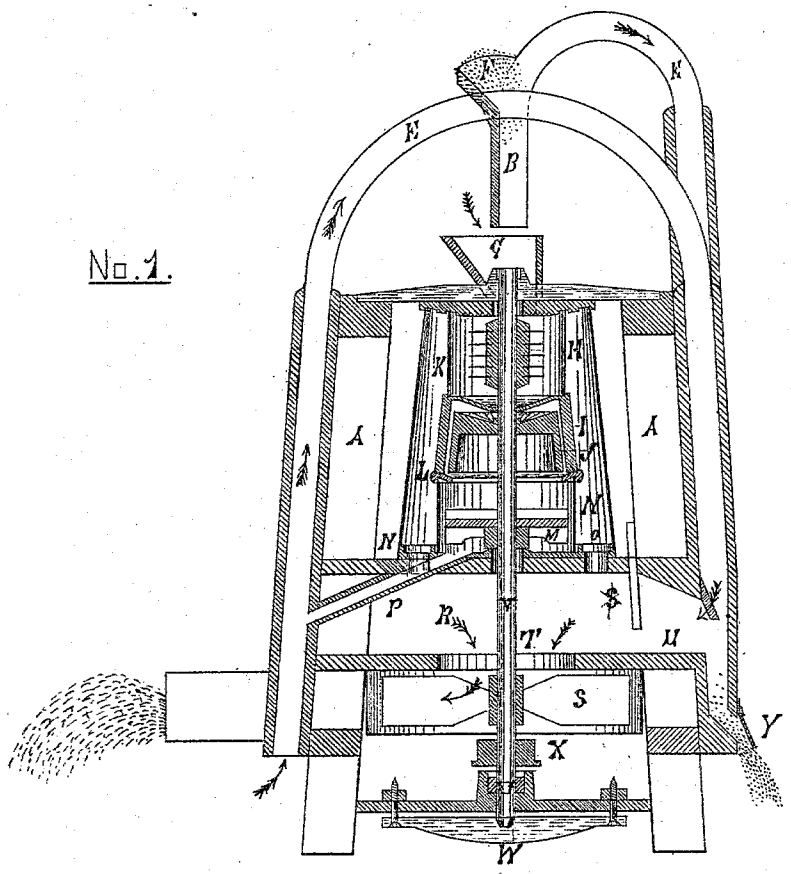
JESSE LANTZ.

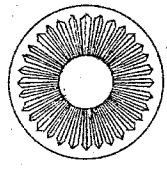
Improvement in Smut Machines.

No. 115,620. Patented June 6, 1871.

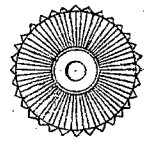
No. 1.



No. 2.



No. 3



WITNESSES.

S. N. Howard

J. Boone McClure

INVENTOR.

Jesse Lantz.

By J. B. McClure Atty.

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JESSE LANTZ, OF WHEELING, WEST VIRGINIA.

IMPROVEMENT IN SMUT-MACHINES.

Specification forming part of Letters Patent No. 115,620, dated June 6, 1871.

To all whom it may concern:

Be it known that I, JESSE LANTZ, of Wheeling, in the county of Ohio and State of West Virginia, have invented certain Improvements in Smut-Machines, of which the following is a specification, reference being had to the accompanying drawing and letters of reference thereon.

My invention relates to that class of mill called smut-machines; and it consists, first, in the particular construction of a rubber or scourer to break the smut-pods and to free any grains of wheat to which it may adhere of the same, that the smut may be the better separated from the wheat; and, second, to the combination and arrangement of said rubber with other parts of the machine, each as hereinafter fully set forth.

Figure 1 is a vertical section of a smut-machine through its center, showing the construction and arrangement of all its main parts, and the particular construction and arrangement of my invention. Fig. 2 is an inside end view of the outside part of the rubber, showing its fluted or ribbed interior. Fig. 3 is an outside top view of the other part of the rubber, also showing that it is ribbed or fluted on its outside.

I will now describe the main parts of the machine, and afterward the particular part and combination I claim as new.

A is the supporting-frame; E, arched spouts, coming together at Z; F, place for hopper; B, end of spout E, through which the wheat passes from hopper E to hopper G; H, beater, which consists of a vertical center frame, fixed to shaft, upon which are fixed, alternately, numerous horizontal pins, the whole of which are inclosed by an open-ended perforated cylinder. I is the outside part of my rubber; J, the inside part of the same, both of which parts will be fully described hereafter; L, a hollow circular frame on top of perforated cylinder inclosing fan M; M, a fan fixed to shaft, inclosed by perforated cylinder 4, which fan is so made that the lower portions of the fans almost touch the perforated base N; O, perforations on the outside of base N, through which the smut and dust are driven; P, wheat-spout leading from center of base N to discharge-spout E; R, air-chamber; S, fan fixed to shaft; T, opening from air-chamber into fan S; U, opening into spout E from air-chamber; V, main shaft, running the whole length of the body of the machine, to which beater H, inside of rubber J, and fans M and S, are firmly attached; W, common provision for raising and lowering the shaft so as to regulate and set the parts thereto attached; X, driving wheel on shaft; Y, cheat-and-cockle discharge; Z, sliding gate to regulate the admission of air into fan.

Having given a general description of the machine, I will now describe more fully the rubber therein: As before stated, it consists of two parts, I and J, the former inclosing the latter so as to leave a sufficient space between the two to allow the grain to pass, but not so large as to prevent it from being well rubbed, while passing, by the revolving of the inside part. Each part is in form like a hollow frustum of a cone, having its lower end open and the top closed, but somewhat concave on the outside. The top of the outside part I has an opening therein to allow the grain to enter in between the two. The exterior surface of the inside part J is vertically fluted or ribbed, and the inside surface of the outside part I is also fluted in like manner as the former one. The inside part J is made fast to the main shaft through its vertical center, and the outside part I is placed over and around it so as to leave the grain-space between them, as before described. The latter remains fixed, while the former revolves within it. The construction of flutes or ribs and the openings in each part are shown in Figs. 2 and 3, the former being an inside end view of the outside part, and the latter an outside end view of the outside part.

Operation.

The grain enters through spout B, when all light matter in it is drawn off by an air-draft through right-hand spout E, the cheat and light grains of wheat coming out at Y, while the smut and dust are taken in at U into air-chamber, from whence they are discharged through fan S. The good wheat falls into beater H, wherein it is well beaten; thence into rubber I and J, wherein it is well rubbed, and all the pods of smut broken, which are

drawn off by fan M; thence (wheat) is discharged through spout P; but when it passes through the spout E from spout P the smut and dirt are again taken from it by an air-suction through spout E.

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

The arrangement herein shown of the small fan M, rubber I J, beater H, and the large fan S, when all constructed and operating substantially as shown, for the purpose set forth.

JESSE LANTZ.

Witnesses:
J. BOONE MCLURE,
S. M. HOWARD.