

S. SPANGLER.

Smut Machine.

No. 1,608.

Patented May 19, 1840.

Fig: 1.

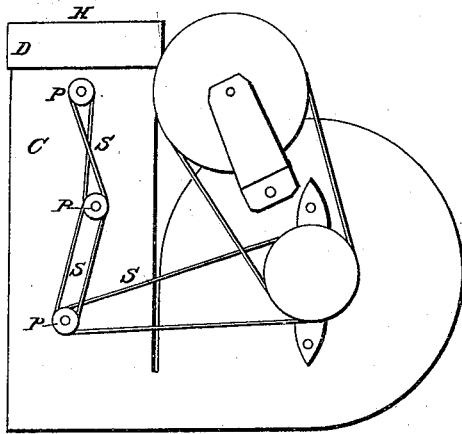


Fig: 2.

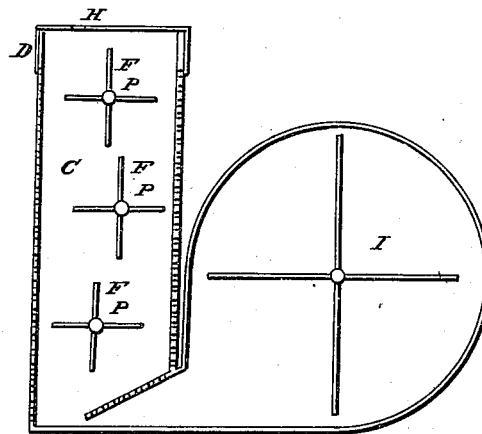


Fig: 3.

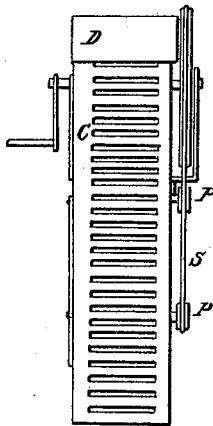
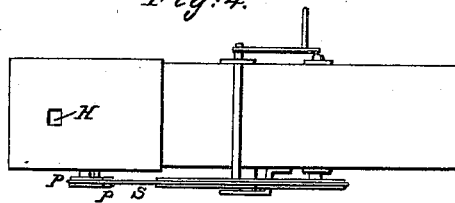


Fig: 4.



UNITED STATES PATENT OFFICE.

SAMUEL SPANGLER, OF STONEY CREEK TOWNSHIP, SOMERSET COUNTY, PENNSYLVANIA.

MACHINE FOR CLEANING GRAIN.

Specification of Letters Patent No. 1,608, dated May 19, 1840.

To all whom it may concern:

Be it known that I, SAMUEL SPANGLER, of the township of Stoney Creek, in the county of Somerset and State of Pennsylvania, have invented a new and useful Machine to Clean Grain by Separating the Smut Therefrom, called "Spangler's Improved Smut-Machine"; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings of the same, making part of this specification.

The nature of my invention consists in a certain new and useful arrangement of revolving fans in a perforated case for separating the smut from the grain and cleaning the same.

To enable others skilled in the art to which this appertains to make and use my invention I will proceed to describe its construction and operation.

Figure 1 is a view of the outside of the case containing the revolving fans and the bands and pulleys by which they are revolved—the frame to support said case and the axles of the fans, being omitted. Fig. 2 is a vertical section through the case and fans; Fig. 3, front view; Fig. 4, top view.

The frame containing and supporting the case and fans may be made of any convenient form, size, and strength. One of the following description will answer very well. It may consist of four sides, each side being separately framed. The two trusses on opposite sides may be framed eighteen inches from out to out, the posts four feet three inches long in the clear between the shoulders and $1\frac{1}{2}$ by 2 inches square. Each post is to have three cross-bars for the axles of the pulleys to run on. The first bar is 9 inches from the top of the post to the top of the bar. The second bar may be two feet one inch from the top of the post to the top of the bar and the third bar 9 inches from the lower end to the top of the bar. These bars are to be $1\frac{1}{2}$ by 2 inches square of good solid wood; the other sides the same length and framed ten inches wide in the clear and have a bar at the top and one seven inches from the bottom to the top of the bar and between these two other bars at equal distances.

The case C containing the revolving fans may be made in the following manner. The two broad sides may be made of sheet iron

punched. The narrow sides must likewise be of perforated sheet iron punched from the outside as full of holes as the iron will permit—not so large, however as to permit the grain to pass through the apertures and so that the inside may be rough to break the smut and the perforations for the escape of the dirt and to let in the air. The four sides when put together form a box ten by eighteen inches square. In this box there must be arranged two or more revolving fans or beaters F F consisting of two or more axles or shafts B $1\frac{1}{4}$ inches square seventeen and a half long to project out of the box four inches to receive pulleys P to be turned by straps S three inches wide passed around them. On these shafts inside the case there must be four or more fans F four on each shaft as the grain may require. These fans, or beaters, must be made of heavy sheet iron and be sixteen inches from out to out and $8\frac{1}{2}$ inches long, and they should have from six to nine hundred revolutions in a minute as the grain may require. The top of this box must be shut with a sheet iron cover D having a hole H in the center, of one and a half by three inches to let the grain pass into the machine through a hopper placed over said opening. There must be a common fan I at the lower end of the box where the wheat comes out to blow out the bran which is polished off the wheat.

Operation: The grain to be cleaned is put into the hopper—from whence it descends into the box, where it is struck by the revolving fans which throw the grain with great violence against the roughened sides of the case by which the smut is broken from the grain which being the lightest is driven through the perforations of the case into the atmosphere while the grain which is the heaviest descends and passes out of the lower side of the case.

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

The before described fans arranged one over the other in a perforated case so that they shall act both as beaters and fans, as herein set forth, in combination with the fan I in the enlarged part of the case.

SAMUEL SPANGLER.

Witnesses:

HENRY LITTLE,
DAVID CLARK.