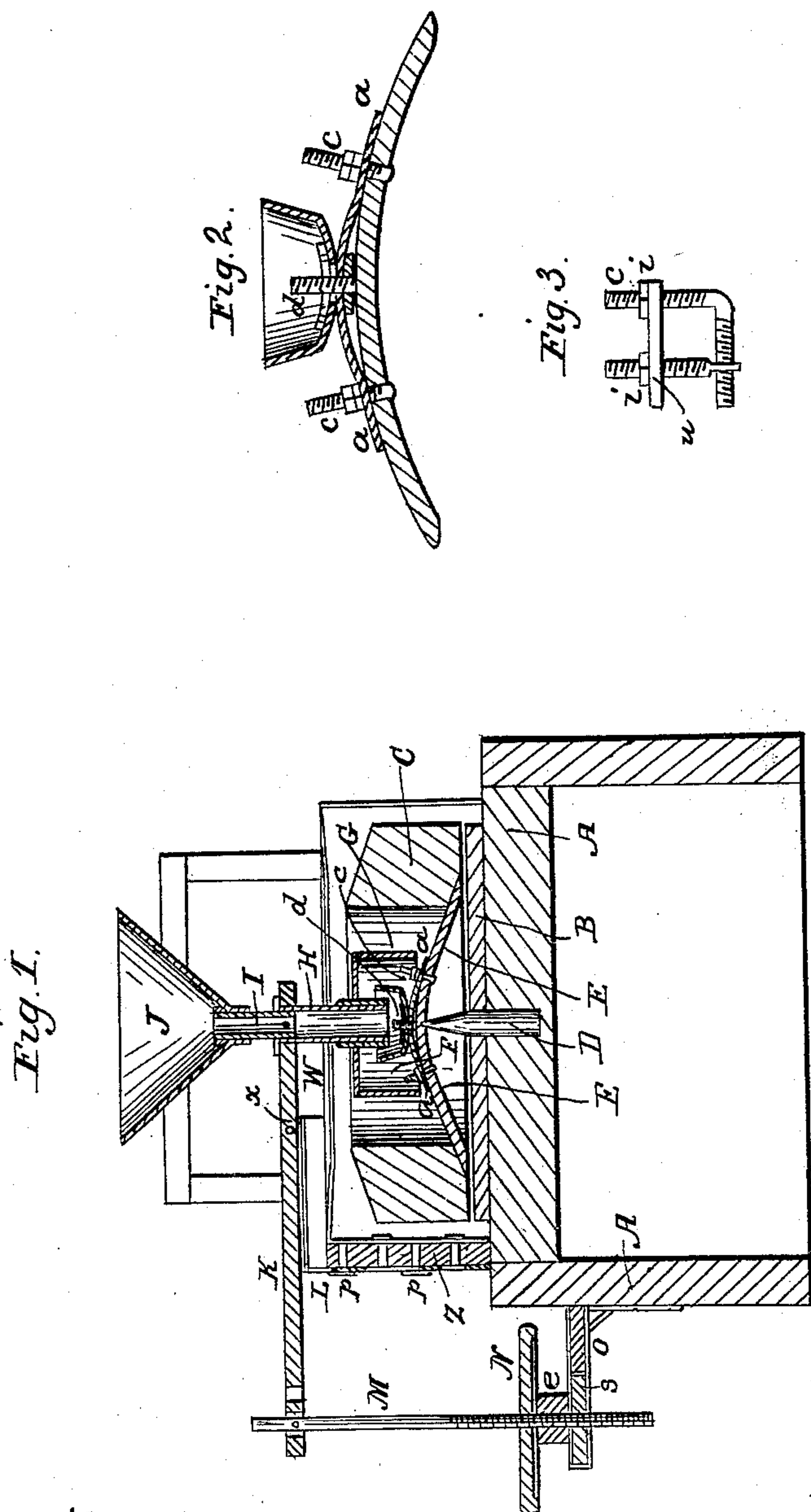


J. M. CLARK.
Feed Regulator for Mills.

No. 34,239.

Patented Jan. 28, 1862.



Witnesses:
C. M. Alexander
M. M. Dow.

Inventor:
J. M. Clark

UNITED STATES PATENT OFFICE.

JAMES M. CLARK, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR FEEDING MILLS.

Specification forming part of Letters Patent No. 34,239, dated January 28, 1862.

To all whom it may concern:

Be it known that I, JAMES M. CLARK, of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Feeding Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the annexed drawings, making part of this specification, A represents the floor or husk upon which the lower stone B is secured.

