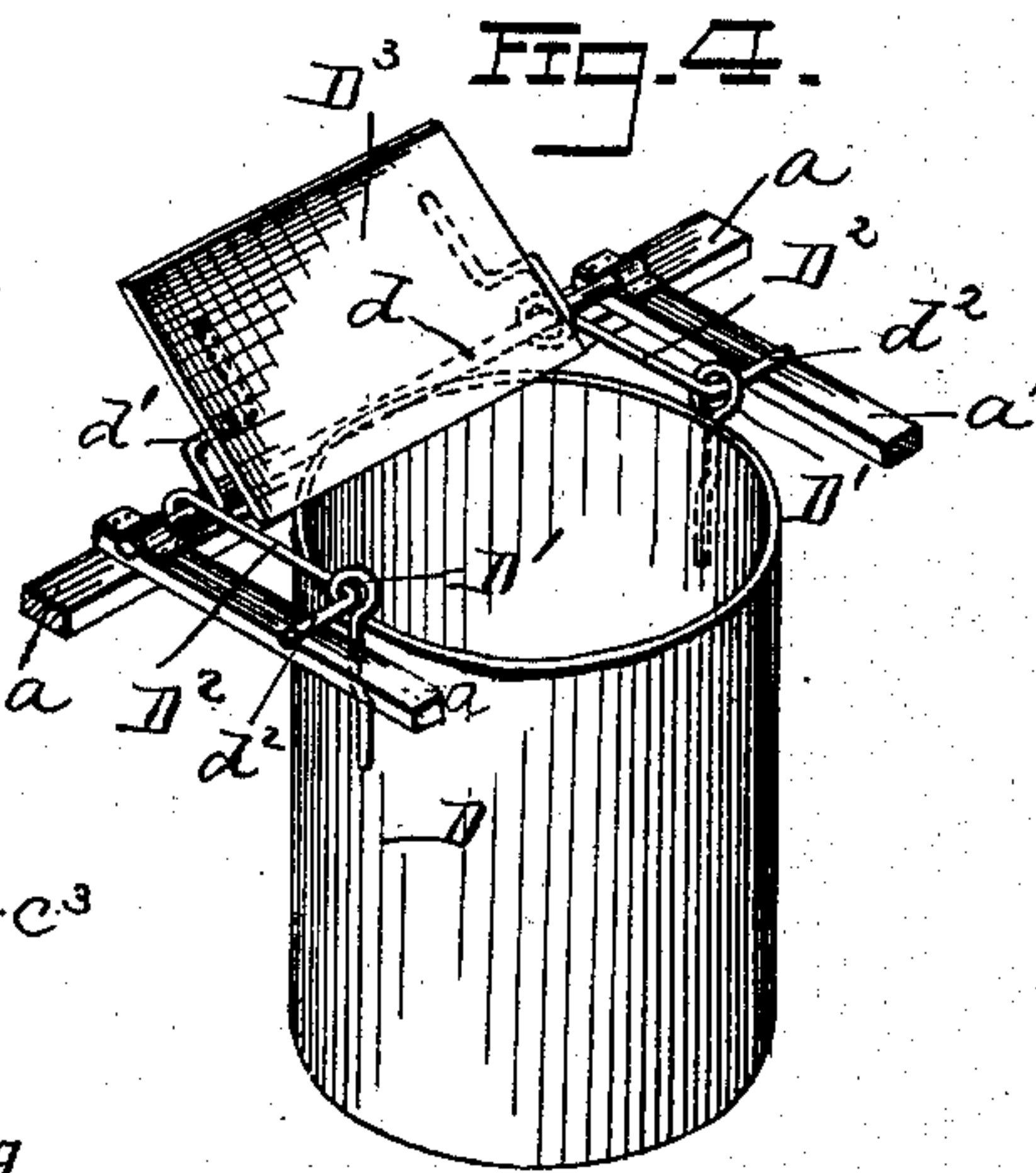
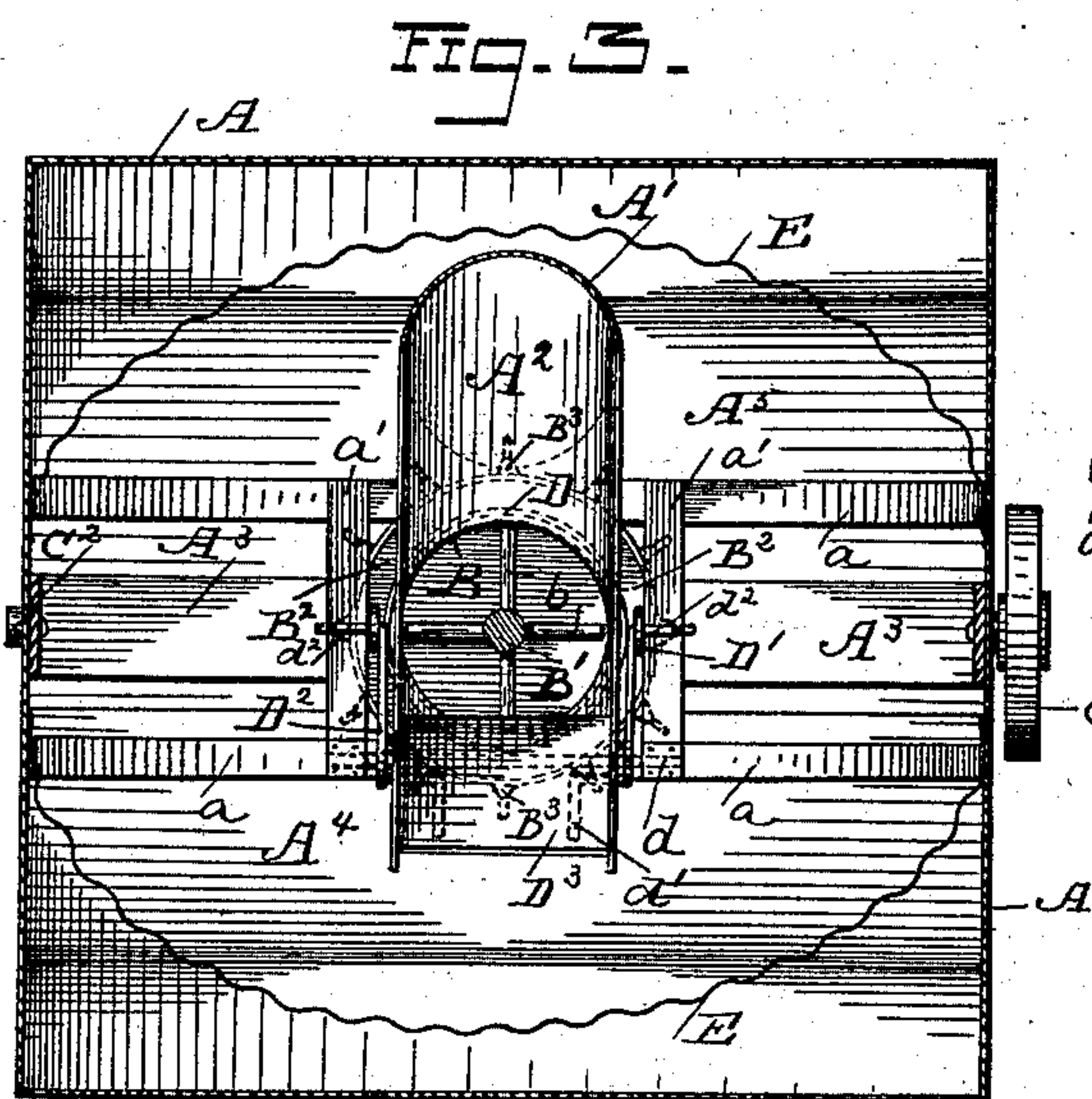
