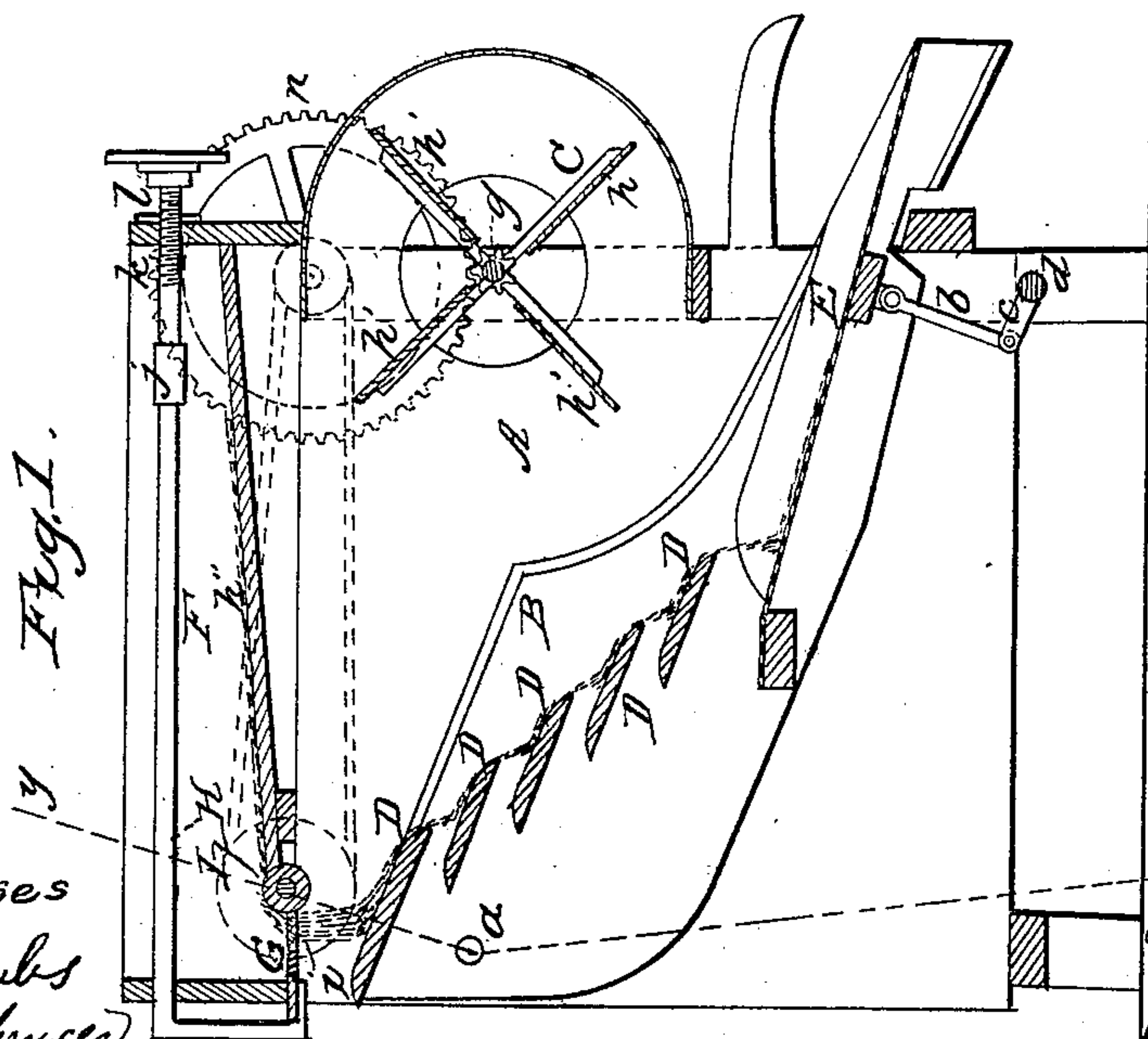
