J. HUNKELER.
Grinding-Machine.

2 Sheets—Sheet 1.

No. 202,656. Patented April 23, 1878.

FIG. 1.

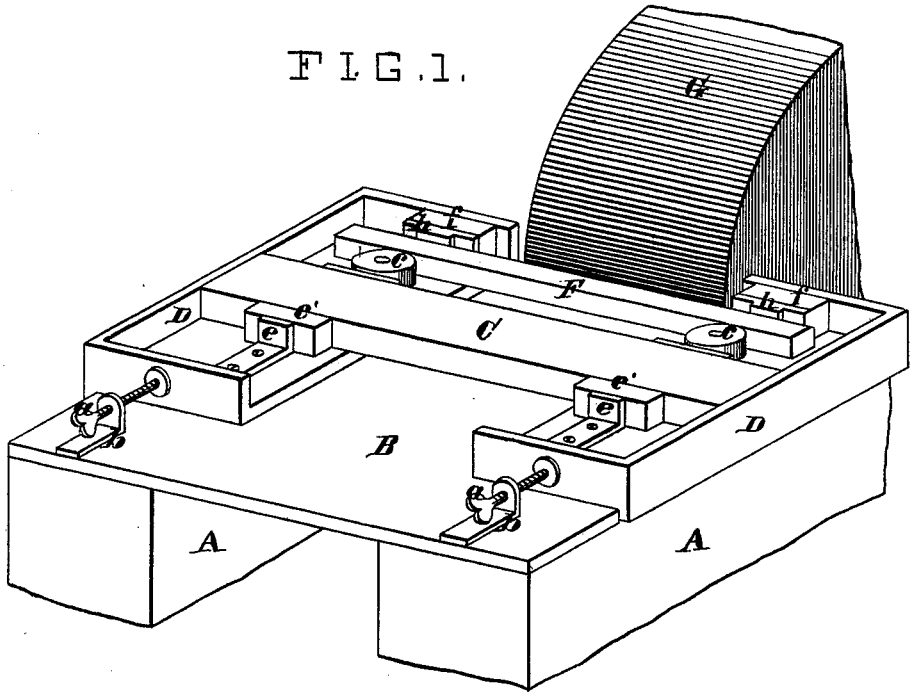
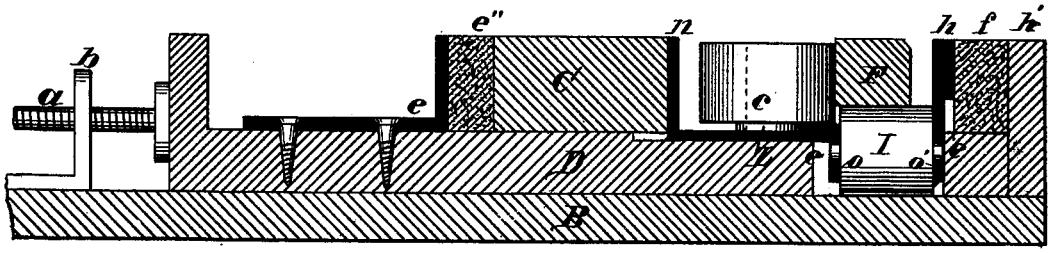


FIG. 2.



ATTEST.
William Daly
Frank E. Burns

INVENTOR.
Josef Hunkeler.
By Joseph E. Marx. Attorney.

2 Sheets—Sheet 2.

J. HUNKELER.
Grinding-Machine.

No. 202,656. **Patented April 23, 1878.**

FIG. 3.

