I. TURMAN.

Grain-Separator.

No. 205,017. Patented June 18. 1878.

Fig: 1.

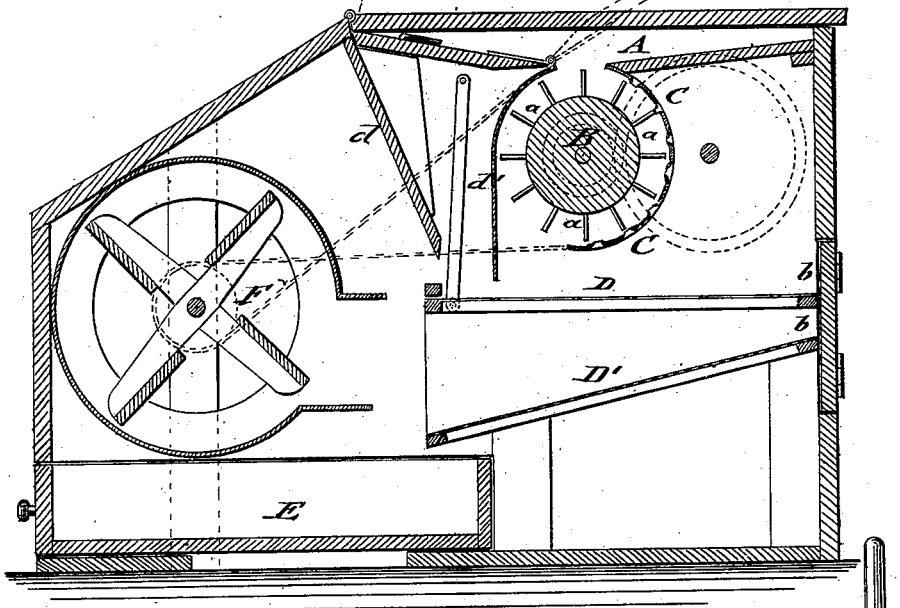
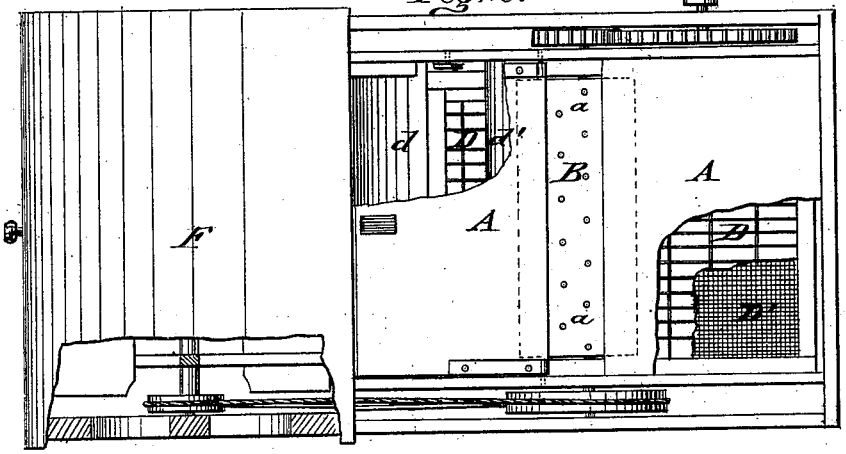


Fig: 2.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

ISAAC TURMAN, OF SMITHLAND, IOWA.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **205,017**, dated June 18, 1878; application filed November 13, 1877.

To all whom it may concern:

Be it known that I, ISAAC TURMAN, of Smithland, in the county of Woodbury and State of Iowa, have invented a new and Improved Grain-Separator, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved grain-separator; and Fig. 2, a top view of the same, with parts removed to show portions below.

Similar letters of reference indicate corresponding parts.

The object of this invention is to clean oats and other grain of the various impurities, such as chaff, dust, dirt, &c., for using it as a better feed for horses in training, or for seeding or other purposes; and the invention consists of a hopper discharging on a revolving cylinder, that throws the oats or grain on a roughened and perforated concave plate, from which the grain is conducted on a coarse reciprocating screen, and from the same on a finer inclined screen, and thence into a suitable receptacle, being exposed to a fan-blast during the passage through the screens. One side of the hopper is hinged, to be thrown over and admit, by means of a hopper-shaped conductor, the direct passage of the grain to the screens, to be treated in the same manner as in a common fanning-mill.

In the drawing, A represents the hopper, that conducts the grain onto a revolving cylinder, B, with radial stirrer-pins *a*, by which the grain is thrown against a roughened and perforated concave, C, that extends from the hopper around the cylinder to the bottom part of the same.

The impurities are separated to some extent from the grain by its being thrown with some force against the perforated concave, the grain being then dropped on a coarse reciprocating screen, D, and through the same on a finer but inclined screen, D′. As the grain falls through the reciprocating screens it is exposed to the action of a fan-blast, created by a revolving fan, F, at the end of the separator. The lighter impurities are thereby separated from the grain and carried off through a large opening, *b*, at the opposite ends of the screens, which opening is closed by a hinged door when the machine is not worked. The grain passes finally from the inclined screen into a sliding box or receptacle, E, below the fan-casing, and is removed from time to time.

Motion is imparted to the cylinder by a hand-crank and gearing, to the fan by belt-and-pulley connection, and to the reciprocating screens in any approved manner, as customary in grain-separators.

One side of the hopper A nearest to the fan is hinged, so that it may be raised and swung over, forming, in connection with an inclined partition, *d*, and a curved plate, *d′*, inclosing the cylinder, a hopper-shaped conductor, by which the grain may be dropped directly on the screens, to be cleared of most of the impurities by the action of the screens in connection with the fan-blast, in the same manner as in common fanning-mills.

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

The combination, with the separator-screens D D′ and the scouring-cylinder B, of the hopper A, having the swinging side and partition, substantially as shown and described, for the purpose specified.

ISAAC TURMAN.

Witnesses:

PETER GAMBO,

J. D. RICE.