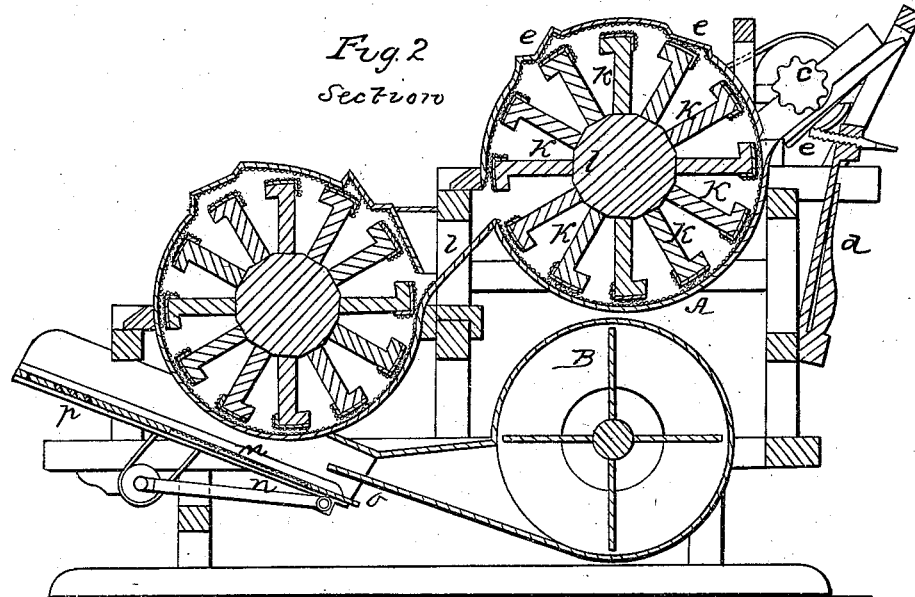
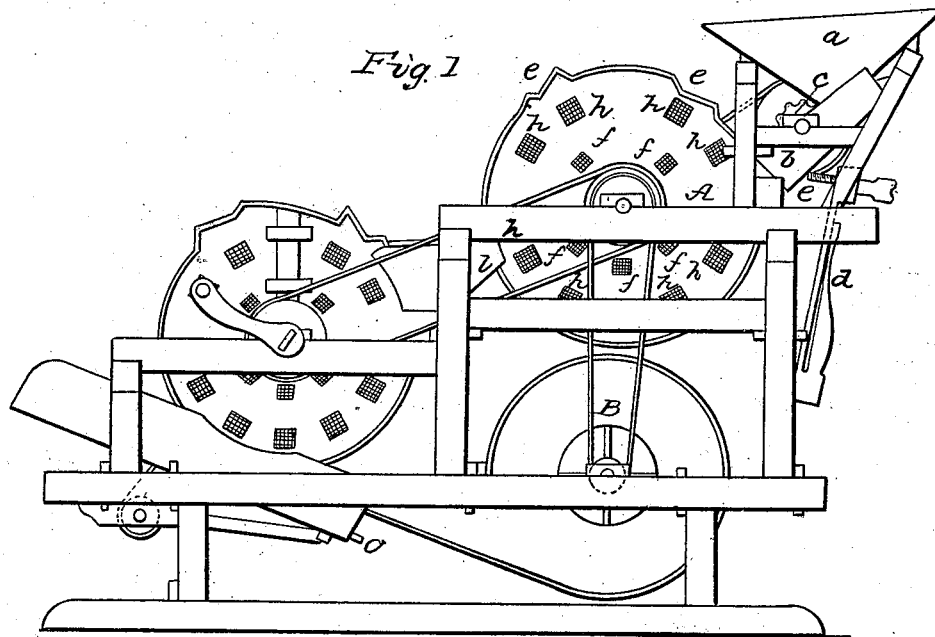


J. HEYGEL.
Smut Machine

No. 4,944.

Patented Jan. 26, 1847.



UNITED STATES PATENT OFFICE.

JOSEPH HEYGAL, OF BALTIMORE, MARYLAND.

SMUT-MACHINE.

Specification of Letters Patent No. 4,944, dated January 26, 1847.

To all whom it may concern:

Be it known that I, JOSEPH HEYGAL, of the city of Baltimore and State of Maryland, have invented a new and useful Improvement in Smut-Machines, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a longitudinal vertical section.

The same letters indicate like parts in all the figures.

The nature of my improvement consists in the manner in which I discharge the smut and receive the blast and in the form and application of the rubbers or runners.

The construction is as follows: The frame is of a suitable form and strength to sustain the working parts and is keyed throughout. At the upper part of this frame is stationed at one end a hopper (a) into which the grain to be cleaned is put; thence it descends down an inclined spout (b) in which is placed a fluted roller (c); the bottom of the spout is movable and is pressed up against the roller (c) by a spring (d) below, tempered by a set screw (e); this serves to flatten the garlic as it descends with the grain into the first cylinder (A). This cylinder or case is composed of any suitable material, the sides may be of wood and the periphery covered with sheet iron punched or with cast iron in staves; on the upper half of this cylinder are four more or less triangular projections from the face of the circle as clearly shown at (e, e) in the drawing; the sides are pierced with a row of holes (f), around and near the axle of the runner; and near the periphery there is another row of holes (h) all around. These holes are all covered with wire gauze, and when the machine is

in operation the air is drawn in through the center holes (f) and is forced out, together with the smut, through the outer ones (h). Within this case a runner is placed turning on an axle (i), from which axle a series of arms (k) radiate, these are flat and form wings; the ends of said arms terminate in segments of a cylinder that nearly fits the case (see Fig. 2); they are faced with sheet iron punched or with cast iron ribbed; by revolving they cause the heavy grain to run through below but carry around the light grain, garlic, and smut and beat them against the triangular projections (e, e) above named. As the smut is disengaged it is blown out through the holes in the sides as before named. The grain and bruised garlic then pass down through the inclined spout (l) into a second cylinder constructed like the first in all particulars; in this the operation is finished of cleaning off the grain, and so bruising the garlic as to fit it for being blown out from the wheat when received onto an inclined screen (m) which receives a blast from a fan (B) situated below the first described cylinder (A). The screen (m) has a motion endwise and the grain received thereon falls down under the fan spout at (o); the screenings pass through at (n), the tailings at (p) and the bruised garlic is blown out at top.

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

Constructing the case of a horizontal smut machine with two rows of holes in the sides thereof, in the manner described, for ventilating and discharging the smut, and in combination therewith the runner constructed as above set forth for the purposes above specified.

JOSEPH HEYGAL.

Witnesses:

J. J. GREENOUGH,
J. W. THAYER.