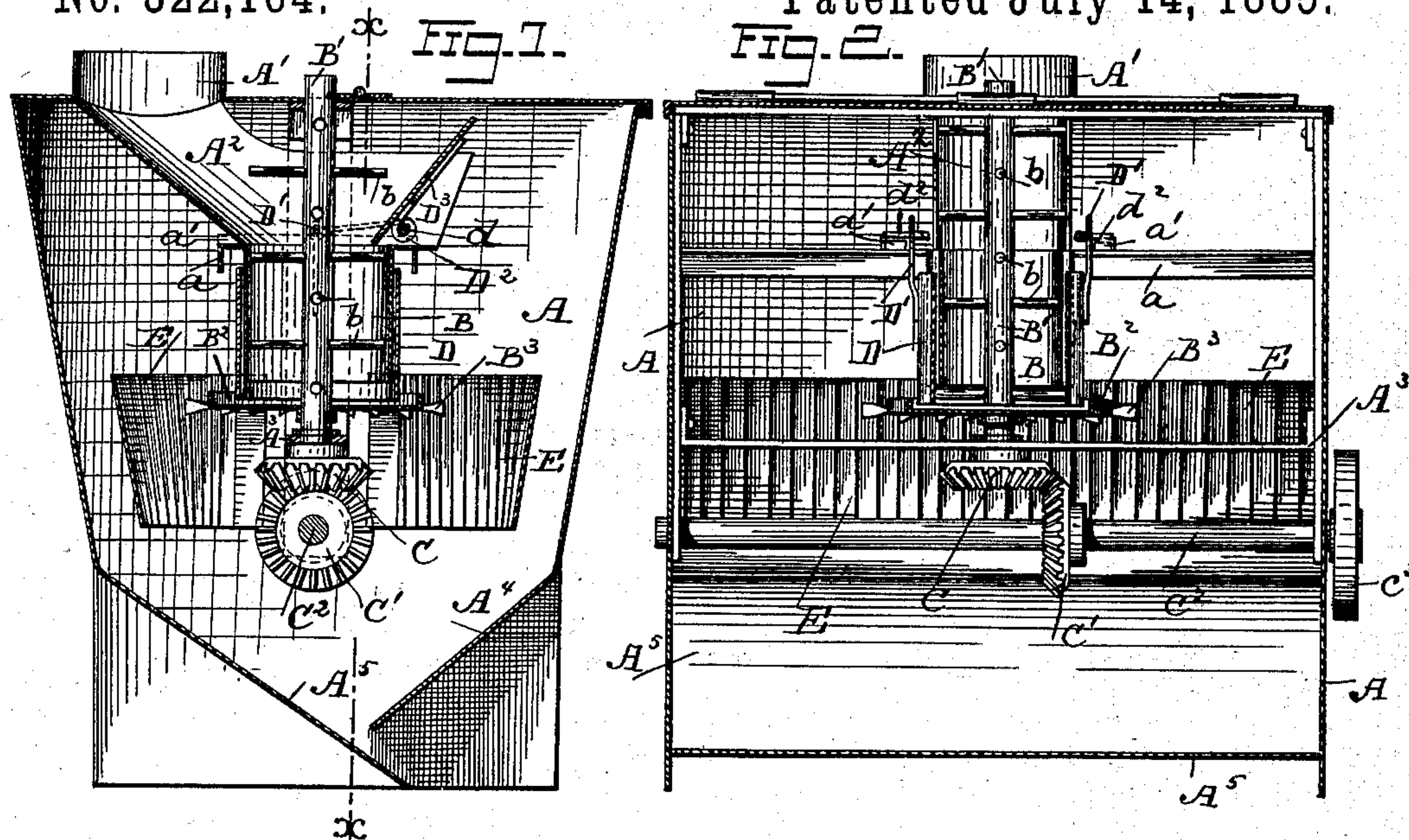


