A. VERBECK.

Grinding Mill.

No. 107,640. Patented Sept. 20, 1870.

Fig. 1.

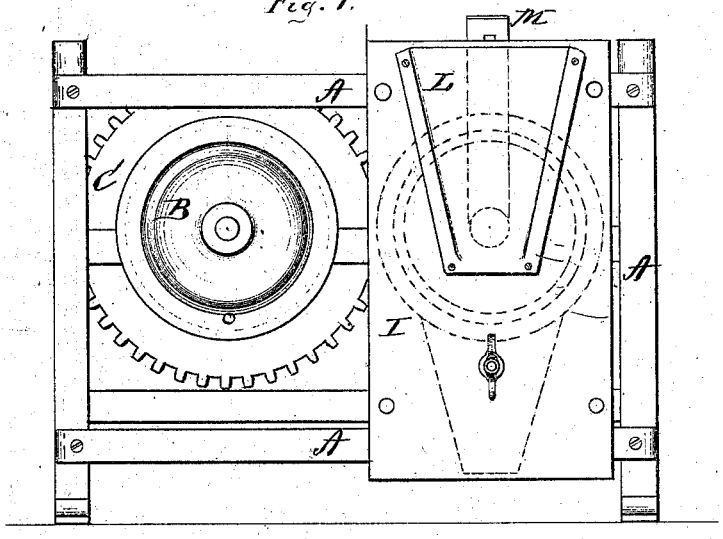


Fig. 2.

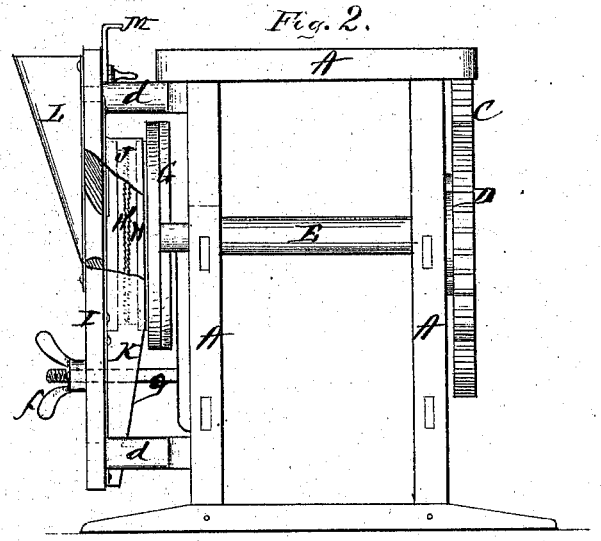
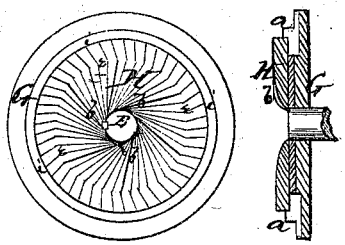


Fig. 3.



Witnesses:

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AMOS VERBECK, OF STERLING, ILLINOIS.

Letters Patent No. 107,640, *dated September* 20, 1870.

IMPROVEMENT IN GRINDING-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, AMOS VERBECK, of Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Portable Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a "grinding-mill," to be attached to an ordinary hand or horse corn-sheller, or other suitable machinery.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, and

Figure 2, an end view of my machine.

Figure 3 shows the mode of cutting and attaching the burs.

A represents the frame of my machine.

B is the driving-wheel mounted upon one end of a horizontal shaft, which has its bearings in the frame A, and upon the other end of which is a large cog-wheel, C. This wheel gears with another wheel, D, upon one end of a similar shaft E.

On the other end of the shaft E is a disk, G, having a circular recess, in which the bur H is inserted. This bur is fastened by means of two blocks, *a a*, secured on the under or inner side of the bur, and let into the flange surrounding the recess on the disk G, as shown in fig. 3.

The outer or grinding surface of the bur H is cut, as shown in fig. 3, the furrows running at a tangent with the shaft E, the end of which is seen in the center of the bur. At a suitable distance from the outer edge the furrows turn at an obtuse angle, as shown, from *e* to *i*.

The surface from *e* to *i* is flat, although furrowed, but from *e* inward to the shaft it bevels inward, and the central edge curved or rounded.

Near the inner edge of the bur is a series of projecting teeth, *b*.

From the side of the frame A, above and below the bur H, project four arms, *d d*, having tenons on on their outer ends, and on said tenons is placed a plate, I, provided on its inner side with a stationary bur, H′, constructed and attached in the same manner as above described for the revolving bur H.

Around this bur is a circular casing, J, with delivery-spout, K, underneath, the casing being large enough to inclose the revolving bur H also when put in place.

On the outside of the plate I is a hopper, L, through which the grain is fed to the mill, said hopper opening in the center of the stationary bur H′; and on the inside of the plate I is a slide M, running behind said bur, and projecting into the central opening to regulate the amount of grain fed to the hopper.

A screw-bolt, *g*, is attached to the frame A, immediately under the disk G, and passes through the face-plate I. On the outer end of this screw-bolt is a thumb-nut, *f*, by means of which the burs may be regulated to grind fine or coarse, as may be desired.

Having thus fully described my invention,

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

1. The arrangement upon the face-plate I of the stationary bur H′, casing J, spout K, hopper L, and slide M, all constructed and operating as set forth.

2. In combination with plate I and devices thereto attached, screw-bolt *g*, and thumb-nut *f*, all arranged and operating as described.

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

AMOS VERBECK.

Witnesses:

JNO. G. MANAHAN,

SAMUEL WELLS.