

(No Model.)

B. H. JOHNSON.
MILL.

No. 309,957.

Patented Dec. 30, 1884.

Fig. 1

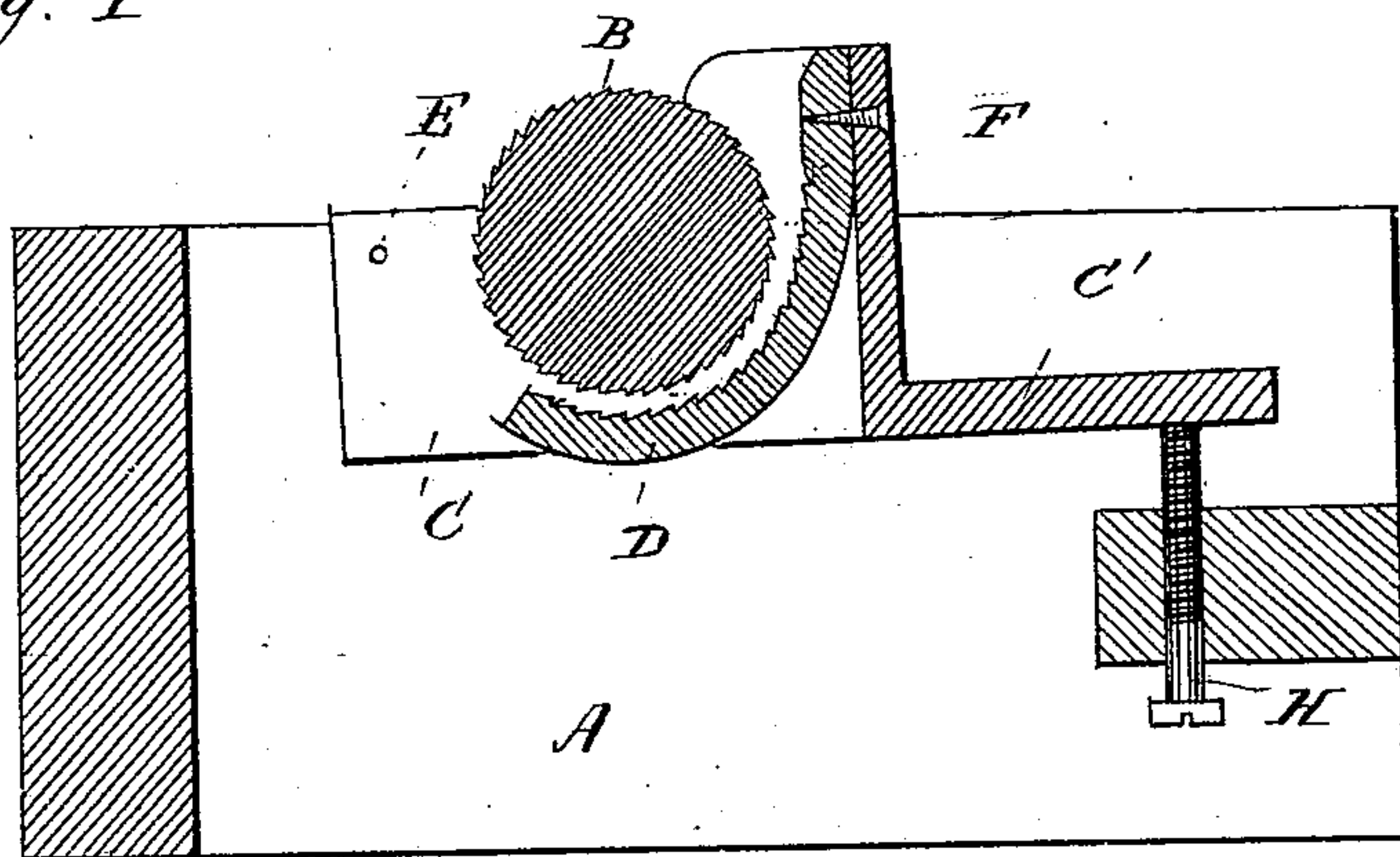
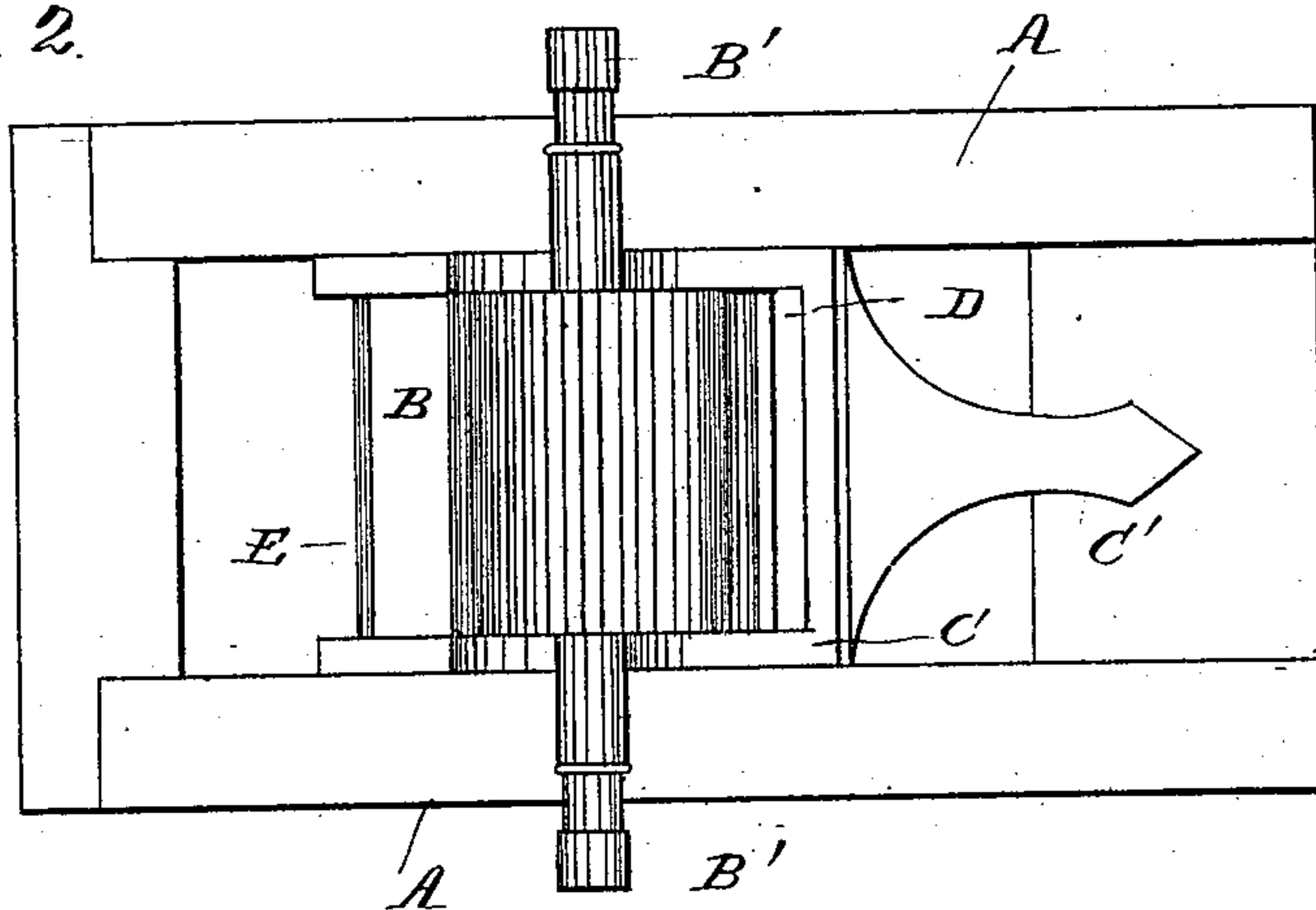


