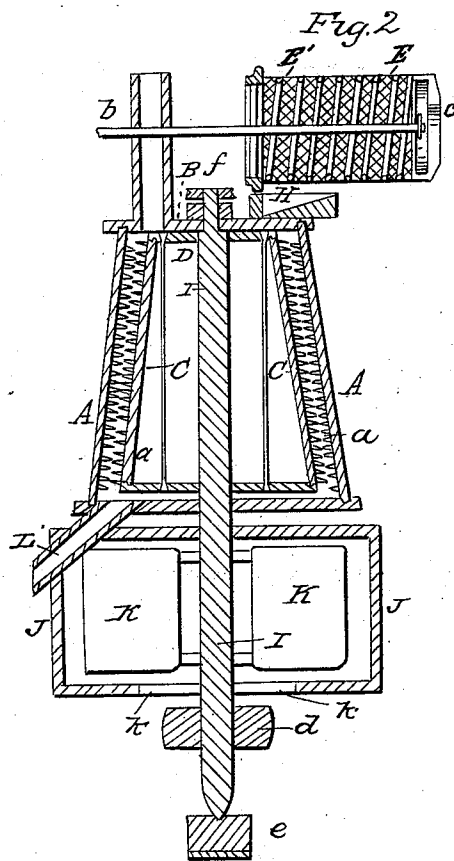
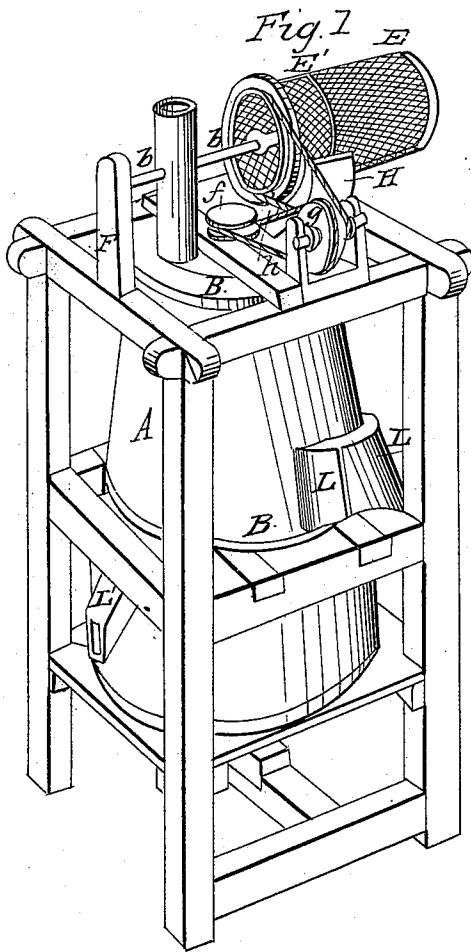


A. ADAMS.
Smut Machine.

No. 1,712.

Patented Aug. 3, 1840.



UNITED STATES PATENT OFFICE.

AMOS ADAMS, OF PORT HENRY, NEW YORK.

SMUT-MACHINE.

Specification of Letters Patent No. 1,712, dated August 3, 1840.

To all whom it may concern:

Be it known that I, AMOS ADAMS, of Port Henry, Essex county, New York, have invented a useful Improvement in the Mode of
5 Constructing Smut-Machines, or Machines for Cleaning Grain; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, Figure 1,
10 is a perspective view of the machine, and Fig. 2, a vertical section through its center.

A, A, is the outer case, which I make of cast iron, forming it in sections, or staves, the ends of which are received in grooves
15 formed by ledges on the two heads B, B, of this case. These heads are firmly fixed to the frame-work of the machine, in any convenient mode. Within this case there is to be a revolving body C, C, corresponding in
20 form with said outer case A, A, and having a space between the two for the passage of the grain, and in which it is to be forcibly beaten by the action of the fangs, or teeth, on the revolving body C, C, and those on the
25 interior of the case.

The body C, C, like the outer case, I usually form of cast iron segments which are to be received within grooves on the heads D, D; rods and screw nuts being employed to hold the heads, and consequently
30 the segments, in place. The interior of the case A, A, and the exterior of the body C, C, are furnished with numerous square, or angular, fangs, or teeth, *a, a, a*, upon which
35 the grain is to fall, and against which it is to be forcibly beaten by the rapid revolution of the body C, C.

The grain is to be fed into the space between the case and the revolving body,
40 through the intermedium of a revolving screen E, E'. This screen is supported by, and revolves upon, a fixed shaft *b, b*, which is firmly attached to the standard F, and to the tube G, or in any other convenient man-
45 ner; the screen is to be made to revolve upon this shaft by the motion of the main shaft of the machine. The grain is admitted at the opening *e*, at the outer end of the screen, and in passing through its portion E, which
50 is covered with wove wire, too fine for the grain to pass through, it is separated from a large portion of dust. The part E', of the screen is covered with coarse wire cloth, through which the grain will pass, while

larger substances are detained by it, and
55 pass out at its open end. Under this part of the screen is a box, or receiver, H, into which the grain falls, and by which it is conducted into the interior of the machine, through the upper head B. 60

I, I, is the main shaft of the machine, to which the heads of the revolving body C, C, are attached; *d*, is a whirl by which it may be made to revolve; *e*, a step on which it rests, its upper end being embraced by a
65 collar on the head of the machine.

J, J, is the case of a fan wheel placed below the body of the machine, K, K, being the vanes of said fan wheel, and *h, h*, the opening to admit air. From the outside of
70 the case J, a flattened tube L, L conducts the wind from the fan wheel through the lower part of the case A, A, into the interior of the machine, whence it passes upward and escapes through a tube G, at the
75 top, counteracting the too rapid descent of the grain, carrying with it the chaff, dust, and other foreign matter, while the grain, descending, runs out at the spout L'.

The feeding screen E, is made to revolve
80 by a band from the whirl *f*, on the top of the shaft I, I, passing around a whirl *g*, from which a band *h*, may extend around the grooved end *i, i*, of the screen E, or by any analogous device. 85

The manner of using this machine will be perfectly obvious from the foregoing description of it, in which I have pointed out the use of the respective parts; of these parts, in general, I do not pretend to be the
90 inventor, they being well known as elements of other machines; nor do I claim the cleaning of grain by beating it in its passage between a revolving body and an external case, as, in this respect, this machine re-
95 sembles others which have been used for the same purpose; but

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

The manner of constructing the revolving,
100 feeding screen, and of combining it with the body of the instrument in which the beating and agitation of the grain are effected, as herein set forth.

AMOS ADAMS.

Witnesses:

JOHN E. McNEILL,

B. F. HYDE.