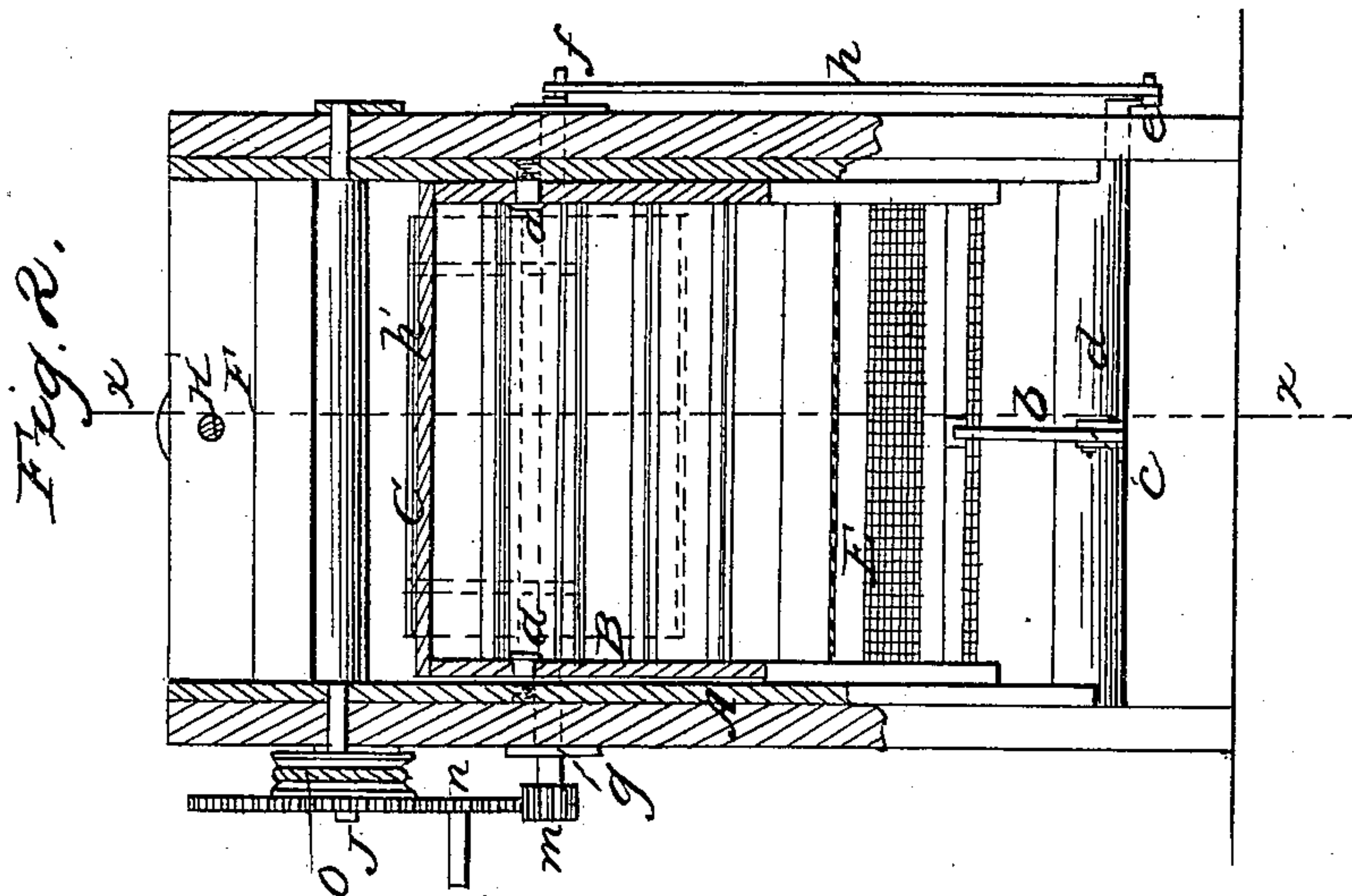


