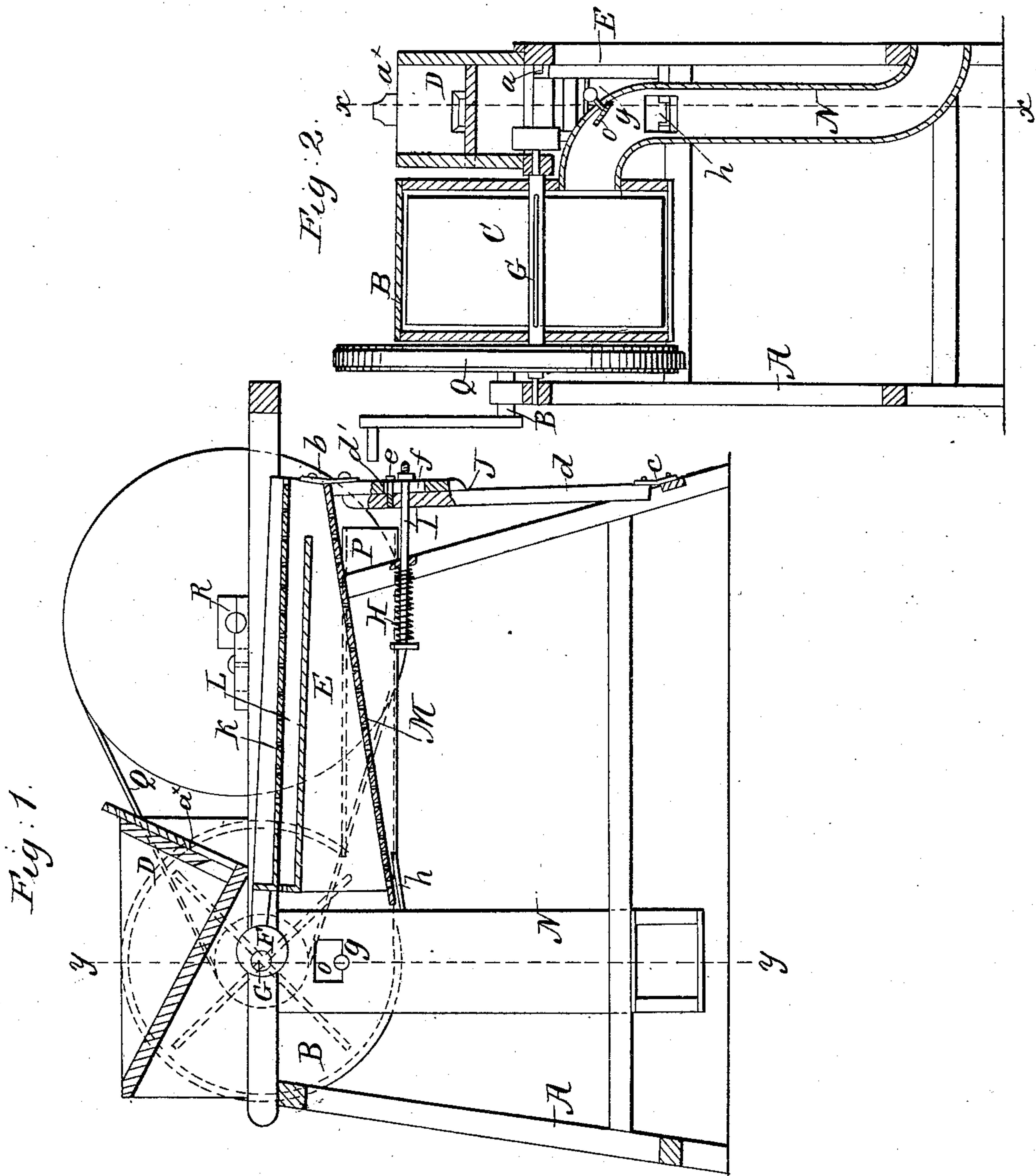


B. BARNEY.  
Grain Cleaner.

No. 58,048.

Patented Sept. 18, 1866.



Witnesses

*W. B. Loringham*  
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Inventor

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*Per [Signature]*  
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# UNITED STATES PATENT OFFICE.

BENJAMIN BARNEY, OF TIME, ILLINOIS.

