S. POTTS & A. PARSON.

Apparatus for Removing Germs and Fuzz from Grain

No. 213,774. Patented April 1, 1879.

Fig. 1

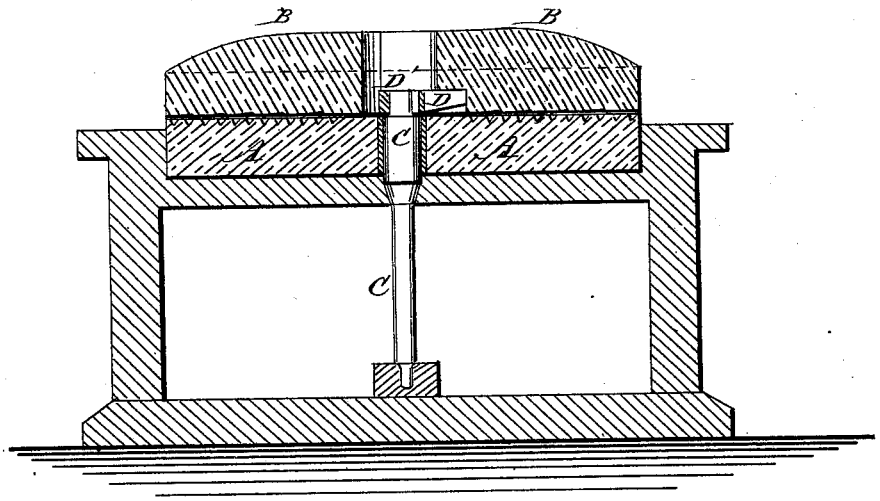


Fig. 2

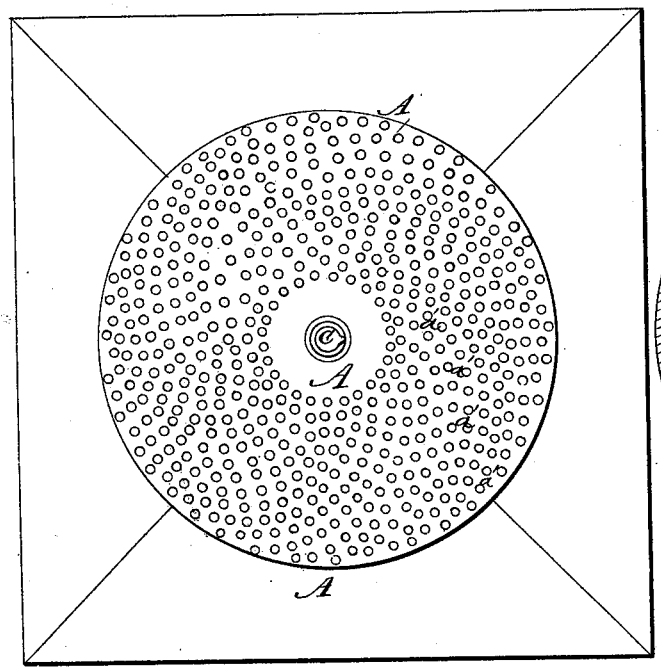
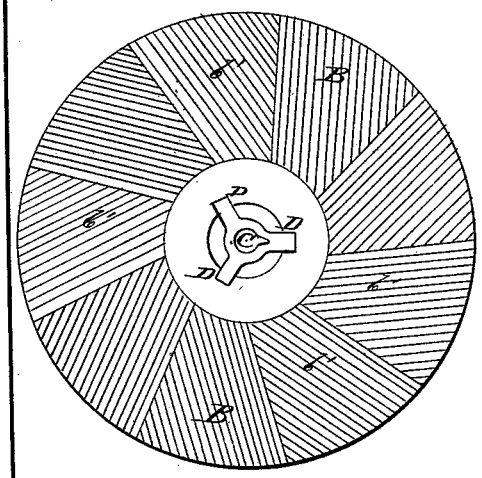


Fig. 3



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SAMUEL POTTS AND ARVID PARSON, OF SOMERSET, WISCONSIN.

IMPROVEMENT IN APPARATUS FOR REMOVING GERMS AND FUZZ FROM GRAIN.

Specification forming part of Letters Patent No. **213,774**, dated April 1, 1879; application filed August 21, 1878.

To all whom it may concern:

Be it known that we, SAMUEL POTTS and ARVID PARSON, of Somerset, county of St. Croix, State of Wisconsin, have invented a new and Improved Germ and Fuzz Removing Mill, of which the following is a specification:

Figure 1 is a vertical section of a run of stones, illustrating our invention. Fig. 2 is a face view of the bed-stone. Fig. 3 is a face view of the top stone or runner.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved mill for removing the germ and the fuzz from the kernels of wheat without reducing the kernels or making any flour, which will make flour better in quality and more in quantity than when the flour is made with the germ and fuzz still upon the kernels, and which will lessen the amount of low-grade flour, the principal impurities being removed before the kernels are ground.

The invention will first be described in connection with the drawings, and then pointed out in the claim.

A represents the stationary or bed stone, and B represents the upper stone or runner. The stones A B are made of the stones or rock known as "hard heads" or "bowlders," which stone has an open texture, but when faced down and polished it becomes very smooth, and at the same time retains a grit or a cutting quality. These qualities make it very desirable for this use, as they adapt it to receive our peculiar dress. Any other suitable material may, however, be employed.

In the face of the bed-stone A are formed holes a', of a depth equal to about one-third the length of a kernel of wheat, and of such a size that the kernels of wheat will readily enter them endwise. The holes a' are bored as close together as is possible without breaking the wall between them, and they are arranged upon lines curved from the eye of the stone in about the direction the kernels would take in passing outward by the centrifugal power of the stones. The face of the runner B is provided with an ordinary dress, b'.

C is the spindle, which passes up through and revolves in a bushing in the eye of the bed-stone A. To the upper end of the spindle C is attached a three-armed driver, D, the ends of the arms of which enter notches in the stone B at the lower end of its eye. By this arrangement the runner B, when properly adjusted, will be carried around with its face exactly parallel with the face of the bed-stone A.

The runner B should be adjusted at such a distance from the bed-stone A that the kernels of wheat, when upon their sides, will be untouched by the runner. The spindle C should be driven by gear-wheels, as the pull of a belt tends to draw the said spindle out of a vertical position, and thus tends to draw the runner out of true.

With this construction, as the grain passes through the space between the stones A B the ends of the kernels will drop into the holes a', tilting them into such a position that the germ will be cut from one end of the kernels and the fuzz from the other end without making or wasting any flour.

The germs and fuzz are separated from the kernels by a revolving screen covered with wire-cloth of a suitable fineness of mesh, and which should be provided with an air-blast to carry off such particles of bran as will not pass through the screen. The wheat is then ground or made into flour in the usual way.

When the wheat is ground with the germ and the fuzz still upon the kernels, the germ becomes crushed, and gives a gloss to the stones, causing them to heat, and at the same time injures the flour. The fuzz also, being finer than the flour, passes through the screen or bolt with it, producing discoloration and injury. All of these injurious results are avoided by removing the germ and fuzz from the kernels before grinding them.

It may be observed that the kernels, in passing from the center to the circumference of the stones, turn end over end, so that the im-

purities will be removed from the ends of the kernels without injuring or scratching the bran fibers. The bran fibers, being thus left intact, will not be pulverized by the reduction or grinding stones.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

A mill whose top stone, B, is rotated by a spindle, C, and bottom stone held fixed in a bed, the former being provided with dress b', and the latter with holes a^2, equal in depth to about one-third the length of the grain, as and for the purpose specified.

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Witnesses:
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