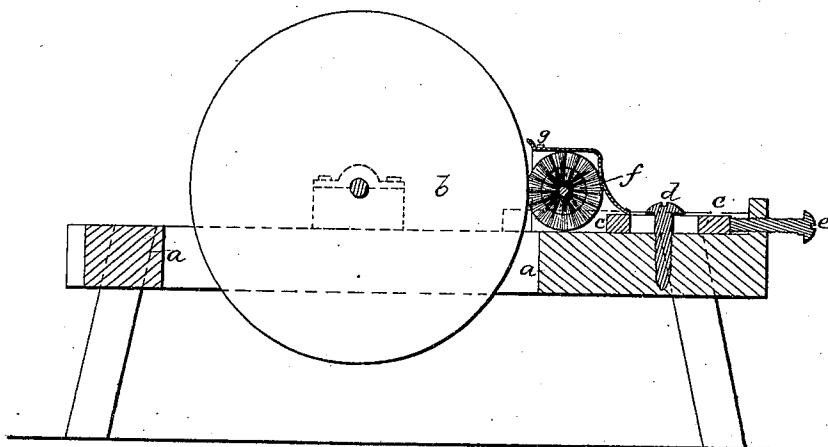


J. BIDWELL.
MACHINE FOR FACING GRINDSTONES.

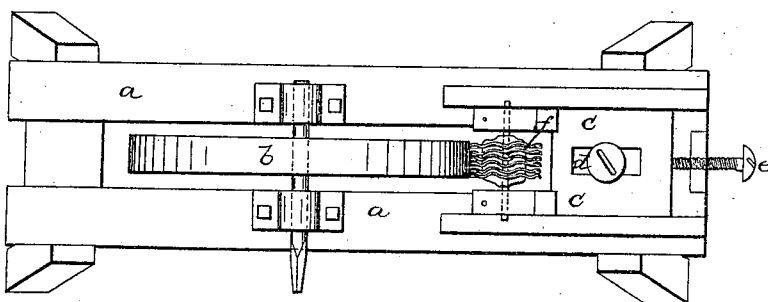
No. 38,782.

Patented June 2, 1863.

Fig; 2.



Fig; 1.



Witnesses;
Lemuel H. Perrell
Chas H. Smith

Inventor,
James Bidwell

UNITED STATES PATENT OFFICE.

JAMES BIDWELL, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND WILLIAM W. MARSTON, OF SAME PLACE.

MACHINE FOR FACING GRINDSTONES.

Specification forming part of Letters Patent No. 38,782, dated June 2, 1863.

To all whom it may concern:

Be it known that I, JAMES BIDWELL, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improved Means for Facing Grindstones; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a plan of the grindstone with the tool-rest removed, and Fig. 2 is an elevation of the grindstone with the frame and tool-rest in section.

Similar marks of reference denote the same parts.

Grindstones when in use wear smaller by the constant use, and the rest upon which the tools are placed hence is farther from the surface than is convenient; besides this, in grinding and sharpening tools the surface of the stone becomes uneven, and the stone being harder in some places than in others makes the same wear untrue and the stone wabbles.

The nature of my said invention consists in an adjustable tool-rest that can be moved up to the grindstone as the same wears away, and in a roller of bent or angular plates rotating by contact with the surface of said grindstone, and keeping the same perfectly true by pressing upon and abrading, chipping, or crumbling away such portions of the surface as may project beyond the true circle formed by the rotation of said stone, and this roller and tool-rest, being adjustable together, are brought up constantly to the surface of the grindstone as that wears away.

In the drawings, *a* represents the frame of the grindstone, of any desired character, and *b* is the grindstone, mounted and driven in any usual way.

c is an adjustable frame held to *a* by the screw *d*, and provided with a screw, *e*, or its equivalent, to force said frame *c* toward the grindstone as occasion may require.

f is a roller, composed of a shaft running in the frame *c*, and carrying metallic disks kept apart by washers. These disks should either be corrugated, as shown, or set at a slight angle to the shaft, in order that said plates, in their rotation, by contact with the surface of the grindstone shall act upon all parts of the surface of the grindstone and cause a sufficient abrasion or crumbling away of the surface by the pressure of the edges of the disks to wear away inequalities and keep the stone true in its conformation and smooth in its surface, and hence in the best condition for grinding. At the same time this roller *f* wears but very little, because the surface rolls in contact with the grindstone. The tool-rest *g* is attached to the frame *c*, as represented, and forms a cover to the roller *f*, and is always at a convenient proximity to the surface of the stone.

The disks composing the roller *f* may be corrugated, as shown, and set at a slight angle to the axis of the roller, in order to act on the surface of the stone more uniformly.

What I claim, and desire to secure by Letters Patent, is—

1. The tool-rest *g*, in combination with the adjustable frame *c*, as specified, whereby said tool-rest is moved up to the stone as the stone wears, as set forth.

2. The roller *f*, composed of a series of metallic disks and taking the entire face of the grindstone and pressed thereto, substantially as and for the purposes specified.

3. The combination of the roller *f*, tool-rest *g*, and adjustable frame *c*, for the purposes and as specified.

In witness whereof I have hereunto set my signature this 25th day of March, 1863.

JAMES BIDWELL.

Witnesses:

LEMUEL W. SERRELL,
CHAS. H. SMITH.