(No Model.)

# J. F. WINCHELL.

## FEED MILL CUT-OFF.

No. 509,416. Patented Nov. 28, 1893.

Fig. 1.

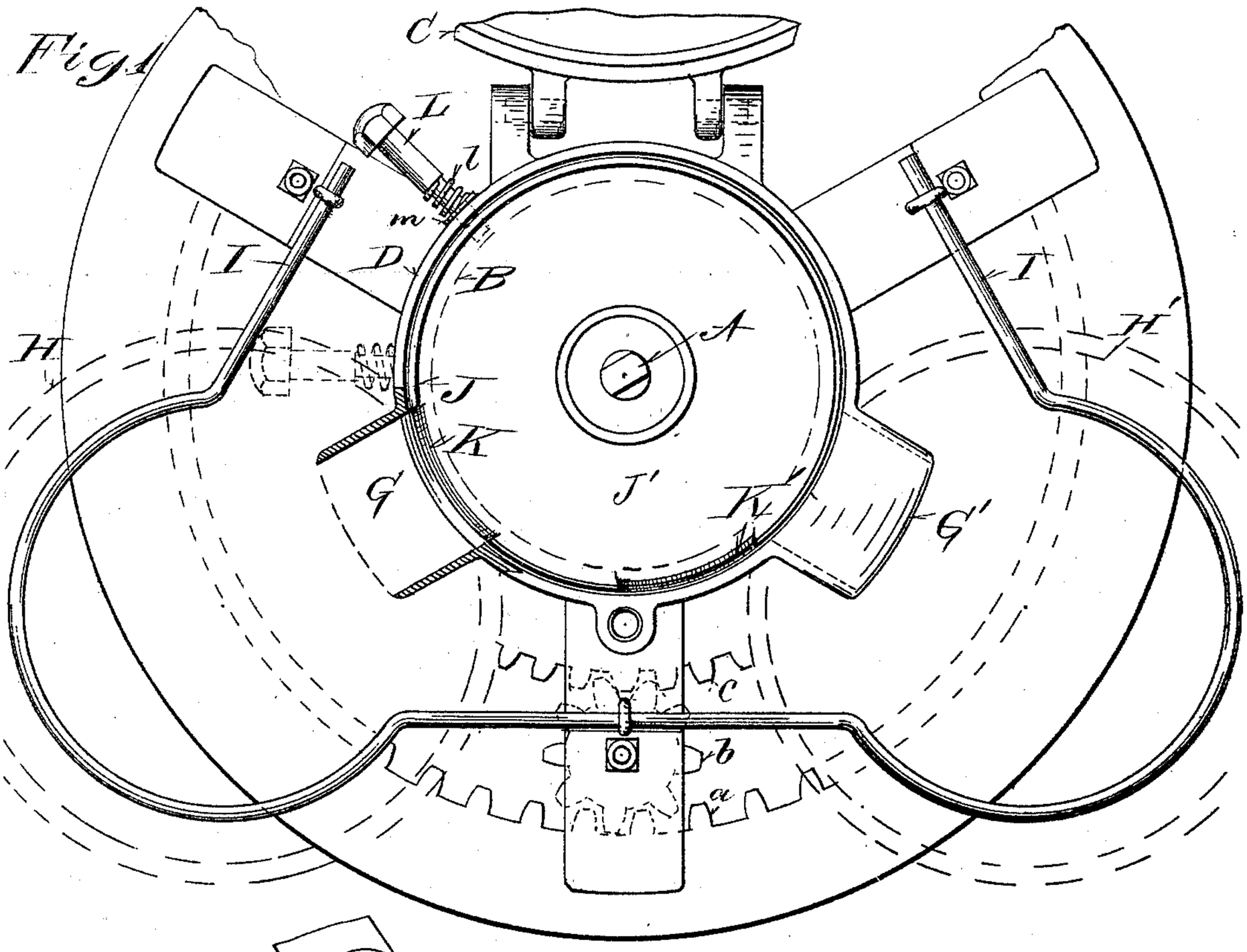
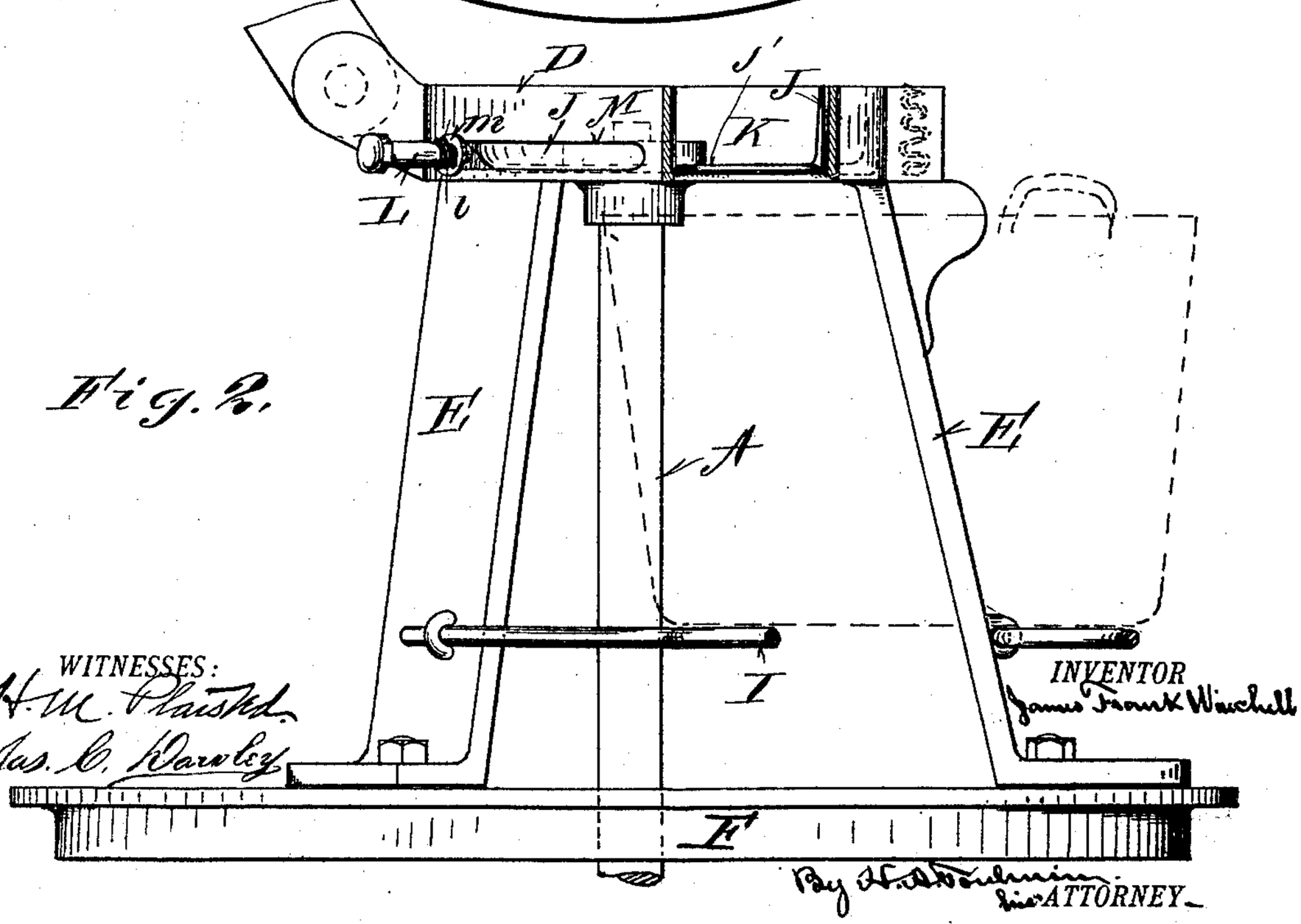



Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## FEED-MILL CUT-OFF.

SPECIFICATION forming part of Letters Patent No. 509,416, dated November 28, 1893.

Application filed February 2, 1893. Serial No. 460,704. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES F. WINCHELL, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Feed-Mill Cut-Offs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in feed mill cut-offs; the peculiarities of which will be hereinafter fully described and particularly pointed out and claimed. In the ordinary form of feed mills of this character, the grinding mechanism must be stopped in its rotation when a certain amount, such as a bushel, of feed is delivered therefrom, until the measure be shifted; or a certain amount more or less of waste occurs in shifting the measure, taking away the full measure and replacing it by an empty one. To avoid this waste and secure the continual operation of the mill, facilitate the handling of the ground feed, and effect simplicity of construction especially adapted to this class of mills, are the chief aims of my invention herein described.

In the accompanying drawings on which like reference letters indicate corresponding parts: Figure 1, represents a plan view of a portion of a feed mill, the grinding disk being thrown upward; and Fig. 2, a vertical side view of the same, a portion of one of the chutes being shown in section.

The letter A designates the driving shaft, for the rotating member of the grinding mechanism, which is mounted thereon, the position of which is indicated by the dotted line B. The non-rotating member is shown thrown upward on the hinged cope C, to allow a view of the grinding chamber, which consists of a cylindrical wall D, through the bottom of which extends the shaft A. This chamber is supported on legs E from the base F in a mill of this construction. The driving mechanism is only partly shown as at A, B, and C, as it forms no part of my invention. The grinding chamber is provided with chutes G G′, consisting of outwardly extending walls and a top which directs the feed into baskets H H′, (indicated by dotted lines,) mounted on a rod support I, below the grinding chamber.

Between the walls of the grinding chamber and the grinding disks is mounted a cut-off, consisting of an annulus J, and a bottom J′, into which the ground feed, from the grinding disks, is delivered, and finds its way outward into the chutes through openings K K′, formed by cut away portions of the ring J. These openings are so located, with respect to the chutes, that when one opening is directly opposite its matching chute, the other chute is opposite a portion of the wall of the chamber D, as shown in Fig. 1. That is to say, but one chute may discharge fully at a time, the other chute being closed. The cut-off is rotatably mounted and adapted to be oscillated through a certain arc by means of a handle formed by a bolt or extension L, engaging with the cut-off through a slot M, Fig. 2, in the wall D. A spring L on a shouldered portion of the handle, acts on a washer *m* with sufficient force to cause the friction of the washer on the chamber wall, to maintain the cut-off easily in place. Thus when the basket H, under the chute G, is filled with the ground feed, the handle L is rotated to the dotted position, Fig. 1, cutting off the feed from the chute G and delivering it through the opening K′ and the chute G′, into the basket H′, without at all slacking up the mill, or wasting the feed. The basket or measure H is replaced by an empty one, and when the measure H′ is filled, the operator will throw the handle and cut off back to the position shown in Fig. 1, delivering the feed through the chute G while the measure H′ is removed. Thus it will be seen that a simple yet effective cut-off is provided, which is easily operated, cheap in construction and economical in use.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a feed mill, the combination with grinding mechanism, and an inclosing circular chamber therefor provided with chutes, of a cut-off located within said chamber consist-

ing of a circular sliding piece having openings alternately matching said chutes, whereby one of said chutes will be closed and another opened, on operating said cut-off.

2. In a feed mill, the combination with a grinding mechanism, of an inclosing circular walled chamber therefor provided with a pair of chute openings, of a cut-off consisting of a concentrically mounted piece operating between the grinding mechanism and the walls of said chamber, and provided with openings alternately matching said chutes, whereby a rotative movement of said cut-off will effect a closing of one chute and an opening of the other, and vice versa, substantially as and for the purpose described.

3. In a feed mill, the combination with a grinding mechanism and an inclosing circular chamber therefor provided with chutes at its periphery and a slot, of a cut-off consisting of an annulus having cut away portions alternately matching said chutes and a handle extending outward through said slot to operate the cut-off and open and close said chutes alternately.

4. In a feed mill, the combination with a grinding mechanism, and an annular surrounding chamber therefor provided with a pair of chute extensions from the side walls, and a slot opening in the side, of a cut-off consisting of an annular walled disk mounted within said chamber and having cut away portions of the wall alternately matching said chutes, whereby first one chute and then the other may deliver the ground food, and a handle extending outward through said slotted opening and carried by the cut-off for rotating the latter, and a friction device to maintain the cut-off in its located position.

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

JAMES F. WINCHELL.

Witnesses:
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