W. W. DINGEE & A. B. FARQUHAR.

GRAIN SEPARATOR.

No. 35,590. Patented June 17, 1862.

Fig. 2.

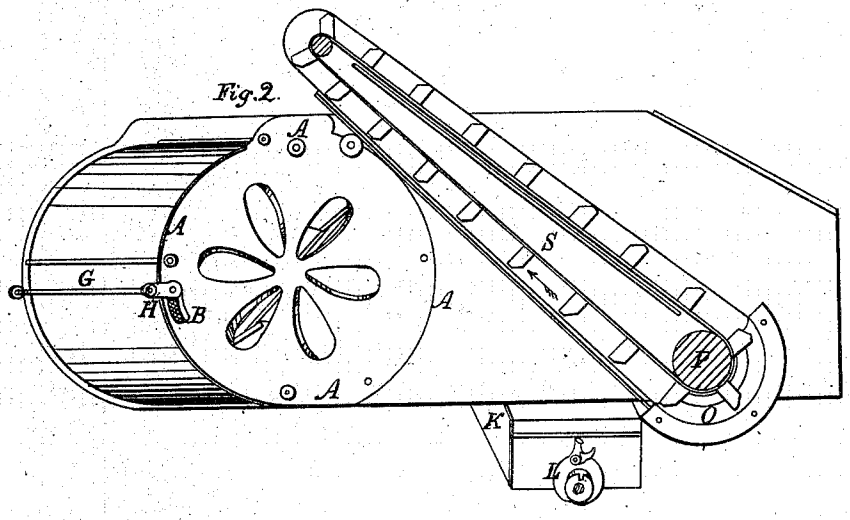
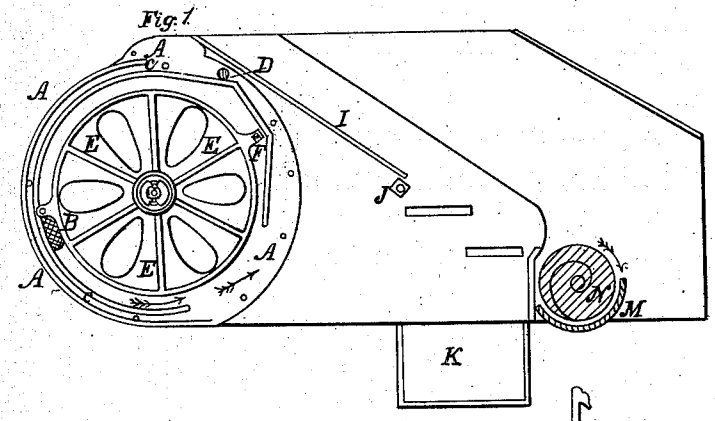


Fig. 1



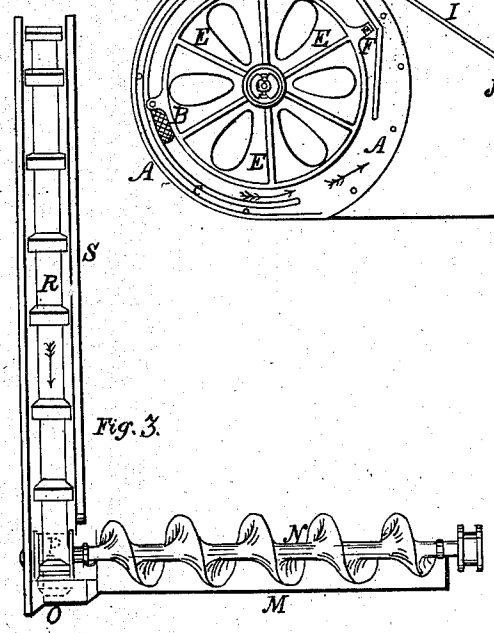


Fig. 3.

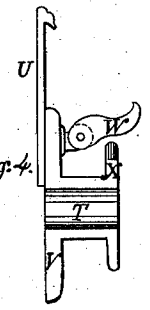


Fig. 4.

Witnesses
Horace Bingham
George H. Sleeper

Inventors
W. W. Dingee
A. B. Farquhar

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

W. W. DINGEE AND A. B. FARQUHAR, OF YORK, PENNSYLVANIA.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **35,590**, dated June 17, 1862.

