2 Sheets—Sheet 1

J. L. LOWE.

Grain-Separators.

No. 199,300. **Patented Jan. 15, 1878.**

FIG. 1.

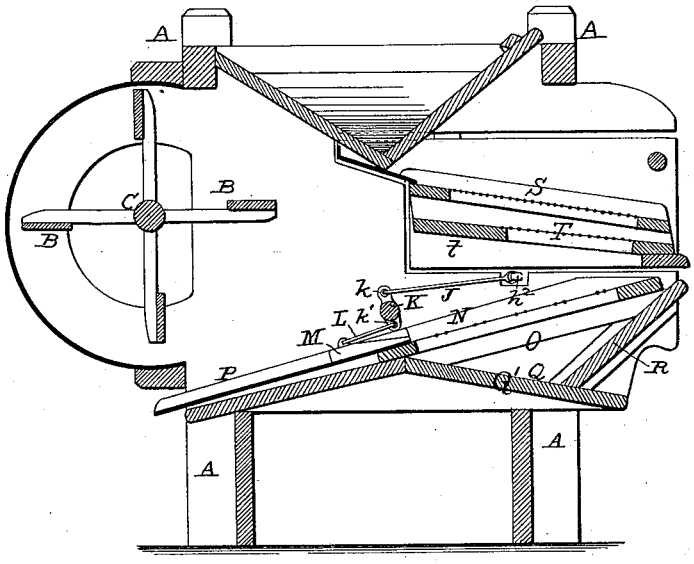
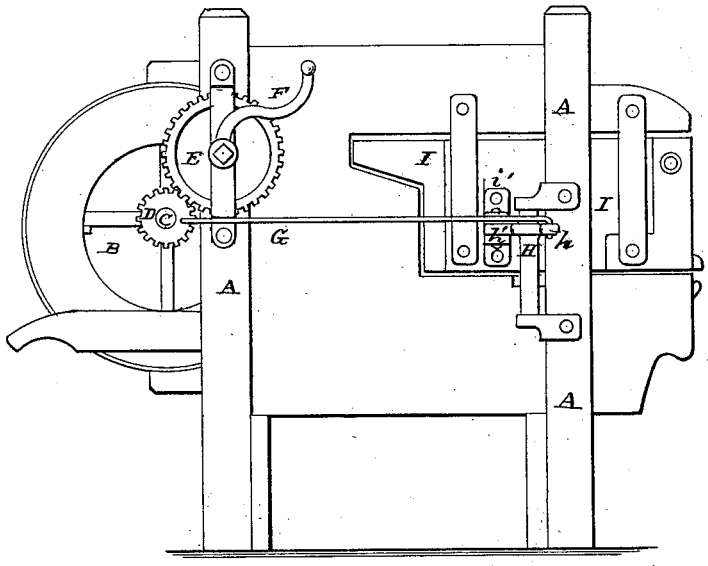


FIG. 2.



ATTEST:

Robert Burns.
Chas. Gable

INVENTOR:

John L. Lowe
per Knight Bros.
attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

2 Sheets—Sheet 2.

J. L. LOWE.

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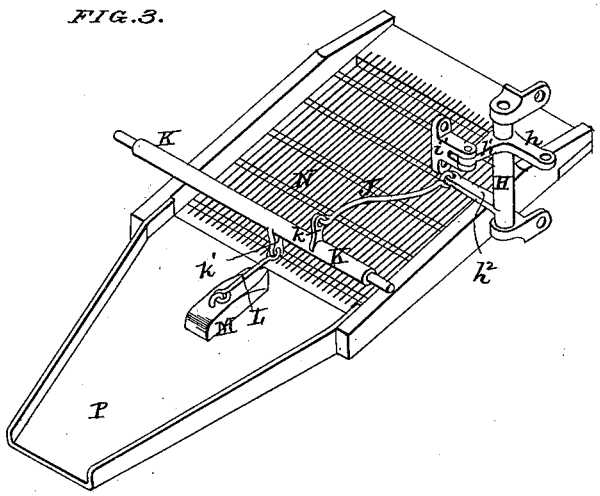
FIG. 3.



ATTEST:

Robert Burns
Chas. Hall

INVENTOR:

John L. Lowe
per Knight Bro's
attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN L. LOWE, OF UPPER ALTON, ILLINOIS.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **199,300**, dated January 15, 1878; application filed May 18, 1877.

To all whom it may concern:

Be it known that I, JOHN L. LOWE, of Upper Alton, Madison county, Illinois, have invented certain new and useful Improvements in Fanning-Mills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My improvement relates to the mechanism for operating the screen and riddle shoe; and my invention consists in a screen, which is reciprocated by the following devices: an arm of the vertical rock-shaft, through which the riddle-shoe is operated, is connected to an arm of a transverse rock-shaft within the mill, and an arm of this rock-shaft is connected by a rod to the screen.

In the drawings, Figure 1 is a longitudinal section through the middle of the mill. Fig. 2 is a side view. Fig. 3 is a perspective view of the screen and mechanism for operating it.

A is the frame or body of the mill. B is the fan. C is the fan-shaft, carrying a spur-pinion, D, engaging with a spur-wheel, E. The wheel E is turned by a hand-crank, F. G is a rod, pivoted eccentrically in the pinion D, and its other end connected to the arm h of the rock-shaft H. The rock-shaft H has an arm, h^1, connected to the riddle-shoe I by a bracket, i', in the usual manner.

No novelty is claimed in any of the parts above described by letter.

The rock-shaft H has an arm, h^2, extending to the interior of the mill, and connected by a rod, J, to the arm k of the transverse rock-shaft K. This shaft has an arm, k', connected by a rod, L, to the bracket-block M, attached to the top of the screen N.

Thus it will be seen that as the handle F is turned the screen has rectilinear endwise reciprocation. The screen N works on ways O. It terminates below in a spout, P, by which the clean wheat is discharged into a measure or upon the floor, as may be desired.

The screen cheat-box Q is beneath the screen, and has an inclined bottom, Q'. The cheat is disharged at the tail end by raising the sliding door R.

The shoe I has two riddles, S and T, the upper one, S, to carry off the grosser impurities, and the lower one, T, other matter.

The riddle T has at its inner end a cheat-board, t, to carry forward all that drops upon it to a point near the mid-length of the riddle, so that it will be subjected to the full power of the air-blast, which the cheat-board aids to concentrate, and will have to travel the proper distance over the screen N, and thus all the cheat will be removed from the wheat.

If the cheat-board t were not provided, the cheat would drop down through a part of the mill where it would not be sufficiently under the influence of the blast, and near the lower end of the screen, so that some of it would not pass through the screen, but would be mixed with the clean wheat.

I claim as my invention—

1. The combination, with the screen N, of the vertical shaft H, having arm h^2, rod J, transverse shaft K, having arms k k', and rod L, as and for the purpose set forth.

2. The combination, with the screen N and shoe I, of the vertical rock-shaft H, having arms h h^1 h^2, rod J, transverse shaft K, having arms k k', and a rod, L, as and for the purpose set forth.

JOHN L. LOWE.

Witnesses:

HIRAM S. DEEM,

SAM. S. LOWE.