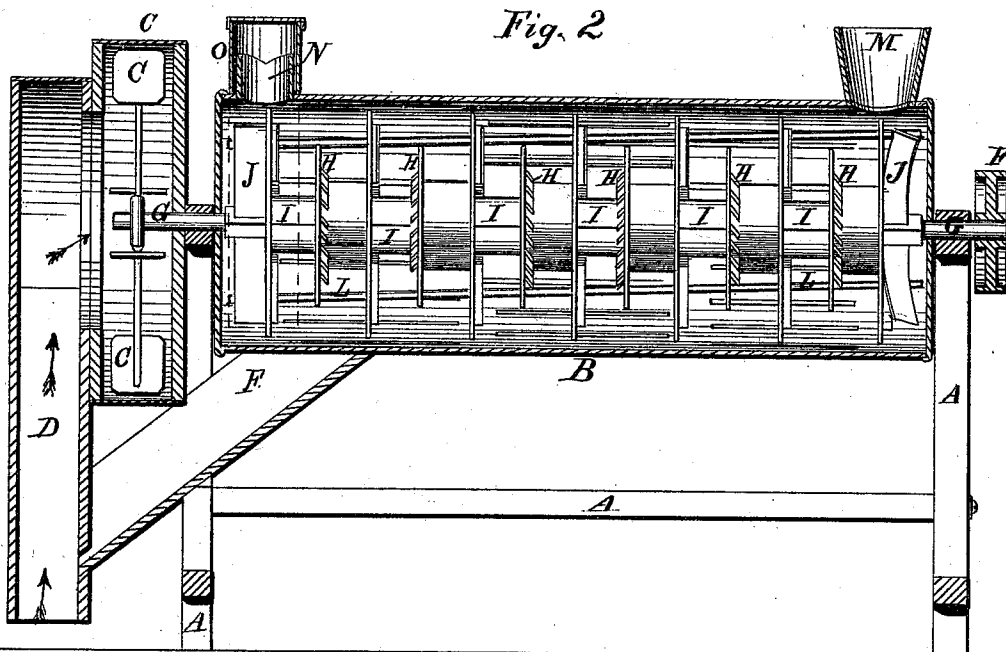
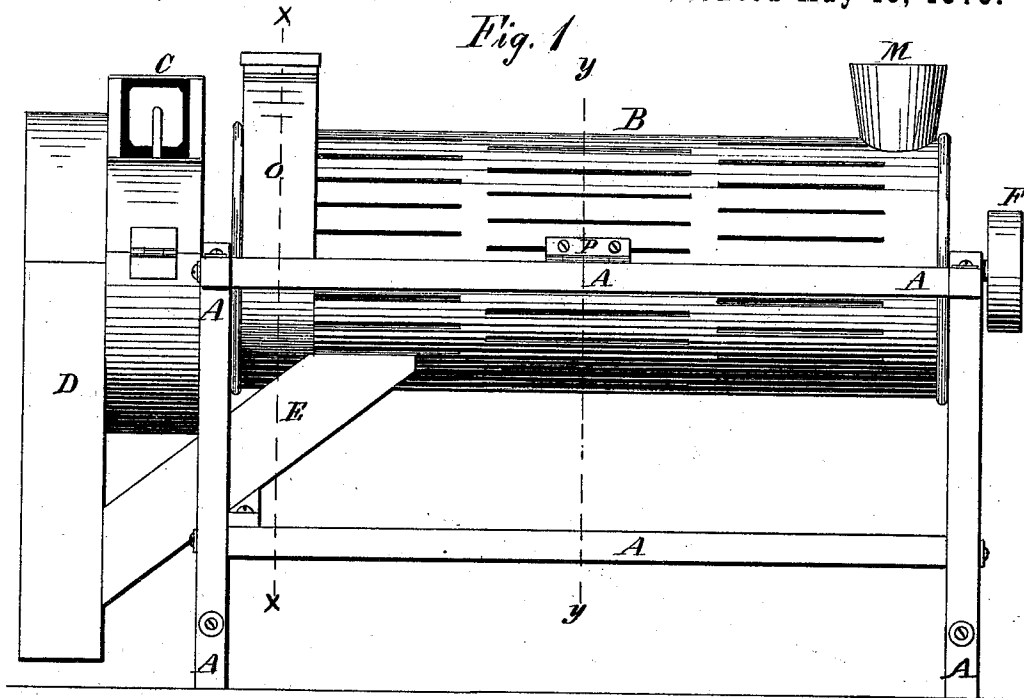


M. SOWER.
WHEAT-SCOURER.

No. 177,582.