(No Model.)

H. R. DESLER.  
MILL FEED REGULATOR.

No. 322,164.

Patented July 14, 1885.



Witnesses:

W.B. Mason  
O.C. Wurdeman.

*Inventor.*

Henry R. Desler  
by E. E. Masson  
atty.



# UNITED STATES PATENT OFFICE.

HENRY R. DESLER, OF FREEBURG, OHIO.

## MILL-FEED REGULATOR.

SPECIFICATION forming part of Letters Patent No. 322,164, dated July 14, 1885.

Application filed May 4, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY R. DESLER, a citizen of the United States, residing at Freeburg, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Mill-Feed Regulators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of grinding-mills in which what is called a "silent feed and regulator" is used—that is to say, the grain falls onto and is fed from a rotating disk into the eye of the runner, or evenly between grinding-rollers, as the case may be; and the object of my invention is to provide a feeding device to be used mainly in connection with roller grinding-mills used for reducing grain into flour.

The invention will first be hereinafter described, and then specifically set forth in the claims.

Figure 1 represents a transverse vertical section of my improved mill-feed regulator. Fig. 2 is a longitudinal vertical section of the same on line *xx* of Fig. 1. Fig. 3 represents a top view of the same with the cover removed, and Fig. 4 is a perspective view of the sliding sleeve and its attachments.

