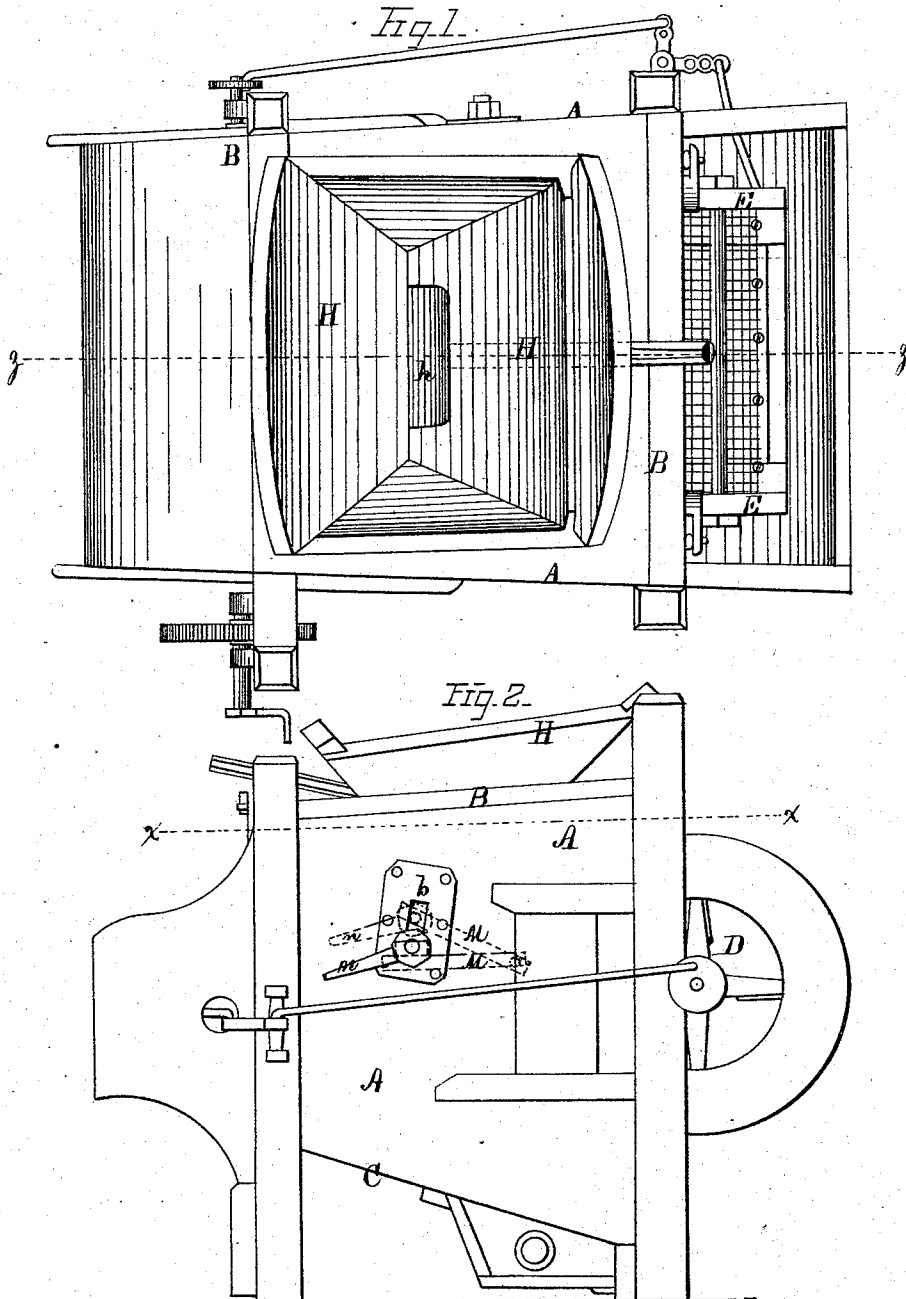


G. & J. R. BEACHLER.
Grain-Separators.

No. 158,235.

Patented Dec. 29, 1874.



