N. KIBLER.

Feeding Device for Fanning Mill.

No. 108,154. Patented Oct. 11, 1870.

Fig. 1.

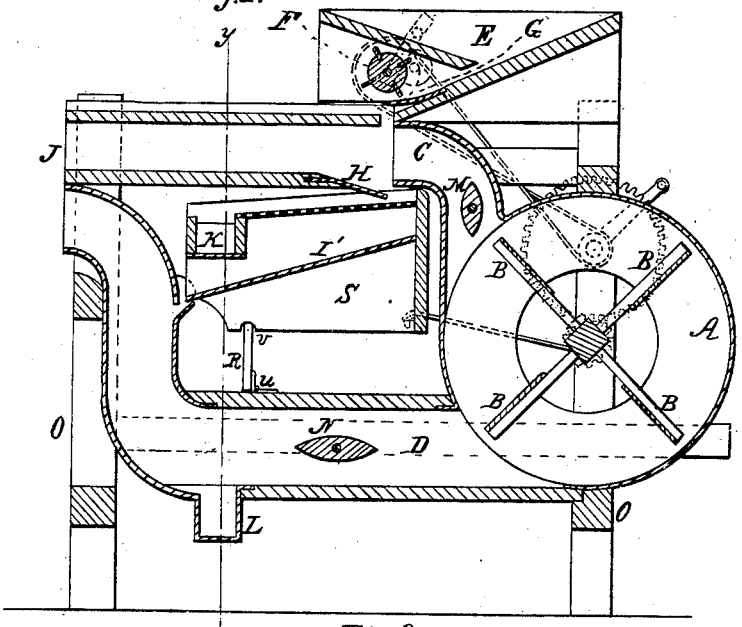
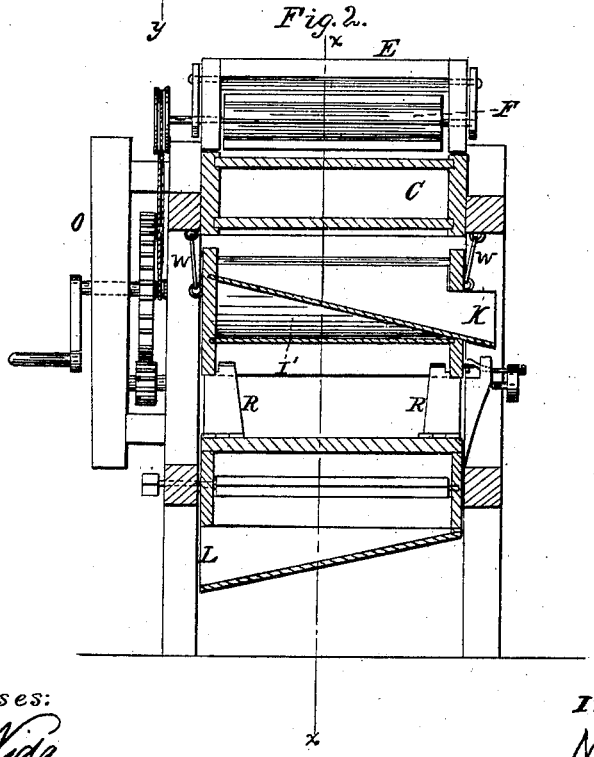


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

NATHAN KIBLER, OF MILTON, ILLINOIS.

IMPROVEMENT IN FEEDING DEVICES FOR FANNING-MILLS.

Specification forming part of Letters Patent No. **108,154**, dated October 11, 1870.

To all whom it may concern:

Be it known that I, NATHAN KIBLER, of Milton, in the county of Pike and State of Illinois, have invented a new and useful Improvement in Fanning-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to fanning-mills; and consists in a new and useful improvement in feeding mechanism, in connection with the hopper, as hereinafter described.

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of the mill on the line *x x* of Fig. 2. Fig. 2 is a vertical cross-section of Fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the cylinder or blowing-drum. B represents the wings, which are revolved by crank and gearing in the usual manner. Unlike the ordinary fanning-mill, there is an upper and a lower channel for currents of air. C is the upper and D is the lower channel. E is the hopper. F is a revolving feeder, with wings, which scrape the wheat or other grain from the elastic wing G and discharge it onto the apron H, from whence it falls onto the sieves I I′ of the mill. In falling to the apron H it passes through the current of air in the channel C, where the chaff is mainly blown out and discharged at J. K is a spout, which receives and discharges the headings and other foreign substances heavier than the chaff from the first sieve, I. The wheat drops through the sieve I onto the screen I′, and is discharged therefrom into the air-channel D, from whence it is delivered, clean and ready for market, by the spout L. M N are valves in the air-channels for regulating the currents of air. O represents the frame of the mill. P is the crank. S is the shoe, which holds the sieves, and is vibrated longitudinally with the mill by the rod T from a crank on the fan-shaft. R represents supports for the shoe, which are hinged at U and fitted into recesses in the bottom of the shoe, as seen at V, so that they vibrate with the shoe. The back side of the shoe is supported by rods, as seen at W.

By means of the feeder F the grain is discharged evenly from the hopper onto the sieves, and by the two separate and distinct air-channels, arranged as shown, the wheat or other seed is cleaned in a most perfect and expeditious manner.

The rotary shaft or roll F has wing-scrapers arranged radially about it, so that one is always acting against the spring-plate G. Each wing, therefore, finds its way through the grain which lies on the incline of the hopper and gathers a determinate quantity for transfer into the fan, while, by its continuous contact with the spring it prevents any choking or crowding of the grain in the vent through which it is poured upon the plate H and sieve I. An intermittent feed is thus obtained, which allows each preceding one to be cleaned before its successor is admitted.

The upper channel, C, through which the cheat is forced out of the fan, is caused to diminish rapidly in cross-sectional area from the vertical plane in which the grain falls, and where the cheat is separated from the wheat. The object of this diminution in the size of the air-channel is to converge and increase the force of the air-current, and thereby discharge the cheat entirely from the outlet of the fan. In windy weather this effect cannot be produced with an ordinary fan-draft of air.

It will be perceived that my shoe S is arranged nearly in the middle of the fan, while the air-channels pass entirely around it, the one above and the other below it.

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

The winged rotary feeder F, spring-plate G, and hopper E, relatively arranged in a fanning-mill, as shown in Fig. 1 of drawing.

The above specification of my invention signed by me this 19th day of January, 1870.

NATHAN KIBLER.

Witnesses:

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