T. EARHEART.
Grain Separator.

No. 29,256.

Patented July 24, 1860.



Witnesses
J. W. Coombs
R. S. Spencer

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UNITED STATES PATENT OFFICE.

THOMAS EARHEART, OF DONELSON, TENNESSEE.

GRAIN-SEPARATOR.

Specification of Letters Patent No. 29,256, dated July 24, 1860.

To all whom it may concern:

Be it known that I, THOMAS EARHEART, of Donelson, in the county of Davidson and State of Tennessee, have invented a new and
5 Improved Grain-Separator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

10 Figure 1, is a side sectional view of my invention taken in the line *x, x*, Fig. 2. Fig. 2, a transverse section of the same taken in the line *y, y*, Fig. 1.

15 Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to feed the wheat or other grain to the machine in a more regular or uniform manner than usual and also to present the wheat or other grain
20 in its passage through the machine more favorably to the action of the blast, whereby in connection with the usual screen or screens, the grain will be thoroughly separated from all impurities.

25 The invention consists in the employment or use of a feed roller placed at the discharge orifice of the hopper and using in connection therewith a slide adjusted in a novel way to vary the capacity of the discharge orifice.
30

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

35 A represents a case or box in which the working parts of the machine are placed, and B, is a shoe one end of which is secured in the case or box by pins or pivots *a, a*. The shoe B, has an inclined position and its lower part rests on a pitman *b*, which is attached to a crank *c*, on a shaft *d*, which is placed transversely in the lower part of the framing of the case or box A. On one end of the shaft *d*, there is a crank *e*, to which
40 and a crank *f*, on a fan shaft *g*, a connecting rod *h*, is attached. C, is a fan which is formed in the usual way of radial wings *h'*, attached to the shaft *g*.
45

Within the shoe B, and directly opposite the fan C, there are placed a series of in-

clined steps D, which extend the whole 50 width of the shoe B, project one over the other, and extend from just above a screen E, at the lower part of the shoe B, to the upper part of said shoe as shown clearly in Fig. 1. 55

F, is a hopper at the upper part of the case or box A. This hopper has an inclined bottom *h''*, the lower or depressed end of which is over the elevated end of the shoe B, and over the highest step D, thereof. At 60 the lower end of the hopper F, and directly opposite the end of the bottom *h''*, there is fitted a slide G, in proper grooves *i*. To this slide G, there is attached a rod H, which extends upward, a certain distance is then 65 bent horizontally and passes into the hopper and is connected at *j*, to a rod *k*, which has a screw thread formed on it the thread passing through or fitting in a nut *l*, in the end of the hopper. By turning the rod *k*, 70 the slide G, may be moved back and forth.

At the lower or depressed end of the bottom *h''*, of the hopper F, there is placed a roller I, which extends the whole width of the hopper and is adjusted snugly to it. 75 This roller may be quite small in diameter and its upper edge is nearly flush with the upper surface of the bottom *h''*, of the hopper.

To one end of the shaft *g*, of the fan C, 80 there is attached a pinion *m*, into which a spur wheel *n*, on a driving shaft J, gears and from this shaft J, the roller I, is driven by a belt *o*.

The operation is as follows: The grain to 85 be separated passes down the inclined bottom *h''*, of the hopper and is fed down on the highest step D, of the shoe B, by the roller I, the discharge being regulated by adjusting the slide G, which is readily ef- 90 fected by turning the rod *k*. The roller I, insures a regular or uniform discharge whether it be greater or less and the grain passes down the steps D, in successive falls and is presented in the most favorable man- 95 ner to the action of the blast from the fan C, the shake motion of the shoe B, produced by the action of the pitman *b*, crank *c*, and

shaft *d*, operated as described causes the grain to pass down the steps D, to the screen E. All light impurities are separated from the grain by the blast from fan C, the screen
5 E, performing its usual function of separating the heavier foreign portions.

I do not claim broadly the employment or use of a slide G, for regulating the discharge of grain from the hopper F, irrespective of
10 the means for adjusting the slide; but

I do claim as new and desire to secure by Letters Patent—

In combination with the roller I, the slide G, when arranged with the rod H, and rotating screw *k*, for the purpose specified.

THOMAS EARHEART.

Witnesses:

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