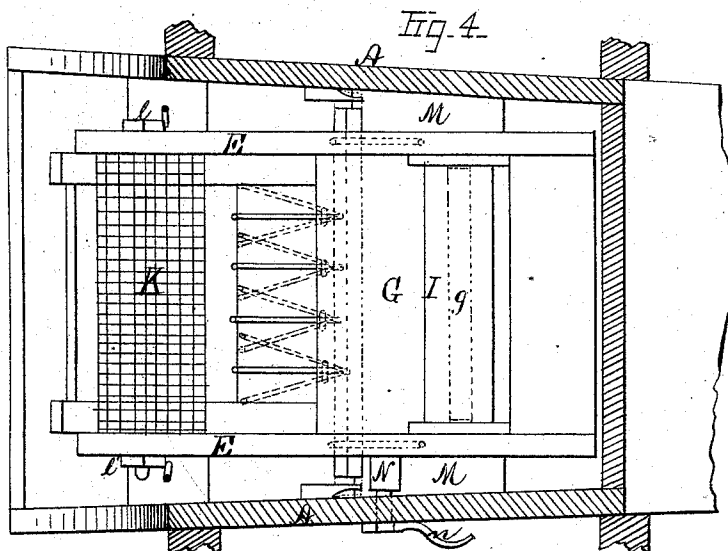
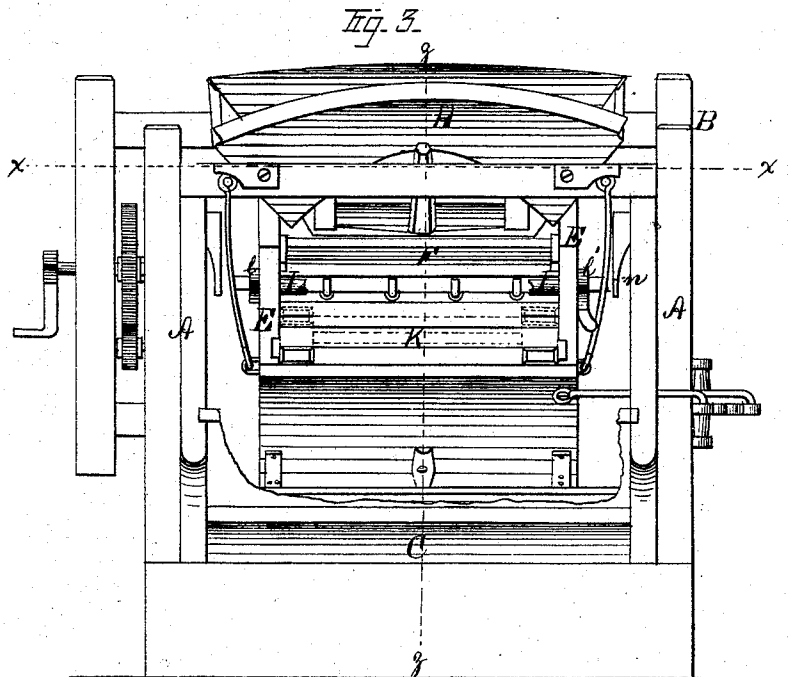
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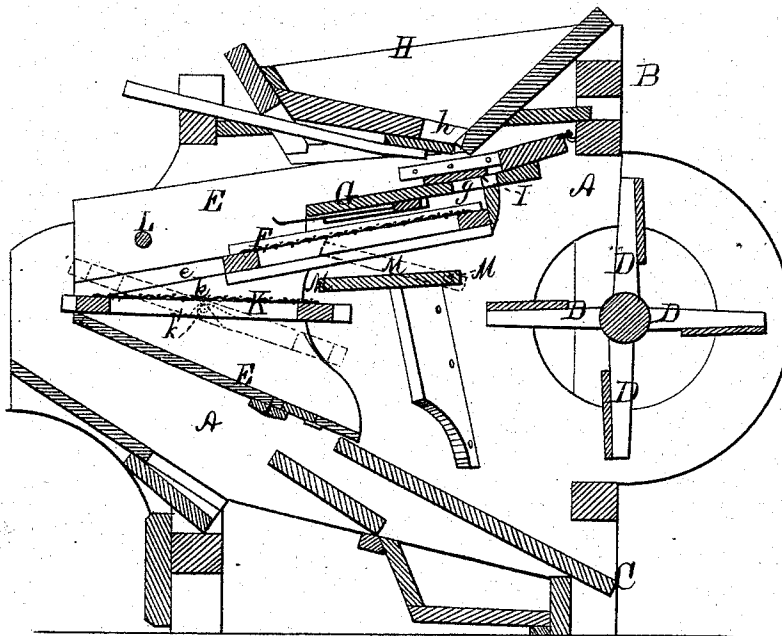
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Fig.5.



