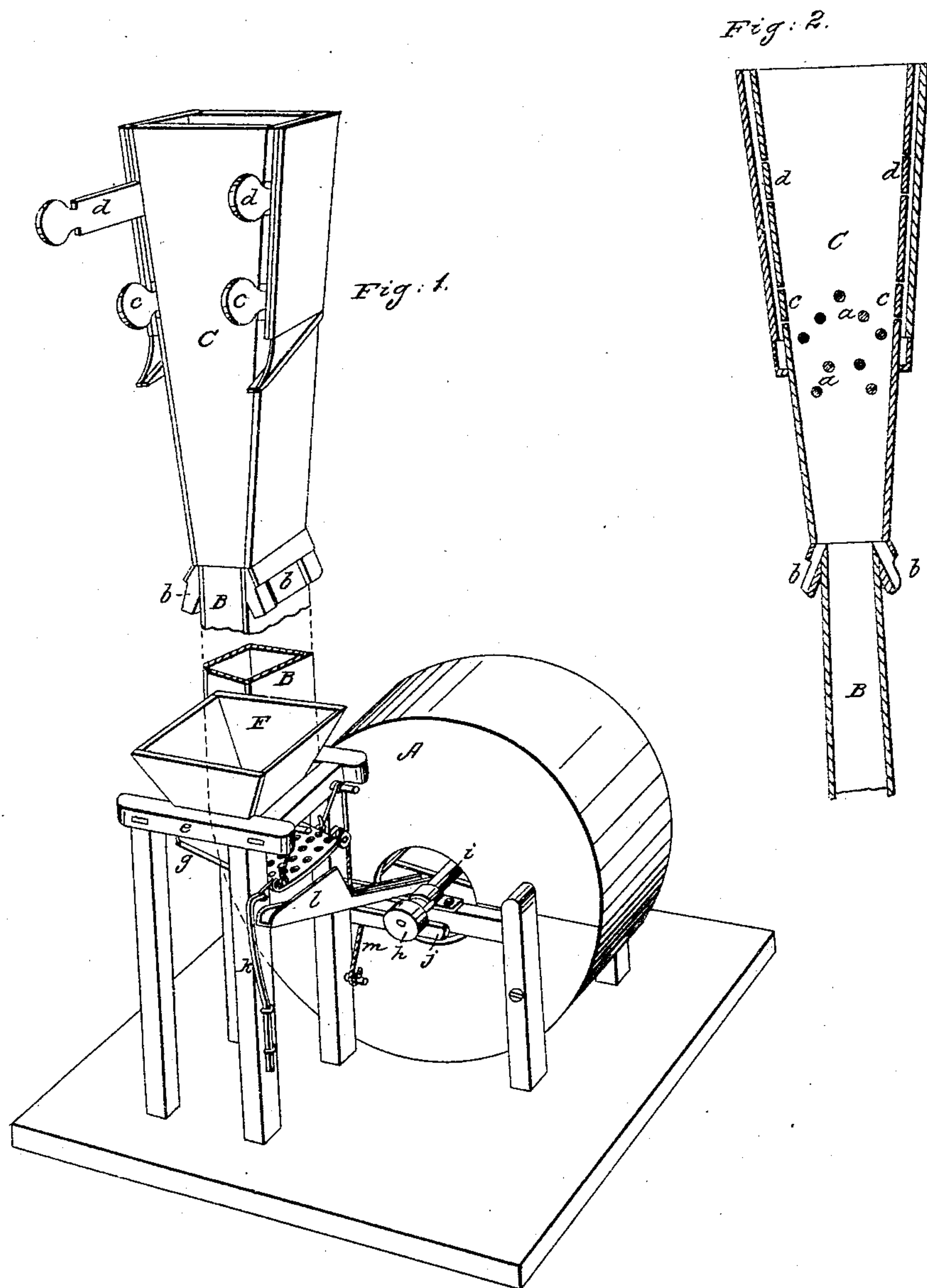


J. WHITE.  
Grain Cleaner.

No. 8,013.

Patented April 1, 1851.



# UNITED STATES PATENT OFFICE.

JESSE WHITE, OF BARNESVILLE, OHIO.

## IMPROVEMENT IN WHEAT-FANS.

Specification forming part of Letters Patent No. 8,013, dated April 1, 1851.

*To all whom it may concern:*

Be it known that I, JESSE WHITE, of Barnesville, in the county of Belmont and State of Ohio, have invented certain new Improvements in Machines for Elevating, Conveying, and Cleaning Grain; and I do hereby declare that the following is a full, clear, and exact description of my improved apparatus, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents a view in perspective of my apparatus, and Fig. 2 is a vertical section of the head of the same.

My invention consists in effecting any one or all of the operations of elevating, conveying, and cleaning grain by means of a current of air, produced artificially, with sufficient velocity to carry the grain along with it through the tube or other channel through which it is forced.

In the apparatus represented in the accompanying drawings the current of air is produced by means of a centrifugal fan A, whose wings also act as beaters to scour the grain and pulverize the smut. A trunk B is adapted to the fan-case to convey the grain in any required direction.

In the example represented in the drawings, the trunk proceeds vertically from the fan-case to the apartment in which the grain is to be delivered. The trunk here terminates in an enlarged cap or head C. This cap is fitted within with inclined racks or ladders *a a*. The lower extremity of the head is fitted with spouts *b b* for the discharge of grain, and its upper extremity is fitted with sliding doors *c d* for the discharge of the lighter portions of the impurities carried upward by the blast. A hopper-frame *e* is erected at the side of the fan to support a hopper F, in which the grain to be elevated, conveyed, or cleaned is introduced. From this hopper the grain is fed to the eye or opening of the fan-case by means of a shoe *g*, to which a vibratory motion is communicated by a pin *i*, projected from a disk *h* on the fan-shaft and acting through the

intervention of a shaking-lever *j* and cord. The shaking is effected in part by a spring *k*, which draws the shoe in one direction, while the pin draws it in the other. The shoe is fitted with a riddle *l*, by means of which the larger impurities which are mingled with the grain are removed before it enters the fan.

The grain to be cleaned and elevated is placed in the hopper F and is fed therefrom by the shoe *g* into the eye of the fan, which is put in rapid motion by means of a belt encircling a belt-pulley secured to its shaft. The grains entering the eye are beaten by the wings of the fan and are carried upward with the air drawn in at the eye through the trunk to the head C. The ascending grain, here striking against the bars of the racks *a a*, is deflected from its direct course, while at the same time the velocity of the air is checked by the enlargement of the head, thus allowing the cleaned grain to fall at the sides, whence it is discharged by the spouts *b b*. The lighter particles are still carried upward, and as the currents of air are weakened by the continued enlargement of the head are discharged according to their respective densities through the openings in the faces, while the finest particles are carried through the open top of the head. The rate at which the grain is fed to the fan is varied by limiting the stroke of the shaking-lever. This is effected by means of a cord *m*, which is tightened or slackened by turning a pin to which it is secured.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the fan, air-trunk, and head, constructed and operating substantially in the manner and for the purpose herein described.

In testimony whereof I have hereunto subscribed my name.

JESSE WHITE.

Witnesses:

JAMES C. NEW,  
JOSEPH OXLEY BASS.