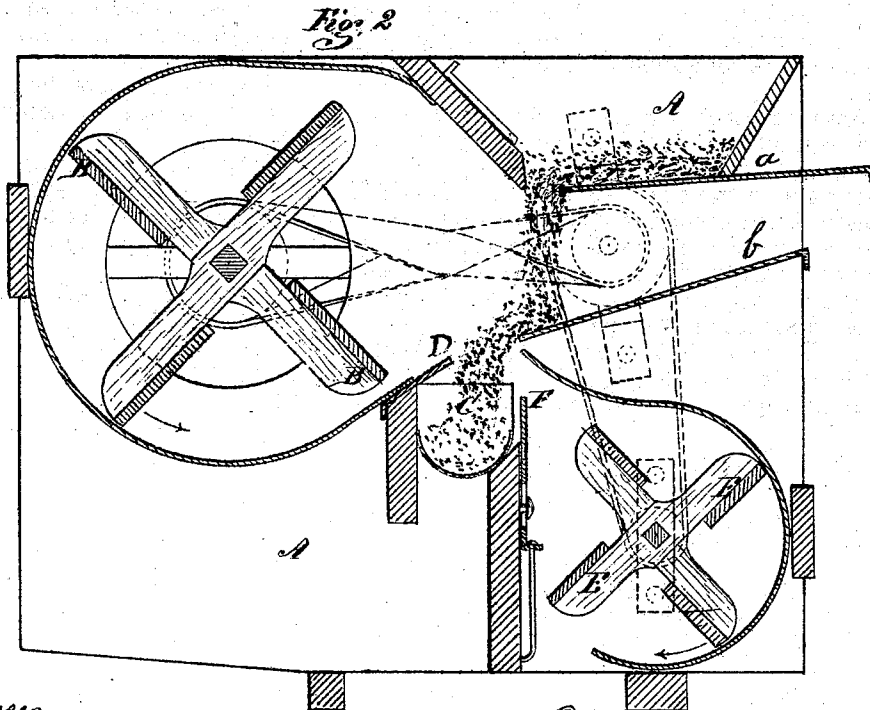
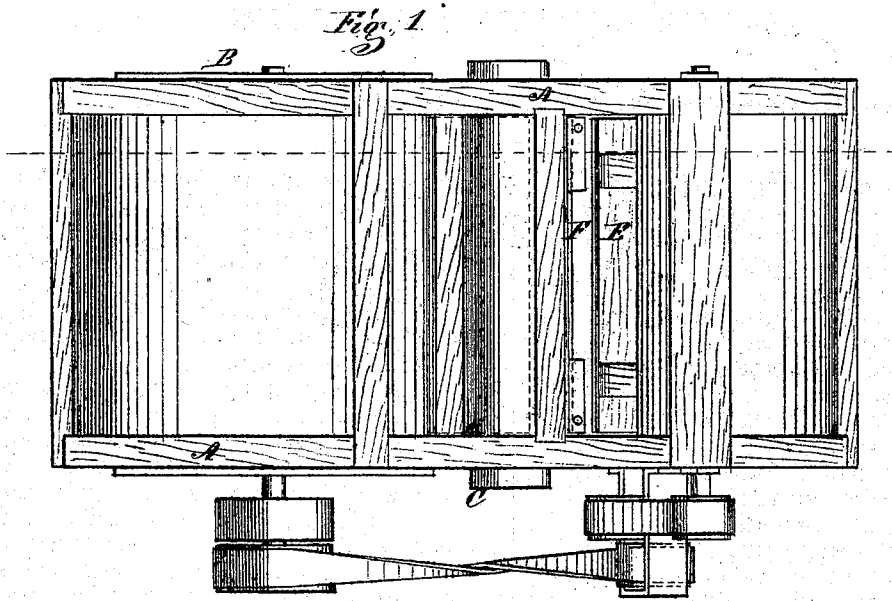


DAVID Y. MILLIGAN.

Improvement in Grain-Separators.

No. 127,258.

Patented May 28, 1872.



Witnesses
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A. M. Hart

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UNITED STATES PATENT OFFICE.

DAVID Y. MILLIGAN, OF SHELBYVILLE, ILLINOIS.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 127,258, dated May 28, 1872.

Specification describing a new and useful Improvement in Grain-Separators, invented by DAVID Y. MILLIGAN, of Shelbyville, in the county of Shelby and State of Illinois.

Figure 2 represents a vertical longitudinal section of my improved grain-separator. Fig. 1 is a top view of the same.

Similar letters of reference indicate corresponding parts.

This invention has for its object to prevent the fan in a grain-separator from driving the dust and chaff back to the conveying-spout, and from thereby defeating the purposes of the machine. The invention consists in the interposition of a protecting-cap between the fan and conveyer-spout, and in the application of a reactionary fan which will drive the light matter upward and away from the conducting-spout; also in the use of an adjustable slide for regulating the opening to the second fan. The invention is particularly applicable to such separators as are connected with thrashing-machines.

A in the drawing represents the frame of my improved separator. B is the main fan hung in the same. C is the conveying-spout arranged under and in front of the fan B. D is a cap or plate placed between the fan B and spout C to prevent the current that comes from the fan from forcing chaff, dust, and light matter back to the spout. The cap reaches to within a short distance of the shoe, leaving sufficient space for the grain to pass through. In order to restore the amount of blast a second fan, E, is arranged in the frame below

the cap and spout, as shown. This fan revolving in a direction opposite to the fan B drives the light matter up and discharges it at the top of the machine. For the purpose of regulating the power of the additional fan E an adjustable slide, F, is arranged to its chamber, which will serve to enlarge or reduce the size of air-opening to it.

Thus for light grain the opening is made smaller, so that the grain will not be driven up bodily, while for heavier grain the slide is raised to enlarge the opening. *a* is a slide-board or screen, and *b* an inclined grain-board.

The mode of operation is as follows: The grain passes from slide or screen-board *a* of hopper A down to the inclined board *b*, receiving during its passage the blast from fan B. As it now passes downward to the spout C it receives the upward blast from fan E, which still further separates any cockle, cheat, or light grain therein, and throws it back into the outward current from the fan B.

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

The combination, in a grain-separator, of the fans B E, with the intermediate spout C and slides D F, arranged with respect to each other and to the shoe, as and for the purpose described.

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Witnesses:

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