To all whom it may concern:

Be it known that we, W. W. DINGEE and A. B. FARQUHAR, of York, in the county of York and State of Pennsylvania, have invented a new and useful Improvement in the Grain-Separator patented by Peter Geiser, October 9, 1855; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of the fan. Fig. 2 is a perspective view of the fan with a longitudinal view of the tailings-elevators. Fig. 3 is the trough, screw, and elevator. Fig. 4 is a bag-holder.

In Fig. 1, A A A A is the perforated side plate of fan (mentioned in the specification of Mr. Geiser) having slot B for the cast projection on the movable plate to pass through, circular groove C C to receive the drum of the fan, and hole D for the eccentric-rod, regulating the shake of the shoe. E E E is a circular movable plate, the perforations of which correspond with those in plate A A A A. (This is the movable plate K in Mr. Geiser's specification.) There is one of these plates on each side of the fan connected by the broad wooden bar F on the inside, and by the iron rod G on the outside of the fan. The iron rod G passes through the cast projection H, Fig. 2, on the movable plates E, and has a nut on either side of projection H, by which plates E are adjusted inside the fan. Between the plates E the wings of the fan revolve in the direction indicated by the arrows in Fig. 1. When the blast increases too much, it will act upon and raise wooden bar F, decreasing the admission of air, as explained by Mr. Geiser. The weight of wooden bar F is more than sufficient to hold movable plates E open, or so that their perforations correspond with those of plates A. Movable plates E are adjusted to suit different degrees of blast required, by hanging weights on iron rod G.

It will be seen that the air in our fan after passing wooden bar H is entirely unobstructed. By connecting movable plates E with the rod G outside the fan we have this necessary connection out of the blast and avoid the angles which the bar *t* in Mr. Geiser's specification, Fig. 4, makes necessary in the drum, allowing our drum to be circular, which form offers the least possible resistance to the motion of the air, thus enabling us to obtain a sufficient blast with one-third less speed, and consequently less power than is necessary in the fan as made by Mr. Geiser. Rod G also furnishes a convenient place to hang the weights required to adjust the blast to the different kinds of grain to be cleaned. Making the side plates, A, with the grooves C form the entire ends of the fan, enables us to make a stronger fan at less cost than when made as heretofore.

In Fig. 1 a shaking motion is given to inclined plane I by the square parts of revolving shaft J. Down this inclined plane the grain and chaff pass and are delivered to the blast. The clean grain falling in hopper K is caught in a bag secured to bag-holder L, Fig. 2. The heads of unthrashed grain and what wheat is blown over the fan (called "tailings") are caught in the cast trough M, (a longitudinal section of which is shown in Fig. 1 and a full length view in Fig. 3,) in which is screw N, turning in the direction shown by the arrow and conveying the tailings to the enlarged part O of the trough M. This screw has a pulley, P, over which passes the block-strap R, the blocks of which in their passage round take the tailings from the enlarged part O up the inclined bottom of trunk S, from which they fall into a spout, down which they run into the thrasher again. The screw is driven by a pulley on its end. It will be seen (Fig. 3) that the screw not only conveys the tailings to the side of the fan, but by pulley P furnishes the power to drive the block-strap R, and that enlarged part O of the trough M also forms the lower end of trunk S, thus making a cheap and convenient tailings-elevator.

In Fig. 4 T is the opening through which the wheat passes. U is the slide to shut off the grain when the bag is full. V is a flange by which the holder is secured to the hopper by screws, having latch W hinged to it. X is a flange having a notch in which latch W shuts down into and fits. The mouth of the bag is drawn tightly around the flange X and

through the notch, and the latch W is shut down upon it, thus holding the bag securely to the hopper.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. Securing the drum of the fan in its proper position by grooves C C, cast in perforated side plates, A.

2. Connecting the movable plates E by the rod G on the outside of the fan.

3. The combination of trough O, screw N, and trunk S with the revolving block-strap R, when made and operated as set forth.

4. Bag-holder L, when made as described.

W. W. DINGEE.
A. B. FARQUHAR.

Witnesses:
HORACE BONHAM,
GEORGE N. SHELLER.