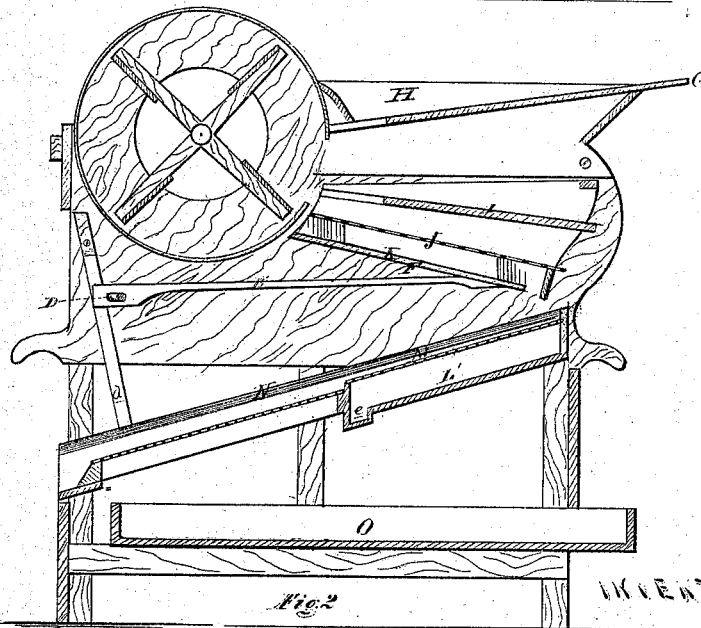
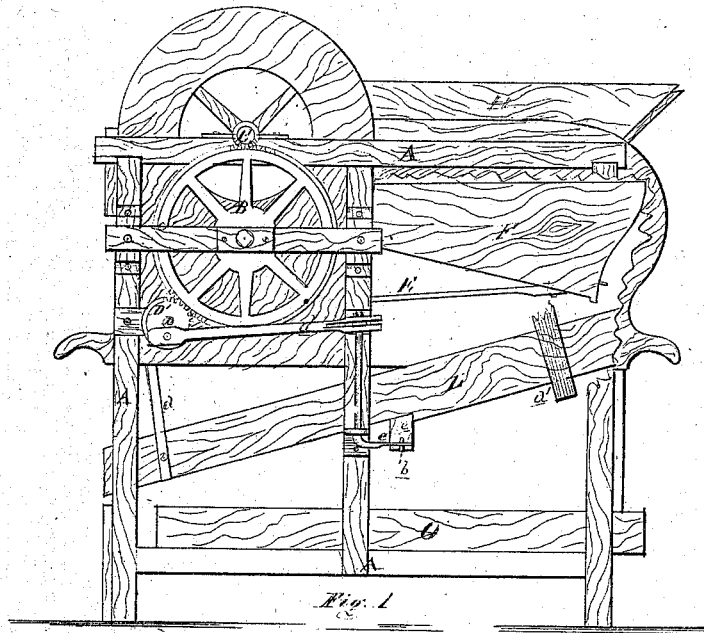


F. A. BEGOLE.
Grain Separator.

No. 107,856.

Patented Oct. 4, 1870.



ATTEST

J. James Spray.
Frederick E. Hunt

INVENTOR

F. A. Begole
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FREDERICK A. BEGOLE, OF JACKSON, MICHIGAN.

Letters Patent No. 107,856, dated October 4, 1870.

IMPROVEMENT IN GRAIN-SEPARATORS.

The Schedule referred to in these Letters Patent and making part of the same

To whom it may concern:

Be it known that I, FREDERICK A. BEGOLE, of Jackson, in the county of Jackson and State of Michigan, have invented a new and useful Improvement in Grain-Separators; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a side elevation of my separator, with a part of the casing broken away to show the shoe; and

Figure 2 is a longitudinal vertical section of the same.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improvement in the construction of grain-separators, and consists in the general arrangement of its various parts, as more fully hereinafter set forth.

In the drawing—

A represents the frame-work of my separator.

In the upper beam of the frame is journaled the fan-shaft, rotated by the gear B through the pinion C.

D is a cranked shaft, journaled in the frame of the machine under the fan-case, and is rotated by the gear B through its pinion, D'.

E is a pitman, pivoted at one end to the further end of the shoe F, suspended within the casing of the machine, and its other end strapped to the crank of the shaft D, whereby the shoe is vibrated longitudinally when the shaft is rotated.

G is the feed-slide, gained in the sides of the hopper H, forming its bottom board. By withdrawing it a little the grain will fall in a thin sheet directly in front of the blast-opening of the fan-case.

I is a chess-board sliding in gains cut in the shoe, and is slightly inclined toward the rear or discharge end.

J is a screen of perforated sheet metal or wire-cloth of such mesh that the grain will pass through, while the larger impurities will not. This screen is inserted in gains in the shoe below the chess-board, and has a little more inclination than the latter.

K is the bottom board of the shoe, extending nearly to the discharge end thereof.

L is a screen-frame suspended from the casing of the machine by straps *a a'*. It extends the full length of the machine, and is inclined in a direction opposite to that of the shoe-screen.

The screen is laterally vibrated by a link, *b*, connecting it with one of the arms of a bell-crank, *c*, whose other arm is connected, by a rod, *d*, with a wrist-pin on the pinion D'.

Under the upper half of the screen-frame is a case or receptacle, *L'*, provided with a spout, *e*, which discharges its contents at the side of the machine.

The screen-frame, over the receptacle, is provided with a screen, *M*, of such mesh that the small impurities, which are too heavy to be blown away by the blast, will drop through and be discharged by the spout *e*, while the wheat will pass along down onto a screen, *N*, which covers the lower section of the frame. This screen should be of such mesh that the largest and plumpest berries, which are desirable to save for seed, cannot pass through, but will be discharged at the front end of the machine into a box placed there for the purpose, while the rest of the grain passing through the screen *N* is received in a grain-drawer, *O*, below.

It will be noticed that the grain, falling in a thin stream on the first screen, receives the full force of the blast, which at once rids it of the lighter impurities, while the sticks and other substances of a size too great to pass through that screen are discharged by it. This leaves no impurities in the grain except they be small and heavy, and which are discharged with the grain from the rear end of the shoe onto the upper end of the screen *M*, which eliminates them from the grain, which is subsequently graded by the screen *N*.

In cleaning and separating seeds and grains other than wheat, the screens of proper mesh should be employed in lieu of those above described.

What I claim as my invention, and desire to secure by Letters Patent, is—

In the grain-separator herein shown, the improved arrangement of parts, consisting of the frame-work A, the fan-shaft rotated by the gear B, the pinion C, the crank-shaft D and pinion D', the pitman E, the shoe F, the feed-slide G, the hopper H, the chess-board I, the screen J, the shoe K, the screen-frame L, straps *a a'*, and link *b*, bell-crank *c*, and rod *d*, the case *L'*, and spout *e*, the screens *M* and *N*, and grain-drawer *O*, when arranged in the manner and for the purpose herein shown and described.

FREDERICK A. BEGOLE.

Witnesses:

LEWIS D. WELLING,
ERASTUS PECK.