## IMPROVEMENT IN MACHINES FOR CLEANING GRAIN.

Specification forming part of Letters Patent No. 58,048, dated September 18, 1866.

*To all whom it may concern:*

Be it known that I, BENJAMIN BARNEY, of Time, in the county of Pike and State of Illinois, have invented a new and Improved Machine for Cleaning Wheat and other Grain; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention taken in the line *x x*, Fig. 2; Fig. 2, a transverse vertical section of the same taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and useful machine for cleaning wheat and other grain; and it consists in the employment or use of a rotary fan, vibrating shoe containing a riddle, cockle-screen, and a chute, and a suction-blast spout, provided with a valve and arranged with the fan and shoe, as hereinafter fully shown and described, whereby wheat and other grain may be cleaned very expeditiously and in a perfect manner.

A represents a framing, which may be constructed in any proper manner to support the working parts of the machine; and B is a cylindrical fan-case, placed in the upper part of said framing, and having a rotary fan, C, placed within it of the ordinary or any proper construction.

D is a hopper, which is placed on the framing A by the side of the fan-case B, and provided with a sliding door, *a*\*, by adjusting which the flow of grain from the hopper may be regulated, as desired.

E is a shoe, also placed in the upper part of the framing A, and having its sides grooved to receive pins *a* in the framing, said pins serving as guides for the shoe, which has a longitudinal shake-motion communicated to it by an eccentric or cam, F, on the fan-shaft G, which works against the rear end of the shoe, and a spiral spring, H, which is fitted on a rod, I, connected with a support, J, which sustains the outer end of the shoe, the upper end of J being connected by a joint or any flexible substance, *b*, to the outer end of the shoe, and

the lower end of said support being connected to the framing A in a similar manner, as shown at *c*. (See Fig. 1.)

The support J is composed of two parts, *d d'*, connected by a screw, *e*, which passes through an oblong slot, *f*, in *d'*, to admit of the latter being adjusted higher or lower, to give the shoe E a greater or less degree of inclination, as may be desired.

In the upper part of the shoe E there is placed a riddle, K, and below said riddle there is a chute, L; and the bottom of the shoe is composed of a cockle-screen, M. The riddle K and chute L incline downward from the inner to the outer end of the shoe, and the screen M inclines in a reverse direction, as shown in Fig. 1.

N is a vertical blast-spout, the upper end of which communicates with the fan-case, B, as shown clearly in Fig. 2. This spout N is provided at its upper part with a valve, O, opening inward, and having a stem or rod attached provided with a sliding weight, *g*. The inner end of the cockle-screen M communicates with the blast-spout N by means of a spout, *h*, and the fan-case B is provided with an eduction-spout, P.

The fan-shaft G is driven by a belt, Q, or by gearing from a shaft, R, on the framing A.

The operation is as follows: The wheat or other grain to be cleaned is placed in the hopper D and passes out upon the riddle K in shoe E more or less rapidly, as required, by raising the slide *a*\* the proper height. The coarse foreign substances are discharged from the outer end of the riddle K, while the grain and cockle pass through the riddle and fall upon the chute L, which conducts said substances to the elevated outer end of the screen M, the cockle passing through screen M while the grain is discharged into the spout N, in which there is a suction-blast generated by the rotation of the fan C, the grain being discharged in a clean state from the lower end of N, while the dust and other light impurities are drawn up into the fan-case B and discharged through the spout P. The valve O regulates the strength of the blast in N, and this blast may be increased or diminished in strength by adjusting the weight *g*. The blast, when strong, draws inward the valve O and admits external air,



thereby diminishing the suction in N below the valve.

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

1. The rotary fan C, hopper D, shoe E, provided with the riddle K, chute L, and cockle-screen M, and having a longitudinal shake-motion communicated to it by the cam or eccentric F, and spring H, in combination with the suction-blast spout N, all arranged substantially as and for the purpose set forth.

2. The valve O, applied to the spout N, and provided with the adjustable or sliding weight *g*, substantially as and for the purpose specified.

3. The extension-support J, formed of the two parts *d d'*, connected by the screw *e*, for the purpose of varying the inclination of the shoe, E, as set forth.

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Witnesses:

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