

UNITED STATES PATENT OFFICE.

THOMAS WREN, OF HAMILTON, NEVADA.

IMPROVEMENT IN CONCENTRATING SILVER ORES.

Specification forming part of Letters Patent No. 120,014, dated October 17, 1871.

To all whom it may concern:

Be it known that I, THOMAS WREN, of Hamilton, county of White Pine, State of Nevada, have invented Improvements in Concentrating Ores; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to an improved method or process for concentrating argentiferous ores, whereby I am enabled to take ore of a poor quality, such as would not otherwise pay for working, and by a system of concentration cull out and separate the richer or more valuable portion, so that it can be worked with profit, while the gangue or worthless portion can be cast aside without further manipulation. In order to accomplish this I take advantage of the well-known fact that silver-bearing ore is much softer and more friable than the gangue or surrounding rock.

In working my method or process I take the second-class ore—such as will not give sufficient result to pay for working in the usual manner—and pass it through a rock-crusher. In my ex-

periments I have used what is known as the Blake crusher. From the crusher I pass the crushed ore over a series of inclined screens of different fineness, so that the fine or pulverized ore, which, owing to its greater softness, has become finely pulverized in the crusher, will pass through the screens, while the larger pieces pass on over them, and may be returned into the crusher, if desired, to be still more reduced, and again passed over the screens. The portion of ore which has passed through the screens can then be worked with profit by the usual processes, while the coarser rock can be thrown to one side as worthless.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The above-described method or process for concentrating the ores by passing the rock through a crusher and then over screens, in the manner and for the purpose specified.

In witness whereof I have hereunto set my hand and seal.

THOS. WREN. [L. S.]

Witnesses:

JOHN L. BOONE,
WM. GERLACH.

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