

G. S. OLIN.
Stamp-Mills for Ores.

No. 142,172.

Patented August 26, 1873.

Fig. 1.

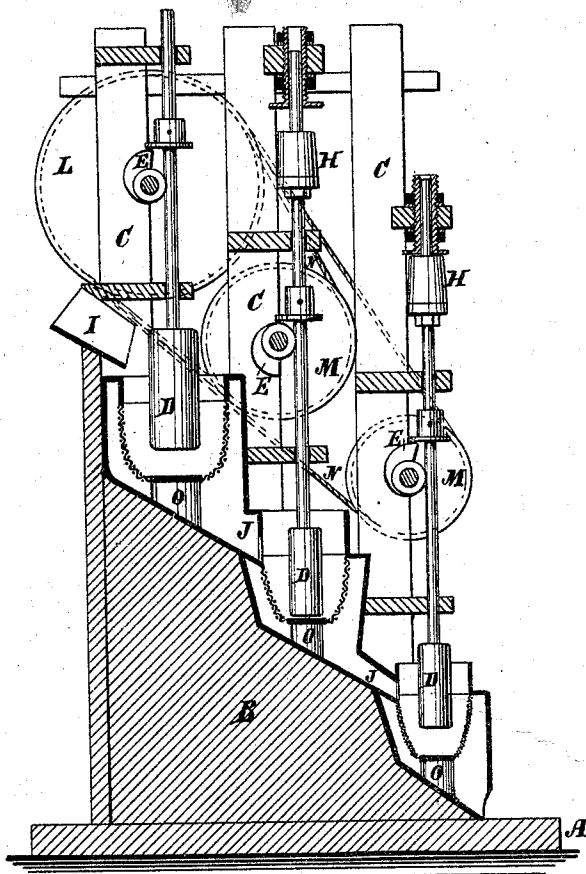
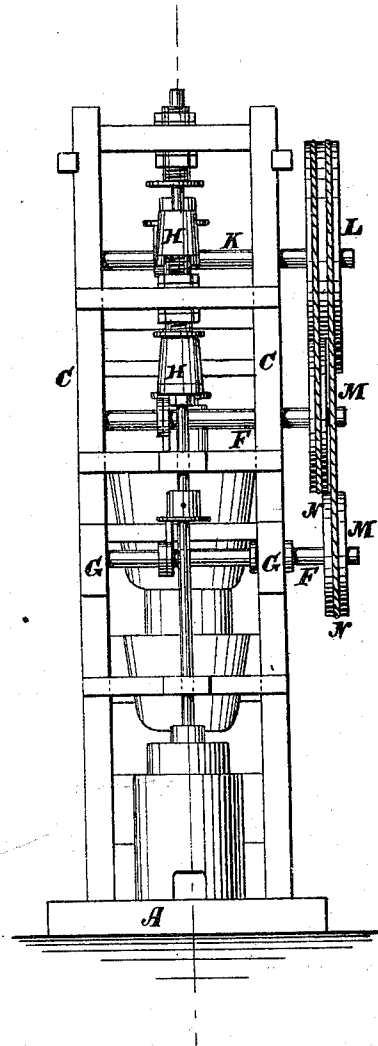


Fig. 2.



Witnesses:

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GILES S. OLIN, OF DEER LODGE, MONTANA TERRITORY.

IMPROVEMENT IN STAMP-MILLS FOR ORES.

Specification forming part of Letters Patent No. **142,172**, dated August 26, 1873; application filed June 21, 1873.

To all whom it may concern:

Be it known that I, GILES S. OLIN, of Deer Lodge, in the county of Deer Lodge and Territory of Montana, have invented a new and useful Improvement in Quartz-Crushers, of which the following is a specification:

The object of this invention is to improve the machines now in use for crushing quartz in the process of mining; and it consists in the construction and arrangement of parts hereinafter described.

In the accompanying drawing, Figure 1 is a vertical section of Fig. 2. Fig 2 represents a front elevation of machine.

Similar letters of reference indicate corresponding parts.

A is the horizontal bed-plate, and B is a triangular-shaped bed thereon, upon which the stamps work. C represents uprights which support the cam-shafts. These uprights rest on the bed-piece A, and are attached by means of screws or bolts to the triangular bed B.

In this example of my invention I show a battery of three stamps, but I do not limit myself to any particular number. The three stamps are driven from one shaft, and are graded from coarse to fine.

D represents the stamps; E, the cams; F, the cam-shafts, which are supported in boxes on the uprights C. H are rubber springs on the stamp-stems, which are compressed by the cam as the stamps rise and react to give the stamp a quick downward movement. The stamps are placed on the hypotenuse of the triangular bed B, and the coarse quartz is fed through the hopper I, under the most elevated stamp, which has the coarsest screen. After under-

going the stamping process within this screen the quartz is spouted under the next stamp, whose screen is finer, and from this it is spouted under the last stamp, and when it passes from the last and finest screen it has been reduced to powder. The quartz falls by its own gravity from one stamp to another through the spout J. This is what is called spouting the quartz from one stamp to the other. K is the driving-shaft. L is a double pulley on this shaft K, from which the other stamps are driven by means of the pulleys M and belts N. The whole arrangement is seen in Fig. 1. The screens not only increase in fineness as the quartz descends, but the stamps increase in speed and are reduced in lift from the first to the last stamp. By reducing the lift and increasing the speed of the lower stamps, the latter are made to work nearer the dies O than they otherwise would. With these improvements many of the defects of the old style of quartz-crushers are remedied, and much trouble and expense are avoided.

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

1. A quartz-crusher, having the stamps driven from a single shaft and with variable speed, substantially as shown and described.

2. A quartz-crusher, having stamps moving with variable speed and raised to variable heights, substantially as shown and described.

GILES S. OLIN.

Witnesses:

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