

(No Model.)

2 Sheets—Sheet 1.

J. F. HIMES.
FEED FOR TOP ROLLS OF GRIST MILLS.

No. 602,754.

Patented Apr. 19, 1898.

Fig. 1.

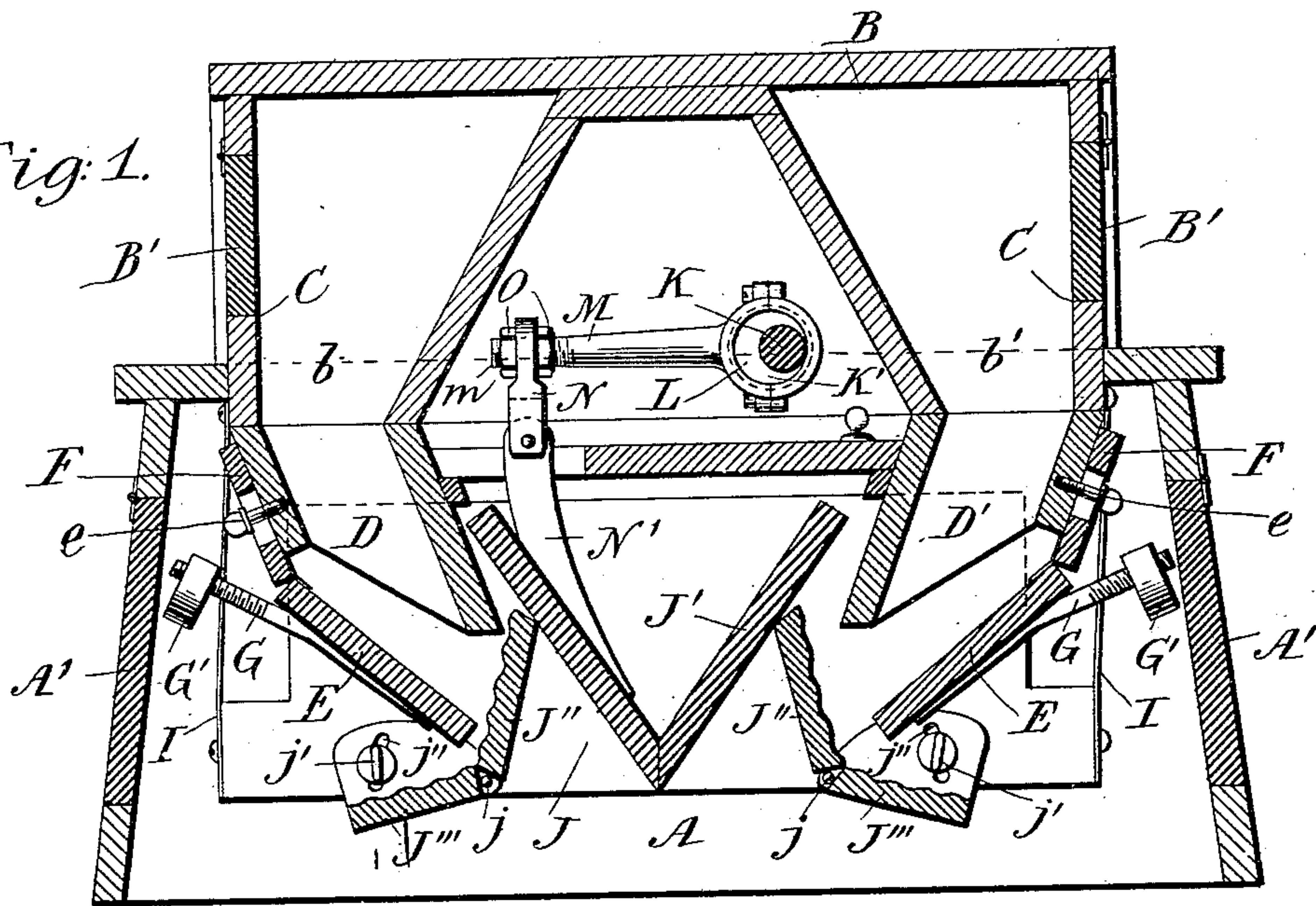
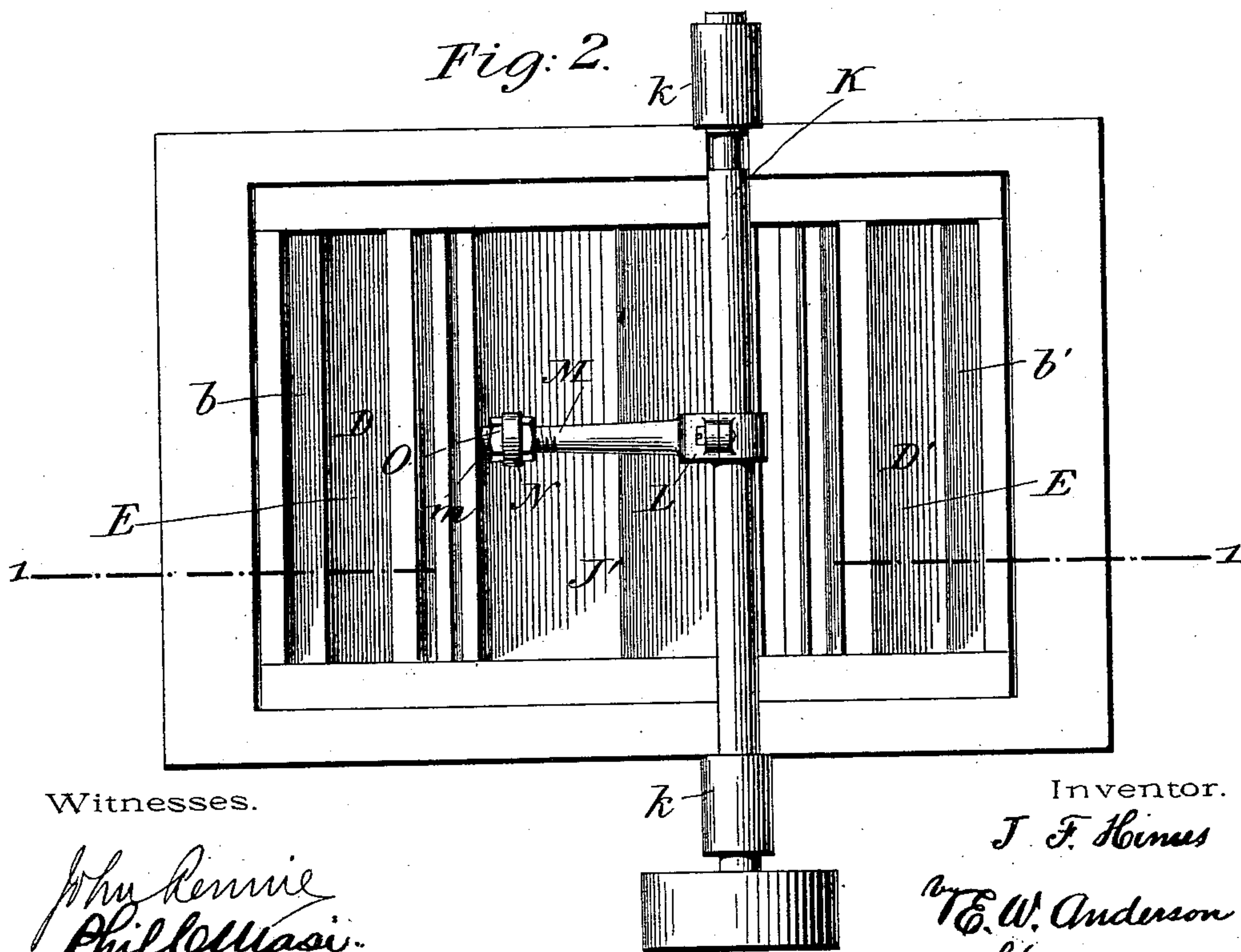