Patented May 16, 1876.



Witnesses;
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Chas. J. Farnsbury

Inventor
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by E. M. Parks
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Fig. 3

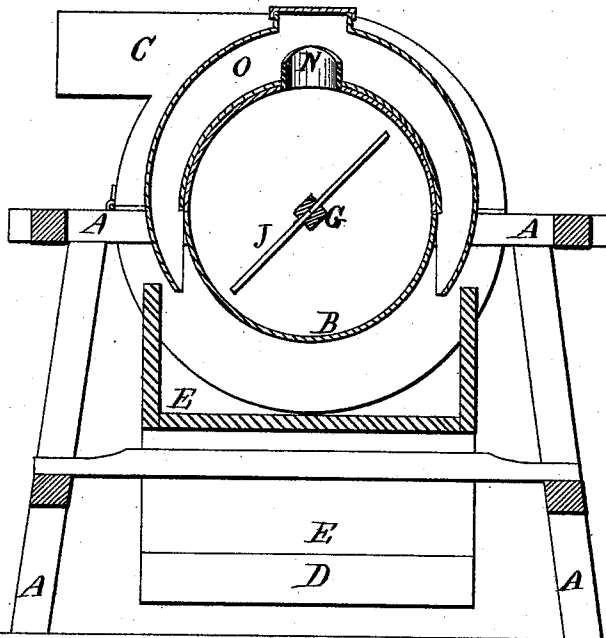


Fig. 5

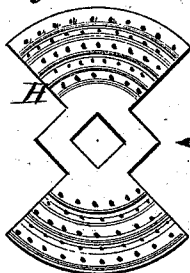


Fig. 4

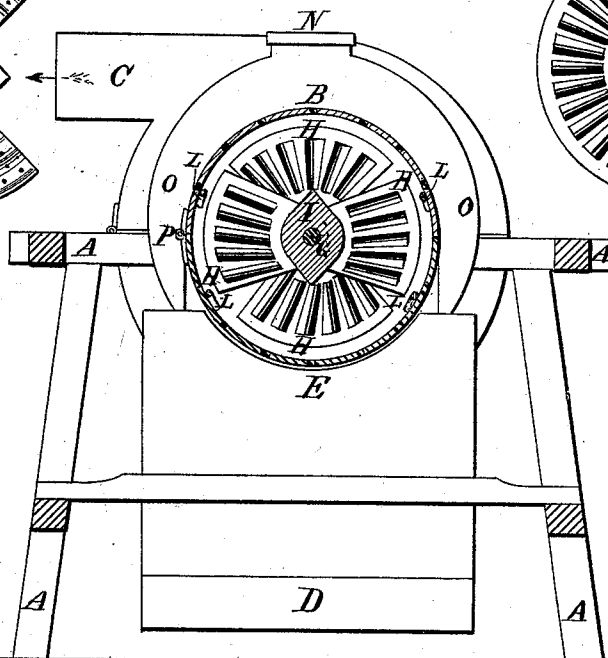
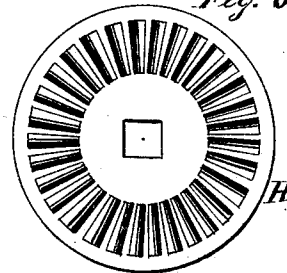


Fig. 6



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UNITED STATES PATENT OFFICE.

MORRIS SOWER, OF PRINCETON, ILLINOIS, ASSIGNOR TO SOWER BROTHERS,
OF SAME PLACE.

IMPROVEMENT IN WHEAT-SCOURERS.

