S. STONE.

Grain-Separator.

No. 206,498. Patented July 30, 1878.

Fig. 1.

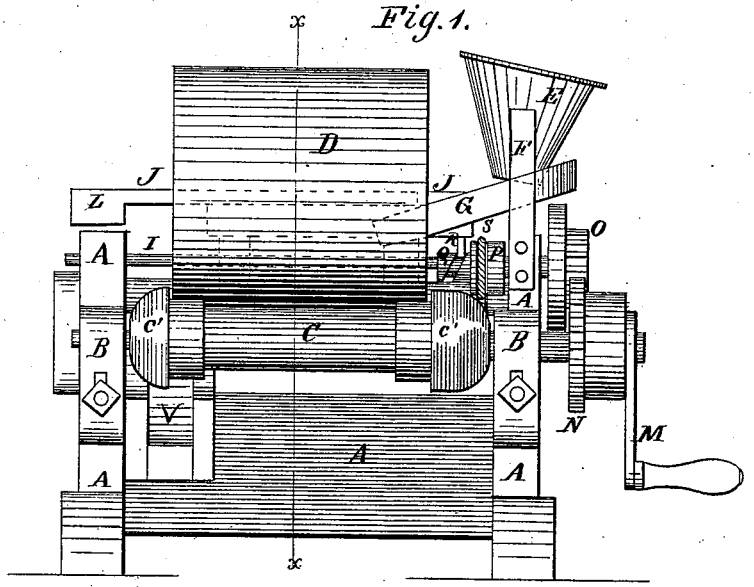


Fig. 2.

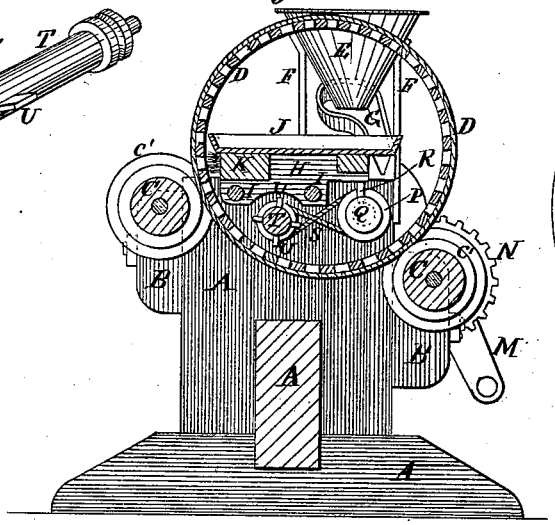


Fig. 4.

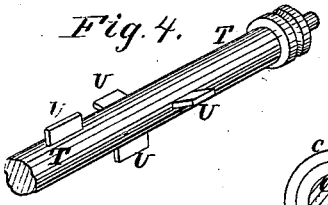


Fig. 5.

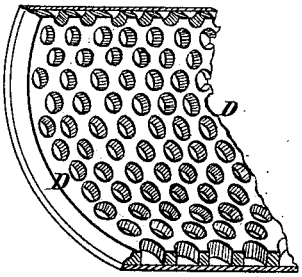
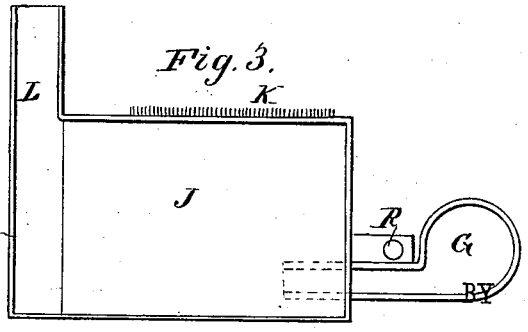


Fig. 3.



WITNESSES:

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INVENTOR:

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BY

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UNITED STATES PATENT OFFICE.

SAMUEL STONE, OF BRISTOL, TENNESSEE.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **206,498**, dated July 30, 1878; application filed June 11, 1878.