Fig. 2.



Witnesses.

John Rennie
Phil. C. Massi.

Inventor.

J. F. Himes

E. W. Anderson

his

Attorney

(No Model.)

2 Sheets—Sheet 2.

J. F. HIMES.

FEED FOR TOP ROLLS OF GRIST MILLS.

No. 602,754.

Patented Apr. 19, 1898.

Fig: 3.

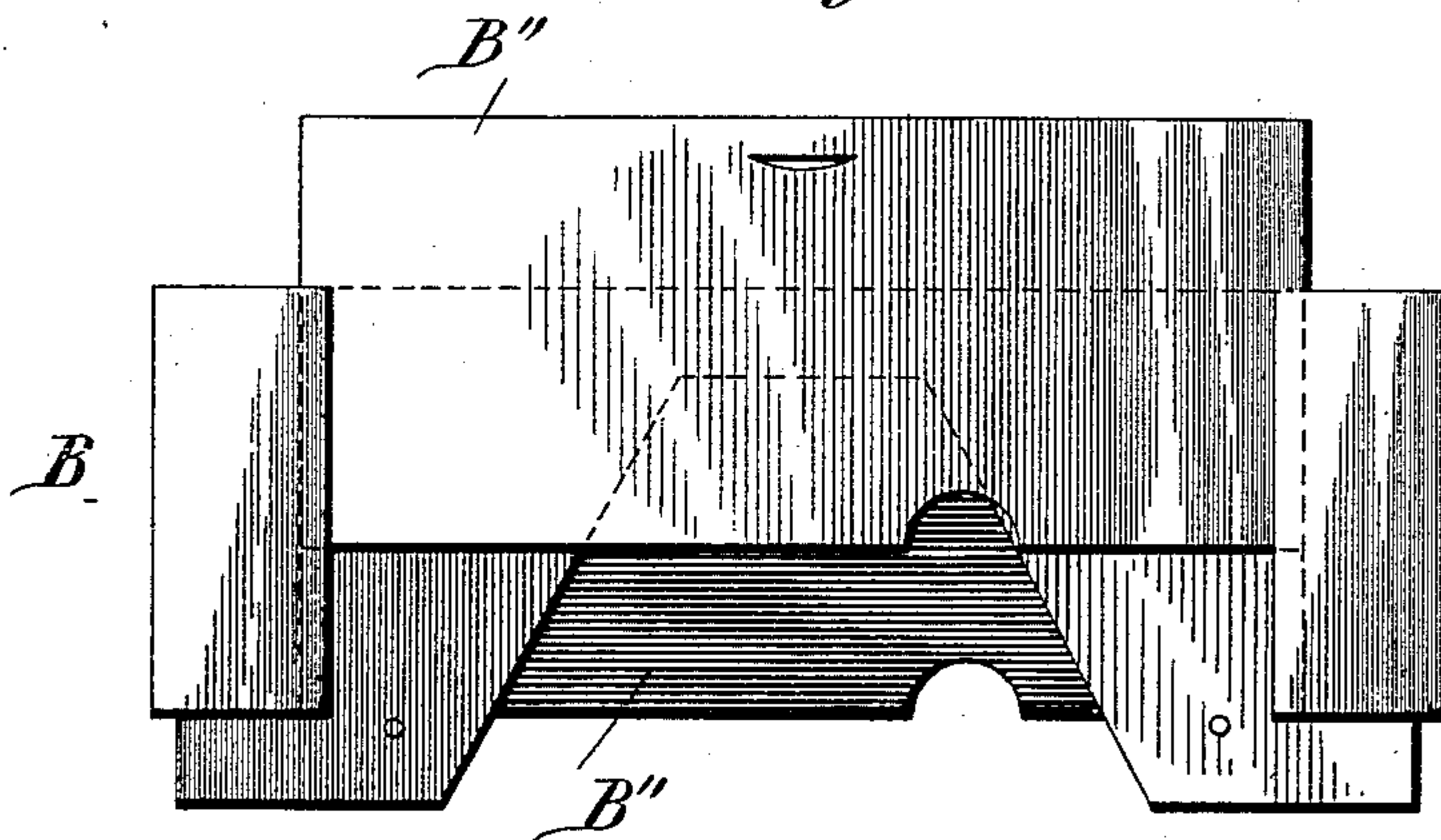
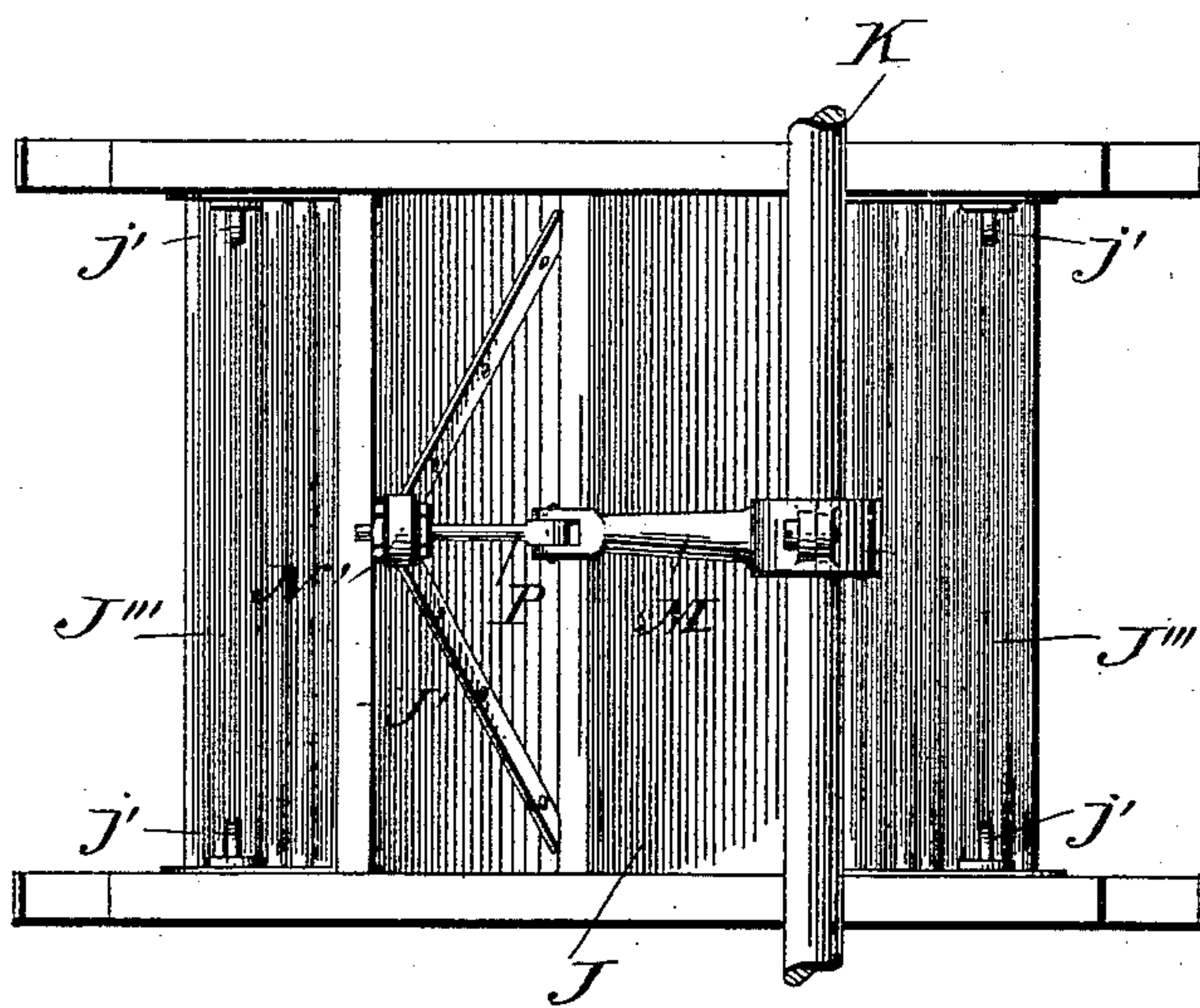


