six buddles, all driven by a 24-in. cylinder engine, supplied with steam from five multitubular boilers. Since then, the number of buddles has been increased. The two Chilian mills, separator, and other appliances for treating the pyrites, are driven by a separate engine supplied with steam from the same boilers.

The following is an extract from Mr. Bland's report to the shareholders in 1877:—

"The quantity of fuel consumed in connection with working the machinery during the first twenty years the company was at work was 37,255 cords of wood, and the total amount of quartz crushed in same period was 954,139 tons. The consumption of fuel during the first year averaged one cord to every 8 tons of quartz crushed; but the improvements made from time to time in the machinery have reduced the consumption to one cord to every 42 tons of quartz crushed. The amount of gold obtained during the first twenty years was 380,308oz. 8dwt. from quartz, and 27,300oz. from alluvial, making a total value of £1,625,529, and the receipts above the expenditure amounted to £366,166; out of this amount was paid £243,500 in dividends to shareholders, and £123,666 to the proprietors of the freehold on which their mine is situated as royalty.

"Finding in the early period of the company's operations that there was a considerable loss of gold on the stamping process, careful examination of the waste sand proved the greatest loss to be in connection with the pyrites. Attention was at once turned to the best means of concentrating this material and extracting the gold from it. Commencing with a produce of 1oz. of gold to the ton of pyrites, being 26 per cent. of the assay, the process was gradually improved until over 90 per cent. of the assay contents has for a lengthened period been obtained.

"The total quantity of pyrites saved and treated from 1862 to 1877 was 4,790 tons; total yield of gold 16,670oz., which left a balance of profits over and above the cost of saving and treating of £50,737 6s.

"The total costs connected with mining and crushing the quartz for the twenty years averaged £1 3s. 3d. per ton. This includes the cost of machinery; and it must be borne in mind that in the earliest period of the company's operations the expenses were very great. The cost connected with crushing the quartz alone, during the first six years, amounted to 19s. 3d. per ton. During the last twelve years the mining and crushing has averaged 18s. 6d. per ton, and this includes £12,000 expended on machinery account."

The total quantity of quartz crushed from the commencement up to October, 1884, was 1,281,835 tons, and the amount of gold, including alluvial, was 506,220oz. 4dwt. 1gr. The general average for the quartz during this period was 7dwt. 10gr., and the total profits divided have been £339,572 17s. 4d. paid to the shareholders, and £138,877 11s. 7d. to the proprietors of the freehold as royalty.

My object in giving a lengthened description of this company's works is to show the amount of gold that has been got out of the pyrites alone, and the profits obtained, in order to direct attention to the large amount of waste that there is in some of our mines. The following is a table showing the return of pyrites treated by this company since they commenced to save it in the beginning of 1863 to the end of 1880. I could not get the returns up to 1884:—

Year.	Tons.	Gold.			Average per Ton.			Proceeds.			Profits.		
		Oz.	dwt.	gr.	Oz.	dwt.	gr.	£	s.	d.	£	s.	d.
1863	562	467	7	0		*		1,817	8	8	*Nil.*		
1864	76	201	0	0	2	12	9	749	18	6	417	0	0
1865	271	762	13	0	2	16	6	3,031	4	0	2,255	17	0
1866	268	796	0	0	2	19	4	3,169	7	9	2,131	17	10
1867	215	960	13	0	4	8	8	3,807	15	0	3,033	17	0
1868	369½	1,322	13	0	3	12	4	5,217	3	7	4,157	18	6
1869	401⅓	1,515	11	0	3	15	11	6,087	2	2	4,899	3	0
1870	456¾	1,420	6	0	3	3	6	5,732	2	2	4,571	18	0
1871	561	2,290	1	0	4	1	15	9,248	13	11	7,668	1	5
1872	368	2,061	9	0	5	11	22	8,522	11	8	7,208	6	9
1873	294	1,268	17	12	4	6	7	5,182	3	9	4,211	2	4
1874	330	1,024	0	0	3	1	22	4,178	6	2	2,770	8	9
1875	236¾	946	16	0	4	0	5	3,868	14	7	2,637	4	2
1876	224¼	937	7	0	4	3	14	3,819	13	9	2,687	18	1
1877	321½	1,549	0	0	4	16	8	6,312	3	3	4,818	2	8
1878	339¼	1,935	7	0	4	16	23	7,886	11	0	6,144	7	0
1879	421	2,018	1	0	4	15	20	8,223	19	0	6,334	4	3
1880	390	1,625	2	0	4	3	8	6,624	1	5	5,028	10	6
											70,975	17	3

* Badly dressed.