(No Model.)

# J. B. LOW.

## ROCK CRUSHER.

No. 350,494. Patented Oct. 12, 1886.

FIG 1

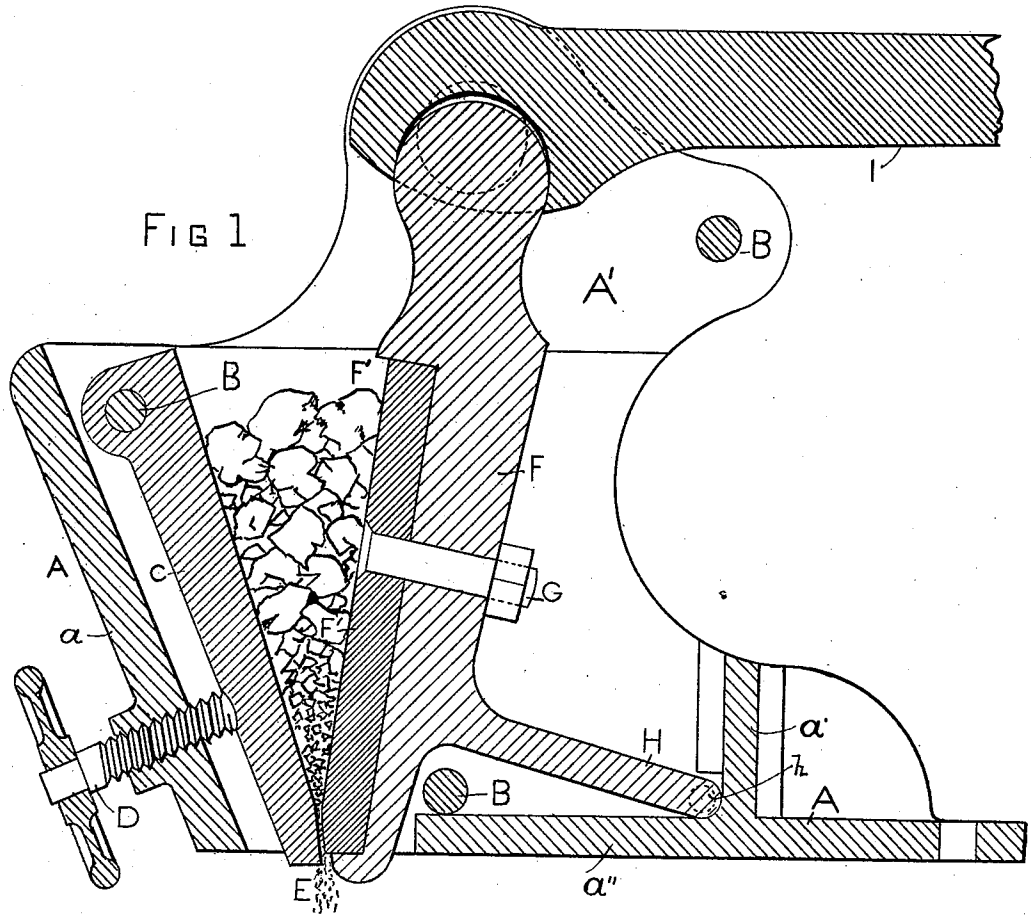
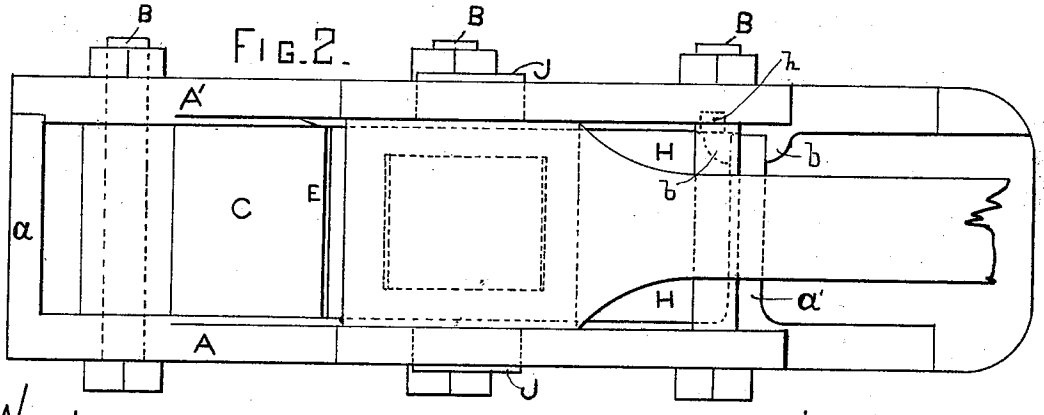



FIG. 2.