To all whom it may concern:

Be it known that I, SAMUEL STONE, of Bristol, in the county of Sullivan and State of Tennessee, have invented a new and useful Improvement in Wheat-Cleaners, of which the following is a specification:

Figure 1 is a side view of my improved machine. Fig. 2 is a vertical cross-section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail top view of the feed-spout, the receiver and its spout, and the brush. Fig. 4 is a detail perspective view of the stirrer-shaft. Fig. 5 is a detail perspective view of a part of the cleaning-cylinder.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for removing from wheat cockle-seed, cheat, and other impurities which cannot be removed by the ordinary fan-mill.

A represents the frame-work of the machine, to the edges of the end parts of which are attached bearings B for the journals of the rollers C. The bearings B are slotted to receive the bolts by which they are secured to the frame A, so that the said rollers C may be adjusted higher or lower, as may be required. Upon the rollers C rests the hollow cylinder D, which is revolved by the friction of the said rollers C, and is kept from longitudinal movement by shoulders *c'* formed upon the end parts of the said rollers C. If desired, the middle parts of the rollers C may be turned down or made smaller, so that only the end parts of the cylinder D will rest upon them. The cylinder D is made of an inner perforated shell, covered upon the outer side with a shell of tin or thin sheet-iron. The inner shell of the cylinder D is made of plate-iron, about one-twelfth of an inch in thickness, and is perforated with numerous holes, forming, in connection with the shell, pockets or pits of such a size that the largest cockle-seed can enter them freely.

The wheat to be cleaned is fed into the machine from a hopper, E, secured to supports F attached to one end of the frame A. From the hopper E the wheat is led into the interior of the cylinder D through the spout G, attached to a frame, H, which is placed and slides upon two rods or long bolts, I, attached to the frame A. To the upper side of the frame H is attached a pan, J, to serve as a receiver for the cockle-seed, and which is made a little narrower than the diameter of the cylinder D, and is placed in the middle part of the said cylinder D, with one edge close to the side of the cylinder that moves upward.

To the side of the frame H that is next to the side of the cylinder D that moves upward is attached a brush, K, to bear against the inner surface of the cylinder D and brush out any kernels of wheat whose ends may enter the holes of the said cylinder D. The brush K should be attached to the frame H adjustably, so that it may be adjusted to bear with any desired force against the inner surface of the cylinder D and to take up the wear. To the forward end of the pan J is attached a spout, L, through which the cockle-seed passes out and drops to the floor or into a receiver.

To the rear journal of one of the rollers C is attached the crank M, by means of which the machine is operated, and to the said journal is also attached a gear-wheel, N, the teeth of which mesh into the teeth of the smaller gear-wheel O. The journal of the gear-wheel O passes through the frame A, and to its inner end are attached the pulleys P Q. In the pulley Q is formed a zigzag groove to receive a pin, R, attached to a bar of the frame H, so that the said frame H and its attachments may be vibrated by the movement of the machine. Around the pulley P passes a band, S, which is crossed and passes around the end of the shaft T, so that the said shaft may be revolved by the movement of the machine. To the shaft T are attached flanges or wings U, which, as the cylinder D is revolved, strike the wheat and throw it back from the rising side of the said cylinder D, to prevent it from collecting or banking up at that side.

With this construction, as the machine is operated the cockle-seed and other smaller seeds and impurities enter the holes in the inner shell of the cylinder D, the kernels of wheat being pushed back by the brush K and the stirrer T U. As the holes of the cylinder D rise above the pan J the cockle-seed, &c., fall out into the said pan J and pass out through the spout L. The clean wheat escapes from the forward end of the cylinder D

into the spout V, attached to the frame A, through which it passes into a receiver. In this way the cockle-seed and other impurities can be readily, conveniently, and rapidly separated from the wheat, so that the wheat will be brought to a suitable condition for use as seed or for making flour.

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

In a grain-separator, the combination of the pitted cylinder D, the reciprocating frame H, and the rotary stirrer arranged under said frame, as and for the purpose specified.

SAMUEL STONE.

Witnesses:
JAMES T. GRAHAM,
C. SEDGWICK.