

A. WULZE.

Smut Mill.

No. 27,182.

Patented Feb. 14, 1860.

Fig. 3.

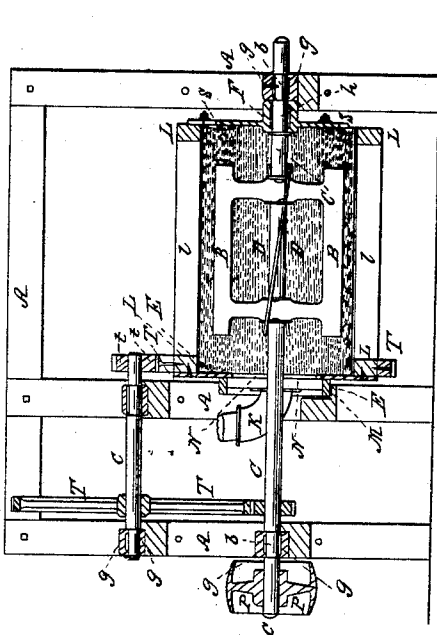


Fig. 2.

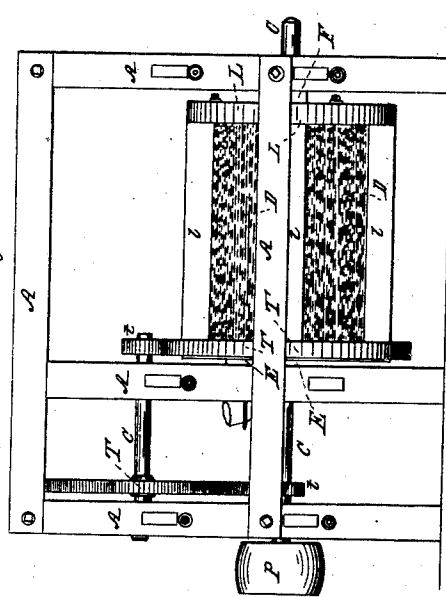


Fig. 5.

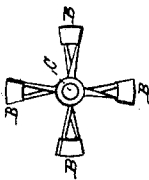


Fig. 6.

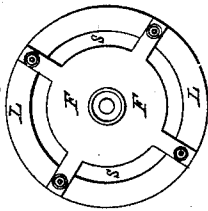


Fig. 4.

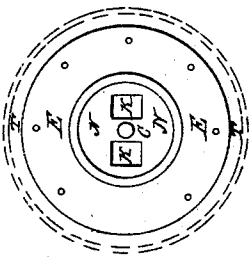
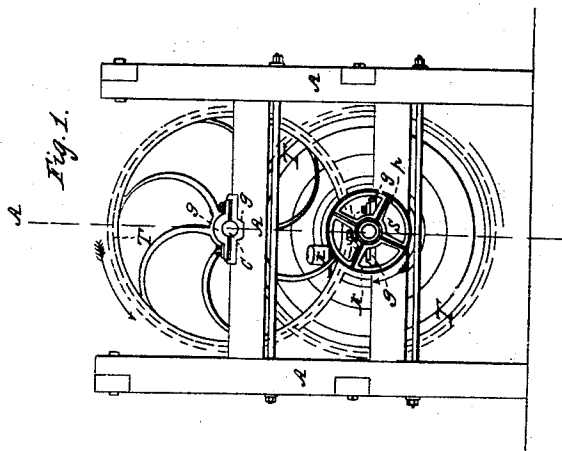


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

AUGUST WULZE, OF ST. LOUIS, MISSOURI.

SMUT-MILL.

Specification of Letters Patent No. 27,182, dated February 14, 1860.

To all whom it may concern:

Be it known that I, AUGUST WULZE, of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Smut-Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is an end elevation; Fig. 2 a side elevation. Fig. 3 is a longitudinal section through A' A'. Figs. 4, 5 and 6 are parts of the machine to be hereinafter explained.

This invention consists of a certain combination and arrangement of machinery for the purpose of cleaning and scouring grain, to separate it from all impurity and foreign matter.

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.

Similar letters of reference represent corresponding parts of the accompanying drawing.

A A A is the frame, which consists of a number of rectangular pieces, which are bolted together so as to form the style of frame shown on the drawing, or the frame may be made of such other form as circumstances may require, taking care to make it of sufficient strength to keep the machinery from shaking, or twisting itself out of line.

D is a scouring drum or cylinder which consists of perforated sheet iron bent in the form of a cylinder and secured between two heads T' L by means of rods *l*, *l*, passing from one head to the other, to which they are secured by means of screws. The head T' has cogs cut in its periphery so as to form a spur wheel into which the pinion *t'* meshes. The head L is so constructed as to leave an opening in the end of the cylinder near the periphery. Each one of these heads has a journal made on its outside about which the cylinder revolves, the said journals having their bearings in the frame at E. Through the scouring cylinder the shaft *c* is passed upon which a beater B, shown at Fig. 5, is fixed. The blades of this beater are set diagonal across its axis, so that they will not only throw the grain around in the cylinder, but will also cause it to escape out of or through the opening

s' s' in one of the heads of the cylinder—the head L as shown at Fig. 6. The perforations in the scouring cylinder are made with a flat end punch, upon a diagonal line drawn around the surface of the cylinder, so as to cause the grain to strike the burs on the inside at an angle, whereby a more efficient operation is obtained, and also a better result. The shaft *c* has its bearing in pillow blocks, bolted upon the frame as shown at *g*. The cylinder revolves about the shaft but not upon it, it having a separate and distinct bearing in the frame at *s* as before stated. The journal of the cylinder is made tight around the shaft *c* by means of a packing piece N, through which the receiving nozzle K, is made to pass, whereby the machine is charged with grain. Upon the shaft *c*, the pinion *t*, is fixed which meshes into the spur wheel T.

The operation of this machine, is as follows: The cylinder is first charged through the nozzle K. The said cylinder is then put in motion by the application of power to the pulley P, the motion being conveyed from it to the cylinder, through the medium of the piston *t*, spur wheel T, pinion *t'* and spur wheel T'. By the action of the beater in the inside of the cylinder all the cheat and smut and all other impurities and foreign matter are cleaned out of the wheat and blown out through the perforations in the cylinder, and the clean wheat will be discharged through the end of the cylinder; that is through the opening *s*. The cylinder is to be covered over with a box, which must communicate with a fan, so as to blow away the dust, smut and other light matter. The box or fan is not shown on the drawing, as they are no part of this invention.

The cylinder revolves in the same direction that the beater does, but with not so great a velocity. The blades of the beater must be set upon diagonal lines leading in the same direction that the diagonal lines do upon which the perforations are punched in the cylinder and the beater and cylinder must both move in the same direction whereby the grain will be discharged out of the open end of the cylinder.

I am aware that smut mills have been made with burred cylinders in combination with beaters inside of them, and that these have been so arranged as to move in differ-

ent, as well as in one direction. I do not therefore claim this combination or movement, as such; but

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

Arranging and operating the cylinder D and beater B with respect to each other, as and in the manner described, not *per se*, but
10 opening *s* in one end (as at Fig. 5) and with

its surface perforated with a flat punch, upon diagonal lines, and when the said beater is made with its blades set diagonally across its axis, in the manner disclosed for the purpose specified.

AUGUST WULZE.

Witnesses:

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