J. W. & S. J. WOODCOCK.
Grinding-Mill.

No. 213,273 Patented Mar. 11, 1879.

Fig. 1.

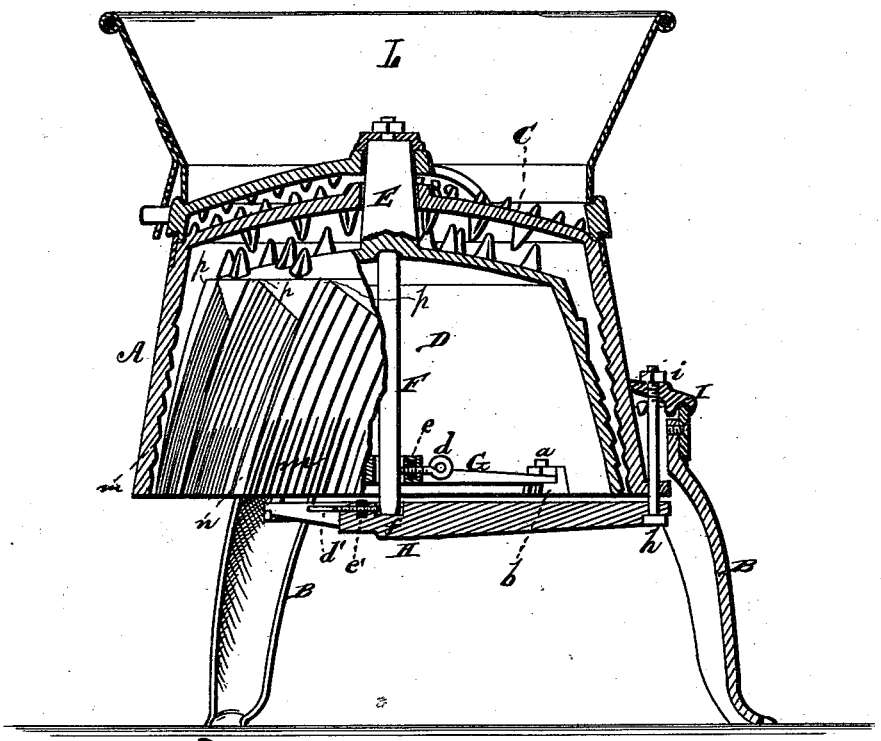
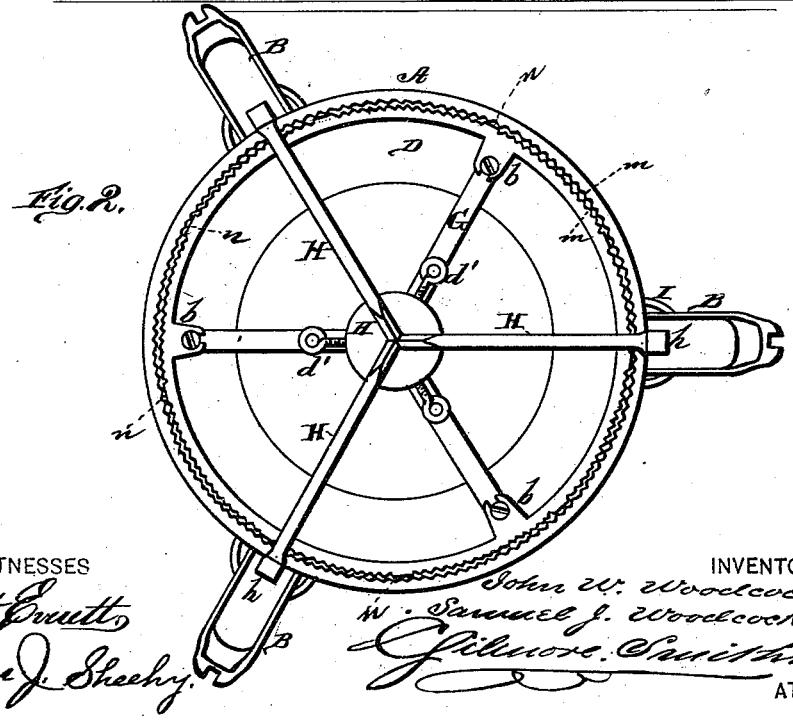


Fig. 2.



