H. SMITH.

Smut Machine.

No. 1,706. Patented July 31, 1840.

Fig. 1

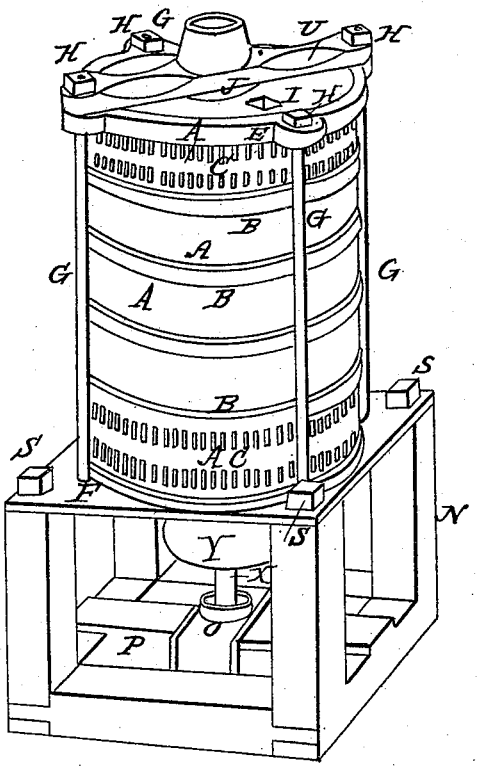
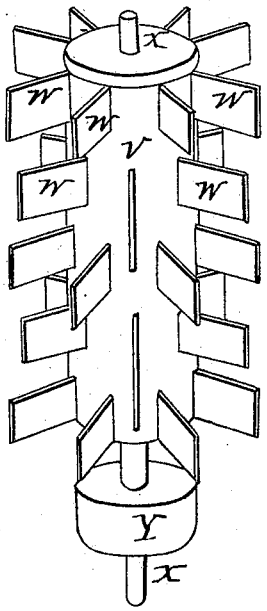
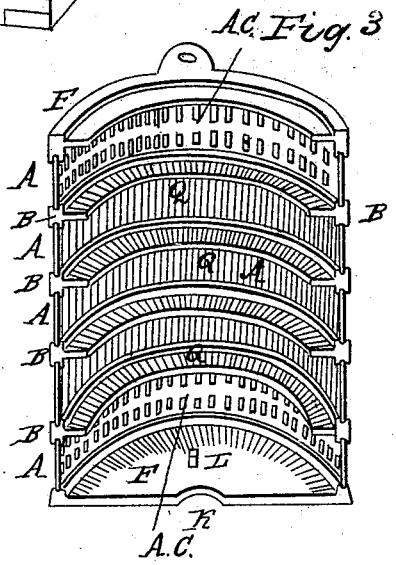


Fig. 2



A.C. Fig. 3



UNITED STATES PATENT OFFICE.

HIRAM SMITH, OF BETHANY, NEW YORK.

IMPROVEMENT IN SMUT-MACHINES.

Specification forming part of Letters Patent No. **1,706**, dated July 31, 1840.

To all whom it may concern:

Be it known that I, HIRAM SMITH, of the town of Bethany, in the county of Genesee and State of New York, have invented a new and useful Machine for Scouring Smut and other Dirt from Grain and Separating the Same Therefrom, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the machine. Fig. 2 is a perspective view of the revolving beater or runner. Fig. 3 is a perspective view of the inside of half of the cylinder.

Similar letters refer to similar parts in the figures.

The stationary case or cylinder is made in the following manner: It consists of a series of parallel circular bands, B, and rims A, placed upon each other and held firmly together in that postion between a top and bottom plate, E F, by four screw-rods, G, and nuts H, the upper plate or head, E, of the cylinder having two apertures, I J, in it, one for the upper end of the axle of the runner and the other through which the grain is admitted, and the lower plate or bottom having likewise two apertures, K L, in it, one for the lower end of the axle to pass through and the other for the discharge of the grain when cleaned, which cylinder is supported by and secured upon a suitable frame, N, by screw-bolts S, the lower end of the axle of the runner turning in an oil cup, O, secured upon the bridge-tree P of the frame.

There are four bands, B, in the cylinder represented in the drawing; but they may be more or less in number, as required, each made about three times as thick as the rims A, and grooved on the upper and lower sides to admit the edges of said rims into said grooves. On the inner periphery of each of these bands there is formed a horizontal circular ledge, Q, one-third the thickness of the band and about one inch wide, made rough on the upper side, like a file, for scouring the grain. All the rims are solid except the upper and lower ones, A C, A C, and these contain two circles of apertures for the escape of the dirt through them, made in the manner of the openings of Venetian blinds.

The lower plate or bottom, F, before mentioned, is square and has a circular groove on the upper side to receive the lower edge of the lower rim, A C, and is perforated with four holes for four bolts, S, which secure it to the frame, and for the four rods G, which hold the parts of the cylinder together.

The upper plate or head, E, is circular, and is grooved on the under side to receive the upper edge of the upper circular rim, A C, and is provided with four perforated ears for the screw-rods G to pass through, that confine the rims and bands, two of which rods also pass through the ends of a cross-bar, U, placed on top of the cylinder for the upper end of the axle of the runner to turn in.

The runner V is a cylindrical piece of wood, with five series of beaters, W, (ten in each,) radiating from the center of the same in circles opposite the spaces between the beaters of the several circles, as represented in Fig. 2, with an iron axle, X, passing through the center of the said runner, which is banded at each end. This runner is placed in a vertical position inside the stationary cylinder, and is turned therein by means of a band passed around a pulley, Y, on its axle leading to the driving-power, the axle, as before mentioned, turning in the oil-cup O below and in the cross-bar U above.

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

The mode of constructing the cylinder by forming it with circular ledges Q and oblique apertures A C, in combination with the revolving beaters, constructed and operating in the manner set forth.

HIRAM SMITH.

Witnesses:
A. W. PAGE,
F. REED.