Like letters refer to like parts in the figures. In the drawings, A represents the casing, which may be of any suitable form, and its top is provided on one side with a funnel, A', through which middlings, grain, or other material passes into the feed-hopper A<sup>2</sup>, having its lower end supported by the longitudinal bars *a*, extending from one end of the casing to the other. Upon said bars *a*, and running at right angles therewith, are located two parallel strips, *a'*, forming therewith a rectangular frame, within and immediately below which is located a tube, B, secured to or forming a part of the feed-hopper A<sup>2</sup>. Through the center of said tube B passes an upright shaft, B', provided with a series of radial pins, *b*, to thoroughly mix the incoming material or "stock," as well as to keep it from becoming clogged. Said shaft B' revolves in bearings located in the brace A<sup>3</sup> extending from end to end of the casing, and is held in position by a collar secured thereto on its lower portion, while at the upper end it passes through the top of the casing. To the lower portion of the

shaft B', and above the brace A<sup>3</sup>, is secured a circular plate or disk, B<sup>2</sup>, having its edge turned up to partly retain the grain or stock upon said disk. The latter is a short distance below the lower end of the tube B, and has around its periphery a series of radial wings, B<sup>3</sup>, to project the stock the whole length of the crushing-rolls. At the lower end of the shaft B', below the brace A<sup>3</sup>, is secured a pinion, C, which meshes with the pinion C', secured to the shaft C<sup>2</sup>, extending through the ends of the casing. Said shaft is provided at one end with a pulley, C<sup>3</sup>, from which the feed mechanism receives its motion; but the shaft C<sup>2</sup> and the operating-gears may just as well be located above the top of the casing.

Around the tube B is located a sliding sleeve, D, which when in its normal position extends below the tube B, and allows a small circular opening between its lower edge and the revolving disk B<sup>2</sup>. The sliding sleeve D is provided at its upper portion with perforated lugs D', from which it is suspended.

Secured to the strips *a'* is a rod, *d*, around which are coiled light rods D<sup>2</sup>, one end, *d'*, of each being secured to the back of the obliquely-retained feed-regulator plate D<sup>3</sup>. The other end, being bent outwardly at right angles, passes through the eye in the lug D'. Thus the weight of the sleeve D is partly counterbalanced by the plate D<sup>3</sup>, and when more grain or other material enters the tube B than can escape through the annular opening formed between the lower edge of the sliding sleeve and the plate or disk B<sup>2</sup> the grain, after filling the tube B, overflows upon the regulator-plate D<sup>3</sup>, and this extra weight tips it outwardly, and its rods D<sup>2</sup>, acting as levers, raise the sliding sleeve D sufficiently to allow the grain to escape more rapidly and prevent clogging of the passages. As the disk B<sup>2</sup> revolves the radial wings B<sup>3</sup> throw the material far enough away from the disk to insure a uniform feed for the entire length of the grinding-rolls located below the two inclined chutes A<sup>4</sup> and A<sup>5</sup>.

Within the casing A are secured vertically two semicircular corrugated shields, E, extending from one side to the other, and arranged so as to arrest the centrifugally-thrown grain or stock, and drop it vertically upon the delivery chutes. This feed mechanism is ap-



plicable to any grinding-mill. The feed-hopper  $A^2$  extending beyond the plate  $D^3$ , the grain can escape only through the tube B, and its delivery is automatically regulated.

5 Having now fully described my invention, I claim—

1. In a mill-feed regulator, the hopper  $A^2$ , tube B, shaft  $B'$ , provided with pins  $b$ , a disk,  $B^2$ , provided with wings  $B^3$ , in combination  
10 with the sliding sleeve D, provided with perforated lugs  $D'$ , bent rods  $D^2$ , rod  $d$ , and regulator-plate  $D^3$ , hinged substantially as and for the purpose described.

2. In a mill-feed regulator, the disk  $B^2$ , and  
15 sliding sleeve D, provided with perforated lugs  $D'$ , in combination with the supporting-frame  $a a'$ , the rod  $d$ , coiled wire-rods  $D^2$ , bent at each end, and the regulator-plate  $D^3$ , hinged substantially as and for the purpose described.

3. In a mill-feed regulator, the vertical tube 20 B, shaft  $B'$ , provided with radial pins  $b$ , and revolving disk  $B^2$ , provided with wings  $B^3$ , in combination with the corrugated shields E, substantially as and for the purpose described.

4. The combination of the supporting-frame 25  $a a'$ , the disk  $B^2$ , the feed-tube B, and the sleeve D with the regulator-plate  $D^3$ , fulcrumed to said frame, and the hinge-rods  $D^2$ , supporting the feed-regulating sleeve, substantially as and for the purpose described. 30

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

HENRY R. DESLER.

Witnesses:

A. G. KLINGAMAN,  
O. W. SLUSSER.