WITNESSES

Robt Ewett

James J. Sheehy.

INVENTORS.

John W. Woodcock.

S. Samuel J. Woodcock.

Gilmore, Smith & B.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN W. WOODCOCK AND SAMUEL J. WOODCOCK, OF NEW LEXINGTON, OHIO.

IMPROVEMENT IN GRINDING-MILLS.

Specification forming part of Letters Patent No. **213,273**, dated March 11, 1879; application filed April 20, 1878.

To all whom it may concern:

Be it known that we, JOHN W. WOODCOCK and SAMUEL J. WOODCOCK, of New Lexington, in the county of Perry and State of Ohio, have invented a new and valuable Improvement in Grain-Mills for the Purpose of Grinding Feed for Stock; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a partly-vertical section of our grain-mill for grinding feed for stock, and Fig. 2 is a plan view of the under side thereof.

The nature of our invention consists in the construction and arrangement of a mill for grinding grain, &c., as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate our invention.

A represents the outside cylinder, supported upon legs B B, and provided at the top with a curve-armed arch-formed spider, C, through the center of which passes the shaft or cone E, projecting from the top in the center of the interior burr, D.

F represents the central gudgeon, which is attached at its upper end by a square eye to the burr D in the top cone, E. This gudgeon is held to its place in the mill by passing through a round eye in a set-tree, G, down into a box in the bridge-tree H. The set-tree G is secured to the burr D by three screws, *a a*, connecting its arms to lugs or ears *b b* on the inside at the lower edge of the burr. The gudgeon, resting in a square eye in the top of the cone of the burr, is adjustable at the bottom by three set-screws, *d d*, in the set-tree G, and three set-screws, *d' d'*, in the bridge-tree H. Each set-screw *d* in the set-tree G has a nut, *e*, in a recess of the set-tree, through which the screw passes to the gudgeon, thereby giving power to control it at will.

In the bridge-tree H the set-screws *d'* are similarly set with nuts *e'*, which adjust the box *f* in the center of the bridge-tree, where the lower end of the gudgeon F rests. By thus adjusting the gudgeon the burr is kept in the center of the cylinder, making the wear equal on the burr and cylinder.

The bridge-tree H is supported by means of bolts *h*, passing up through caps I on top of the legs B, and nuts *i*, screwed on the upper ends of said bolts. By these means the burr D may be adjusted up and down, as required, to bring the grinding-surfaces closer together or farther apart, as required.

The inside of the cylinder A and the outside of the burr D are provided with the usual inclined grinding-teeth *m*, and at suitable intervals said surfaces are provided with flat ribs *n*, which stand out more prominently at the bottom than the teeth *m*. These flat ribs are intended for rubbers to protect the fine teeth from wear. These flat ribs extend, however, only a certain distance from the lower edge upward, and then they are continued to the top in the form of larger teeth or wings, *p p*, to hasten the feed.

The top of the burr D is provided with the usual teeth, and the spider C is also toothed on both top and bottom. Above this spider is a similar one, J, attached to the upper end of the shaft E for rotating the burr D. L is the hopper.

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

1. In combination with the burr D, the gudgeon F, set in a square eye in the burr, the set-tree G, with set-screws *d* and nuts *e*, and the bridge-tree H, with set-screws *d'*, nuts *e'*, and box *f*, all as and for the purposes set forth.

2. The flat ribs *n*, arranged at suitable intervals in the teeth of the burr and cylinder at the bottom, and forming at the top the feeders *p*, as and for the purposes set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN W. WOODCOCK.
SAMUEL J. WOODCOCK.

Witnesses:
HENRY N. FREE,
JAMES F. COMLY.