Specification forming part of Letters Patent No. 177,582, dated May 16, 1876; application filed
January 7, 1876.

To all whom it may concern:

Be it known that I, MORRIS SOWER, of Princeton, Bureau county, State of Illinois, have invented an Improvement in Wheat-Scourers; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a longitudinal vertical central section of the same. Fig. 3 is a transverse section on line *xx* of Fig. 1. Fig. 4 is a transverse section on line *yy* of Fig. 1. Figs. 5 and 6 represent modifications of the form of the "flights."

The same letter indicates the same part wherever it occurs.

The nature of my invention consists in the peculiar construction of a wheat polishing and scouring machine, in which the grain is introduced at one end of a horizontal slotted cylinder and driven to the other end by flights or wings attached to a central rotating shaft, polished on the way by attrition against the surfaces of the flights, and against itself, and forced out at the upper side of the delivery end of the cylinder into a hood and spout, which delivers it to a suction-leg of a fan, by which it is freed from all dust and impurities which have not escaped through the slotted sides of the cylinder, all as hereinafter more particularly described.

In the drawings, A marks the frame-work of the machine which supports the operative parts. B is the horizontal cylinder, provided with numerous small longitudinal openings or slots to allow of the escape of dust and impurities from the grain under treatment. This cylinder is divided into two parts and hinged at P, so that it can be opened when desired. Through the center of the cylinder runs a shaft, G, provided with a driving-pulley, F, and a number of segmental wings or flights, H H, &c., which are placed on the shaft and separated by the oblong or diamond shaped blocks I, placed on the shaft between them. The flights are made of steel or other metal, and have a number of radial slots in them, from one side of each of which projects

an inclined lip. These lips assist in scouring the grain and in its propulsion through the machine. The blocks I when shaft G is in rotation, continually throw the grain from the shaft toward the walls of the cylinder. The flights and blocks are held in place on shaft G by means of the keys J J, which, being long and properly inclined, assist in the propulsion and delivery of the grain. Collars, with arms on them, may be substituted for keys, if preferred. M is the receiving-pipe, through which the grain is introduced to the machine. On the opposite end of the cylinder is the discharge-tube N, through which the grain is forced out into the double-branched hood or conveyer O, which carries it to the inclined spout E, down which it falls into the lower end of the suction-leg D connected with the fan-case C. In this case revolves a fan, C', attached to the end of shaft G, as shown in Fig. 2. By the revolution of the fan-blades an upward current of air is produced in leg D, by which the dust and light impurities are carried off and driven out of the mouth of the fan-case. On the inside of the cylinder B are placed long strips L, so inclined as to assist in driving the grain toward the delivery end of the cylinder.

The operation is as follows: Rotation being imparted to shaft G, the wheat to be operated upon is fed into the machine through pipe M. It is constantly propelled toward the delivery end of the cylinder by the joint action of the flights H, blocks I, and strips L, and by the rubbing action of all these surfaces, as well as the friction of the grains upon each other, it is thoroughly scoured and polished. Much of the dust and impurities escape through the fine slots in the walls of the cylinder. When the grain arrives at the delivery end of the machine, it is carried upward out of the delivery-pipe N, the arm or key J assisting in lifting and driving it out. It falls through the hood O into the inclined spout E, from the contracted lower end of which it escapes into the suction-leg D, where it encounters the upward current of air produced by the fan C', divested by said current of all remaining dust and impurity.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a grain polishing and scouring machine, the combination of the slotted horizontal cylinder B, constructed as described, with the rotating shaft G, provided with the slotted flights H, blocks I, and keys J J, arranged and operating as set forth.

2. In combination with the horizontal cylinder B and rotating shaft G, constructed as described, the inclined strips L, arranged in the manner and for the purpose set forth.

3. In combination with the cylinder B, the delivery-pipe N, hood O, and trough E, constructed and operating as specified.

4. The flights H, provided with radial slots and inclined lips, in manner and for the purpose described.

The above specification of my said invention signed and witnessed at Princeton this 24th day of December, A. D. 1875.

MORRIS SOWER.

Witnesses:

I. P. RICHARDSON,
P. T. RICHARDSON.