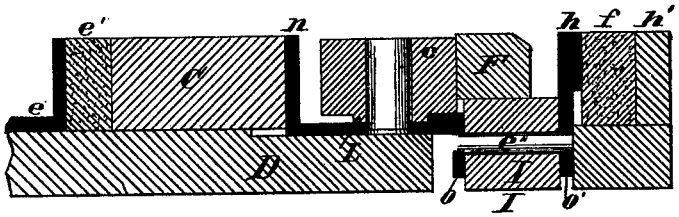
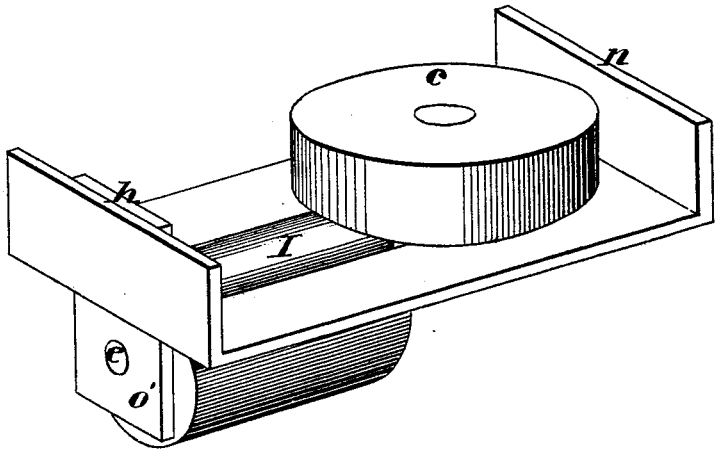


FIG. 4.



ATTEST.

Alex. J. Thomson
W. F. Daly

INVENTOR.

Joseph Hunkeler.
By Joseph E. Ware, Attorney.

UNITED STATES PATENT OFFICE.

JOSEF HUNKELER, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN GRINDING-MACHINES.

Specification forming part of Letters Patent No. **202,656**, dated April 23, 1878; application filed March 1, 1878.

To all whom it may concern:

Be it known that I, JOSEF HUNKELER, of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Movable Rests for Grinding Mill-Picks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement whereby mill-picks may be ground with great rapidity and accuracy, the durability of the grindstone being at the same time extended.

Against two vertical friction guide-rollers, which are set parallel and transverse to the frame of the grindstone, and upon two other friction-rollers, set at right angles to the preceding ones, I place a bar of iron or steel, which operates as a movable rest, through the freedom with which it can be moved on and against the friction-rollers, either to the right or left, while the tool is thus moved across, and pointing downward or upward against the face of the grindstone, to the great advantage of its grinding-face being always kept true.

In the annexed drawing, Figure 1 shows the apparatus in perspective, and as resting on the grindstone-frame in position for service. Fig. 2 is a sectional view, exhibiting the operative arrangement of the various parts. Fig. 3 is a longitudinal section, and Fig. 4 a perspective view of the roller bracket or carriage.

On the floor-piece B is placed the frame D, which is held down on said floor B by the weight of the weight-bar C, which may weigh ten pounds, (more or less,) while to cause the said frame to be moved forward toward the grindstone as it wears away, set-screws *a* in the brackets *b* are provided. In consequence of the adjustment of the frame D by the said set-screws *a*, the rest-bar F is set up to, say, a half-inch of the stone. The said rest-bar F is caused by the grinder to move regularly across the face of the grindstone G, which it does the more freely by the aid of the supporting-rollers I and the paralleling friction-rollers *c*. The said rollers *c* revolve upon posts L, which are firmly set in the double bracket *n*. To afford any required recoil when the pick has a tendency to jam between the movable bar and the stone, the elastic cushions *e'* are provided, and to balance the pressure of said cushions *e'*, cushions *f* are oppositely placed between the frame D and the said double bracket *n*. The friction-rollers I revolve on journal *e''*, which are attached by lugs *o* to the said double bracket and bracket-lug *o'*. To enable the movable rest to properly recoil, there are to that end cutaways in the frame D, which permit as well the removal of the said double brackets when cleaning or oiling may be necessary in the parts thereto affixed. To resist the general backward strain upon the movable parts of frame D, the brackets *e* are firmly screwed to the said frame D.

I claim as my invention—

In the movable rest for regulating the grinding of mill-picks, as herein shown, the movable bar F, the support and guide-rollers I and *c*, and the weight-bar C, as inclosed between brackets *e'*, *n*, and *h*, as set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

JOSEF HUNKELER.

Witnesses:

JOSEPH MATTMANN,

JOHN K. HUBER.