Fig: 4.



Witnesses.

John Rennie
Phillips.

Inventor.

J. F. Himes

by E. W. Anderson

his Attorney.

UNITED STATES PATENT OFFICE.

JOHN F. HIMES, OF ROARING SPRING, PENNSYLVANIA.

FEED FOR TOP ROLLS OF GRIST-MILLS.

SPECIFICATION forming part of Letters Patent No. 602,754, dated April 19, 1898.

Application filed August 26, 1897. Serial No. 649,616. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. HIMES, a citizen of the United States, and a resident of Roaring Spring, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Feed for Top Rolls for Grist-Mills; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a longitudinal vertical section of the feeder, taken on line 1 1, Fig. 2. Fig. 2 is a plan view of the same. Fig. 3 is an end view, and Fig. 4 is a plan view, of the shaker.

This invention has relation to a feeding and feed-regulating device for grist-mills, and is designed to provide means of this character which will insure regularity of feed at all times and which operates with less noise and vibration than is usually attendant upon such devices.

With these objects in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim.

Referring to the accompanying drawings, the letter A designates the main or body portion of the hopper or feed-box, and B a superimposed removable top portion thereof. The portion A is provided at its ends with observation-doors A', and the portion B has similar doors B', which are designed to close openings C, through which grain is delivered to the feeder from suitable chutes (not shown) or otherwise. B'' indicates vertically-sliding doors at the ends of the portion B. Within the portion B are two feed-spouts b b', located one at each end thereof, and whose open lower ends register, respectively, with chutes or hoppers D D' at the end portions of the part A. At the bottom of each chute or hopper D D' is a transverse hinged or pivoted flap-valve E, which is carried by an adjustable piece F, movably secured to the outer or rear side of the wall of the chute. e designates screws or other suitable means for securing the adjustment of said piece. Fastened to the under

side of the valve is a short threaded rod G, which carries an adjustable counterweight G', eccentrically placed on said rod. By means of this weight the position of the valve may be accurately adjusted to regulate the feed. The eccentric form of the said weight prevents it from being moved out of its determined adjustment by vibration, &c.

J designates a shaker, which is suspended and supported within the part A by means of springs I, which permit it an endwise vibratory movement. This shaker consists of parallel side pieces connected by a central portion J' and by transverse feed-plates J'' J''' at each end. The feed-plates J'' are respectively adjacent to the free edges of the valves E and have curved, roughened, or corrugated surfaces. The plates J''' are inclined, as shown, and meet at their upper edges the lower edges of the plates J''. They are pivoted at j in the side pieces of the shaker, and their adjustment is secured by means of screws j' and slots j'' or by other suitable means.

K designates the actuating or drive shaft for the shaker. This shaft is journaled transversely at the upper central portion of the part A in suitable boxes k and carries an eccentric K'. L is a strap which is fitted to said eccentric, and carries a rod or pitman M, whose opposite end portion is connected by a link N with an arm N', rigidly secured to the central portion J' of the shaker J. The end portion of the rod M is threaded, as indicated at m, and its point of connection with the link N may be varied to change the throw or degree of vibration of the shaker. O designates lock-nuts for securing this adjustment. The connection between the shaft K and the shaker may, however, be effected in other ways than that just described, as by the means shown in Fig. 4. In this figure the eccentric rod or pitman M is loosely connected to a rod P, which is adjustably connected at p to the arm N' of the shaker.

The action of the eccentric, together with the spring-supports I, causes an intermittent, short, and quick vibration of the shaker and makes the action of the latter a very regular and effective one. The movement obtained by this single center drive is, moreover, when the parts are properly constructed, a compara-

tively noiseless one and is a marked improvement over the action in those feeders heretofore employed, wherein a separate "drive" is employed for each side.

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

10 In a feeding and feed-regulating device for mills, the combination with the feed-box having the feed-chutes or hoppers, one at each end portion thereof, the hinged or pivoted counterweighted valves at the bottoms of the said chutes, and the adjustable pieces to which said valves are attached, of the spring-sup-

ported shaker having the feed-plates J'', J''' 15 at each end portion thereof, the plates J'' being curved and the plates J''' adjustable, the central drive or actuating shaft having an eccentric, the strap fitted thereto, and an adjustable connection between said strap and 20 the central portion of the said shaker, substantially as specified.

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

J. F. HIMES.

Witnesses:

RANCY B. DICK,

HARRY H. HILEMAN.