C represents the upper stone or runner.

E is the rine secured to the upper stone and which sustains it.

D represents the spindle, the point of which enters an opening or socket in the under side of the rine. The stone and rine rest upon this spindle in the usual way and revolve upon it.

F represents a cup, which is secured to the rine E by means of a strap *a*, to which it is attached. The strap *a* is provided with a screw, which is attached to it at its center, and which stands in a vertical position. This screw passes through an opening in the bottom of the cup, and a nut passes over said screw to secure the cup to the strap and screw. The bottom of the cup has the hole through which the screw passes made sufficiently large to enable it to be adjusted to one side or the other, so that it may be made to run perfectly true at all times.

c c represent two clips, by means of which the strap *a* is secured to the rine. This clip consists of a bent screw, a straight screw with a nut in its lower end, and a cross-piece *u*, as shown in Figure 3.

i i are nuts, which pass over the two screws for confining the cross-piece *u* down. This clip is adjustable, as seen by the arrangement of its parts, so that it can be made to secure the strap *a* to different-sized rines.

H represents a tube, which connects with the hopper by means of a glass tube I. The tube I fits in the tube H, and the tube H slides over it when it is moved.

K represents a lever, which has its fulcrum on the metallic standard L. The inner end of this lever K is connected to the tube H by a pivot, so as to allow the tube to move up or

down in a vertical position when the lever is moved.

M represents a screw-rod, one end of which is pivoted to the lever K, while the other end passes through a hand-wheel and bracket. The hand-wheel is connected to the bracket, and when said wheel is turned it causes the screw-rod to rise or fall, and thus change the position of the lever and tube H. The bottom of the tube H stands immediately over the center of the cup F, and the grain when it passes down from the hopper through the tubes I and A falls into the cup before going to the stones. The cup revolves with the stone, and when it becomes full of grain the centrifugal action throws the grain off against the shield G, from which it drops regularly into the eye of the stone to be ground. The shield G is stationary, and is connected to the tube H by means of suitable arms for that purpose, or to the stationary guide-bar W.

Still-feeds have been used before in which a flat or convex plate was used at the bottom of the tube, upon which the grain fell; but this arrangement will not answer, because the tube must be made so small or confined so close to the plate that it is very liable to choke with strings or husks, or any other impurity in the grain.

In the case of my cup the tube may be raised high enough to effectually prevent choking, and that, too, without endangering to an excess of feed. The still, even motion of the cup distributes the grain with wonderful accuracy and regularity to the stones. Hence I am enabled to make a better and larger yield in a given space of time with given power.

The standard L is made of metal and is provided with slots through which the screws *p* pass to secure it in position. Z represents a piece of wood, which is bolted to the hoop. The standard L is then secured to this piece of wood by means of the set-screws *p p*. The standard can be adjusted vertically by means of the slots and set-screws, so as to adjust it to different mills. The object in having this standard is to have a firm and solid fulcrum for the lever K. If the fulcrum of the lever rested upon the top of the hoop, it would be constantly varying with the vibrations of said

hoop, and the tube H could not consequently be kept at one feed, and I would be subject to all of the disadvantages of irregular feeding. The hand-wheel N has a hub *e*, and on the lower end of the hub is a rim *s*. This rim *s* passes into a dovetail in the bracket O, where it is held in proper position and allowed to revolve whenever it is necessary to move the screw, &c. The rim *s* may be prevented from coming out of the bracket in any desirable way.

Too much stress cannot be laid on the regularity with which this apparatus feeds. It is evident that with this cup the space between the bottom of the tube and the bottom of the cup may be made greater than the diameter of the tube, so that anything which passes down the tube must pass out through the cup, and cannot possibly choke it.

The shield G is made stationary, as has before been observed, so that when the grain strikes against it it will fall regularly into the eye or the stone. Revolving shields have

been used, but they do not answer a good purpose.

I am aware of the claims of Edwin Clark to certain devices in an application now pending for a still-feed. Hence I disclaim everything claimed at the present time by the said Edwin Clark, confining myself strictly to the devices claimed hereinafter by me.

Having thus fully described my invention, what I claim is—

1. The employment of the revolving cup F, when adjustable, substantially as and for the purpose specified.

2. The arrangement of the cup F, the strap *a*, and rine E, secured and connected by means of clips *c c*, substantially as represented.

3. The employment of the stationary shield G used as and for the purpose specified.

JAMES M. CLARK.

Witnesses:

C. M. ALEXANDER,
M. M. DOW.