WITNESSES

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# UNITED STATES PATENT OFFICE.

JOEL B. LOW, OF SAN FRANCISCO, CALIFORNIA.

## ROCK-CRUSHER.

SPECIFICATION forming part of Letters Patent No. 350,494, dated October 12, 1886.

Application filed March 13, 1886. Serial No. 195,159. (No model.)

*To all whom it may concern:*

Be it known that I, JOEL B. LOW, of San Francisco, State of California, have invented a new and useful Improved Rock-Crusher, of which the following is a specification.

The invention relates to those machines principally used for crushing quartz-rock to a degree of fineness suitable for the grinding-pans or pulverizers, though it is suitable for crushing other friable substances.

It consists in the combination of parts, as hereinafter described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a longitudinal vertical section taken through the center line of the machine. Fig. 2 is a plan view of the same.

In both figures the same letters of reference are used to indicate the same parts.

The present illustration of the invention is intended to represent a small-sized machine to be operated by hand for the light service of testing ores. Heavier machines will be constructed on the same general principle, but with slight changes in matters of detail, which will suggest themselves to the manufacturer.

A A′ forms the casing of the machine, made in two parts. The part A includes one side piece, the end piece, *a*, the transverse plate *a′*, and the foundation-plate *a″*. The part A′ consists of one side piece only. The two parts are bolted together by bolts B.

C is the stationary jaw, pivoted above to one of the bolts B, and its lower end is adjusted by the hand-screw D, to vary the width of the opening at E and regulate the fineness of the ore passing through.

F is the moving jaw. It is provided with a wearing-plate, F′, which is fastened in place by the bolt G.

H is the brace-piece, which bears against the transverse piece *a′*, the point of bearing being the fulcrum of the lever or jaw F. To keep the jaw F from crowding forward in case dust or dirt should accumulate at the fulcrum-point, there is a projection, *h*, on one side, entering a recess provided for it in the side piece, A′.

*b b* are lugs cast on the side piece, A′. They support the end of the transverse piece *a′*.

I is the hand-lever. It is supported on trunnions J, which enter holes in the side pieces, A A′. Between these trunnions the under side of the lever is hollowed out to loosely fit over the circling top of the moving jaw. The trunnions are eccentric to the circling top of the moving jaw, and as the lever is made to fit snugly against the opposite sides, it follows that a leverage is obtained proportionate to the vertical movement of the end of the hand-lever with the horizontal movement of the top of the jaw.

There may be provided a wearing-plate for the stationary jaw, similar to that provided for the moving jaw, and it might be well to provide in the larger sizes of machines the usual wearing-surfaces, which can be replaced wherever there is frictional contact of the parts—as, for instance, the holes in the side pieces in which the trunnions J work might be lined, and where the brace-piece H bears against the transverse piece *a′* a suitable wearing-block might be supplied. The present illustration of the machine, however, is designed simply to show its essential features.

The operation is simple and as follows: When the quartz-rock is taken from the mine, and it is desired to crush it fine enough to feed to the stamp-battery, or, as the case may be, when the tester or assayer wishes to crumble the rock fine enough for his purpose, it is thrown into the mouth of the machine and the lever I moved up and down. The result will be that the jaws C and F will be brought together with such force as will crumble the rock to the finest degree, accordingly as the opening at the bottom of the jaws is adjusted wider or narrower apart.

What I claim as my invention, and desire to secure by Letters Patent, is as follows:

The herein-described rock-crusher, consisting, essentially, of the casing A A′, provided with the transverse plate *a′*, stationary jaw C, moving jaw F, having brace-piece H, lever I, provided with trunnions J, engaging with the upper part of the jaw F, the whole being arranged and operating substantially as and for the purpose described.

JOEL B. LOW.

Witnesses:
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