C. B. HORTON.

Buckwheat Huller.

No. 12,908. Patented May 22, 1855.

FIG. 1.

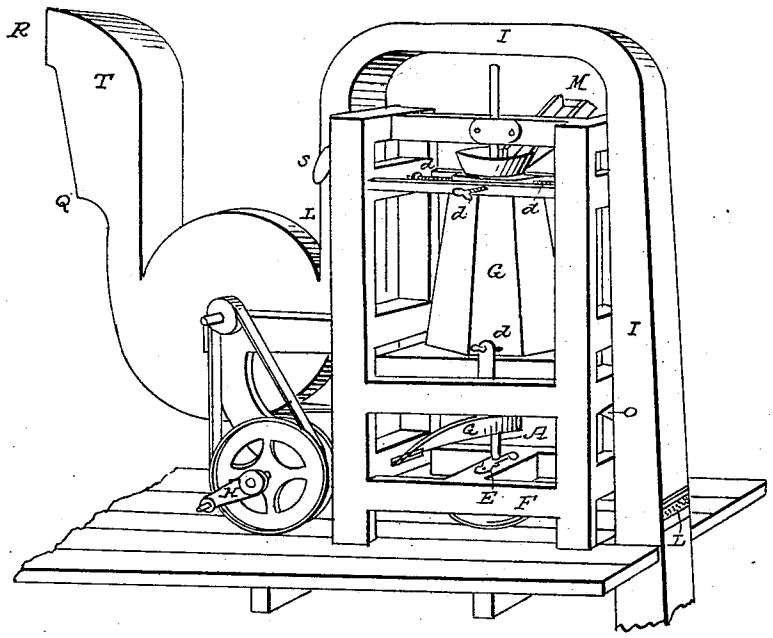
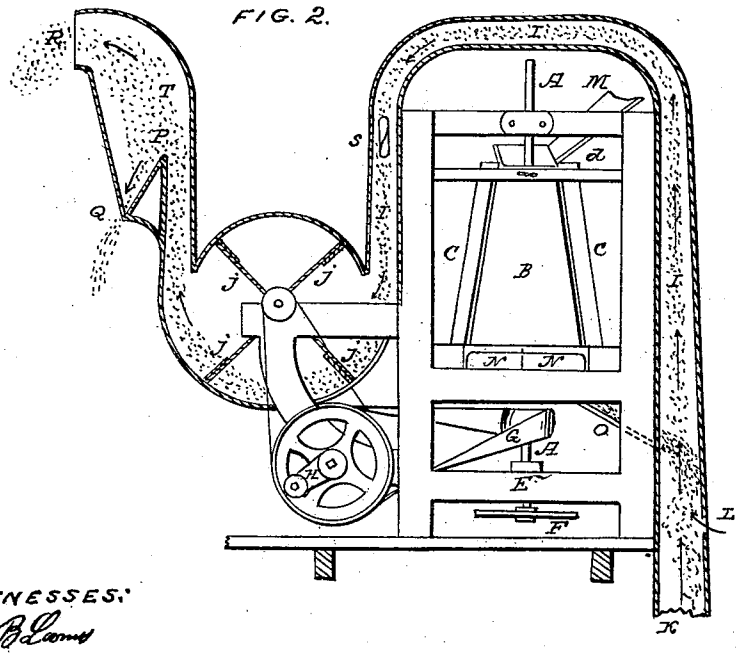


FIG. 2.



WITNESSES:
J. B. Lamb
J. Prader

INVENTOR
C. B. Horton.

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UNITED STATES PATENT OFFICE.

CHASE B. HORTON, OF ELMIRA, NEW YORK.

HULLER OF BUCKWHEAT.

Specification of Letters Patent No. 12,908, dated May 22, 1855.

To all whom it may concern:

Be it known that I, CHASE B. HORTON, of Elmira, in the county of Chemung and State of New York, have invented a new and useful Machine for Hulling Buckwheat; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, (of which Figure 1 is a perspective and Fig. 2 an elevation and part sectional view,) and to the letters of reference marked thereon, making part of this specification.

The nature of my invention consists in passing the grain to be operated on through hulling stones of a conformation peculiarly adapted to the purpose, in connection with a reverse close suction separator which completes the operation by separating the hulls, dust and chaff from the hulled grain.

Fig. 2 shows the general arrangement of the parts.

A is a vertical spindle on which the inner stone B is hung. This stone is in the form of a frustrum or truncated cone, and revolves in a stone case the inner surface of which corresponds exactly to the form of the frustrum stone. C C represents a part of this case or outer stone which is removed in the drawing to show the interior construction. The spindle A has its bearing in the step E which is capable of being raised or lowered by the hand screw F for the purpose of adjusting the frustrum to the outer stone which is immovably attached to the frame of the machine and held firmly by the adjusting screws (*d*, *d*, *d*,) Fig. 2. The spindle is run by the band G from a drum wheel on the shaft to which the crank H is attached for the purpose of shewing the motion of the machine. It may be driven by any shaft within a convenient distance.

I I I is the suction-blast-pipe shewn in section. The blast is created by the fans *j j j j* driven at a high rate of speed. The air is drawn in either at the bottom of the pipe K, or at the gage opening L, and the current carried in the direction of the arrows over the hulling stones, and downward around the fans until discharge at the expanded throat of the pipe.

The grain enters the stones by the spout M where it is subjected to a gradual abrasion as the grain moves downward by gravitation from the two surfaces, which are carefully adjusted to the size of the kernel so as to break and remove the hull without crushing the kernel. Under the frustrum stone is a receiving case into which the grain and chaff fall together and are swept by the arms N, N, into the inclined plane or spout O, which discharges them into the blast-pipe. The peculiarity of the operation of the blast-pipe is that by its construction no air is admitted but that which is taken in below the discharge of the grain at O, not any or very little being taken in with the grain, so that the ascending current of air carries the hulls, dust and all the lighter and imperfect grain through its course, while the hulled grain falls by its own gravity and is carried down the pipe into a receiver. The chaff being carried as far as the enlarged throat P of the circular head of the separator where an eddy is formed by the enlargement which permits the weightier matters such as chess, light grain, &c., to descend against the inclined plane by which they are discharged at an opening at Q, while the remaining chaff is carried out of the mouth of the separator at R. The force of the blast is increased or diminished by valves in the pipe at S, to adapt it to grain of greater or less gravity.

The stones may be used either with or without a dress, but I prefer using them without as the natural surface of stones of this construction gives that kind of abrasion which most effectually rids the grain of its hulls and leaves it in a condition to manufacture into the whitest and purest article of flour.

I am aware that conical stones have been used for the grinding of grains, therefore I do not claim that as my invention, but

What I do claim, and for which I desire to secure Letters Patent is,

The arrangement and combination of the fan *j*, *j*, *j*, *j*, with the suction spout, I, I, the discharge openings R, Q, and the stones B, and C, substantially in the manner and for the purposes set forth.

C. B. HORTON.

Witnesses:
I. B. LOOMIS,
J. FRASER.