Fig. 2



WITNESSES:

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BENDICK H. JOHNSON, OF LAKE MILLS, IOWA.

MILL.

SPECIFICATION forming part of Letters Patent No. 309,957, dated December 30, 1884.

Application filed July 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, BENDICK H. JOHNSON, a citizen of the United States, residing at Lake Mills, in the county of Winnebago and State of Iowa, have invented certain new and useful Improvements in Mills, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in mills, and has for its objects to provide a mill which can be cheaply built and do good work, either by hand or power, which will permit the grinding-surfaces to be removed, annealed, sharpened, and then retempered, and which will permit the said grinding-surfaces to become separated, and thus freed from injury in the event of any foreign matter—such as iron—happening to get into the mill. These objects are attained by the mechanism illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional view, and Fig. 2 is a plan, of the mill.

The letter A indicates the frame of the mill, which may be made of wood or other suitable material.

B is the burr, which is of cylindrical form, and is provided with saw-shaped teeth or grooves around its periphery, and is intended to be made of wrought-iron or steel, in order that it may be annealed and sharpened when dull, and then tempered or case-hardened. This cylinder is mounted upon a shaft, B', having suitable bearings in the frame A. This shaft may be provided with a fly-wheel, as well as suitable pulleys or crank, for the purpose of giving it rotary motion.

C is a metal frame, which is secured to the frame A by means of a wooden pin, E. It is made of wood, in order that it may break should any obstruction get into the mill between the cylinder B and the concave D, and thereby allow such obstruction to pass out of the mill without injury to its abrasive surfaces.

The concave plate D is intended to be made of steel or wrought-iron, in order that the temper may be drawn when it is desired to sharpen the teeth thereon, which are of saw-

tooth shape, with intermediate grooves extending across the surface thereof. The concave plate D is secured to the frame C by means of the screw or bolt F. In the rear the frame C is elongated into a rearwardly-projecting arm, C', beneath which is an adjusting-screw, H, by means of which the frame C may be raised or lowered, in order to grind fine or coarse, as the case may be, and also serves the purpose to support this end of the frame.

It will be observed that the frame C oscillates upon the pin E, by which it is also secured to the frame A. A mill constructed in this manner permits the frame which supports the concave grinding-surface D to be instantly removed by withdrawing the pin E whenever it is desired to do so, either to sharpen the teeth of the concave or for any other purpose, and, besides being simple, is exceedingly cheap. To remove the concave from the frame, it is only necessary to unscrew the single bolt F. The elongated portion C' of the frame C enables the adjustment of the frame C and its concave D to or from the burr B to be made more gradually than if not provided therewith.

I have found that a mill constructed in this manner grinds with great rapidity and with a small comparative consumption of power.

I am aware that wooden pins and also springs and weights have been used in several instances, in various classes of machinery, to prevent the breakage of more important parts. I do not claim, broadly, any such devices; but,

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

The herein-described mill, comprising the frame A, the frame C, having a rearwardly-extended portion, C', a screw, H, a concave, D, screw-bolt F, the breakable pivot-pin E, the burr B, and shaft B', as described, and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

BENDICK H. JOHNSON.

Witnesses:

WM. LARSON,

OLE C. WESTRUM.