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UNITED STATES PATENT OFFICE.

GEORGE BEACHLER AND JOHN R. BEACHLER, OF CENTRE, OHIO.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **158,235**, dated December 29, 1874; application filed June 4, 1874.

To all whom it may concern:

Be it known that we, GEORGE BEACHLER and JOHN R. BEACHLER, of Centre, in the county of Montgomery and in the State of Ohio, have invented certain new and useful Improvements in Grain-Separators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan view of the upper side of our improved machine. Figs. 2 and 3 are, respectively, a side and a front elevation of the same. Fig. 4 is a horizontal section upon line *xx* of Figs. 2 and 3, and Fig. 5 is a vertical section upon lines *zz* of Figs. 1 and 3.

Letters of like name and kind refer to like parts in each of the figures.

The design of our invention is to increase the efficiency and ease of operation of a grain-separator; and to this end it consists, principally, in the means employed for securing the riddle in place, and rendering the same adjustable within the shoe, substantially as and for the purpose hereinafter specified. It consists, further, in the arrangement of the slide for controlling the passage of grain to or upon the screens, substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A and A represent the sides, B the top, and C the bottom, of the casing of our machine, in which is a journaled fan, D, and a suspended screen-shoe, E, connected and operated by the usual mechanism, and in the usual manner. Within the upper side of the shoe E is a screen, F, which slides within grooves *e* and *e*, that incline upward and rearward, and at a short distance above and parallel with the same is placed a board, G, which is provided near its upper end with a transverse opening, *g*, that is beneath the discharge-opening *h* of the hopper H, by means of which grain from said hopper is permitted to pass directly upon the upper end of said screen. A slide, I, moving within suitable guides upon the upper side of the board G, enables the opening *g* to be closed at will, in which event grain from the hopper will be compelled to pass to the lower end of said board before falling upon the screen.

This arrangement enables the grain, when

especially dirty, to be passed over the entire length of the upper and lower screens before passing from the machine, so as thereby to increase the chances for the thorough cleaning of said grain; but when but little foreign substance is contained in the latter its cleansing may be expedited by closing said slide and causing said grain to fall upon the lower end of said upper screen.

The lower screen or riddle K rests at or near its longitudinal center upon two studs or pins, *k* and *k*, which extend horizontally inward from the sides of the shoe E, and fit into suitable notches *k'* and *k'*, that are formed within the lower side of said riddle, the arrangement enabling the latter to be placed at any desired angle, so as to accelerate or retard the passage of grain over its surface. In order that the screen K may be secured in position when adjusted thereto, a rod, L, passes through the upper portion and near the outer ends of the shoe sides, and is provided upon one of its ends with a head, *l*, and upon its opposite threaded end with a nut, *l'*, so that by turning inward upon the latter said shoe sides will be drawn together and closely clamp the edges of said screen.

By this construction the adjustment of the screen or riddle is easily and quickly effected, and without derangement of other parts of the machine.

The wind-board M is situated in front of the fan D, and between it and the screen or riddle K, though not in an exactly parallel line, and under the screen F. This arrangement is adopted so that the current of air from the said fan may be directed, as described, to or from either of said screens. To accomplish this result said board is pivoted at its ends and rear edge to or upon the sides A A, and its front edge is capable of being moved up or down. A bolt, N, is attached to one end, and at the forward edge of the wind-board M, and, extending outward through a slot, *b*, in one side, A is provided with a hand-nut, *n*, which, when turned inward against the outer face of said frame side, clamps said wind-board closely in position. As thus arranged, by loosening the nut *n* the wind-board may be adjusted to the desired angle, and there secured in position by again tightening said nut.

Having thus fully set forth the nature and merits of our invention, what we claim as new is—

1. In combination with the screen-shoe E, provided with the pivotal studs *k* and *k* and compressing-bolt L, the riddle K, provided with the notches *k'* and *k'*, and resting upon said studs *k* and *k*, substantially as and for the purpose specified.

2. The means employed for controlling the passages of grain at will to or upon the upper or lower end of the screen F, consisting of the

board G, placed between the upper end of said screen and the hopper H, and provided with the opening *g* and slide I, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 11th day of May, 1874.

GEORGE BEACHLER.
JOHN R. BEACHLER.

Witnesses:

JNO. P. ACHEY,
ADAM PRITZ.