O. J. BUTTS.

MACHINE FOR BRUSHING RICE.

No. 18,496. Patented Oct. 27, 1857.

Fig. 1.

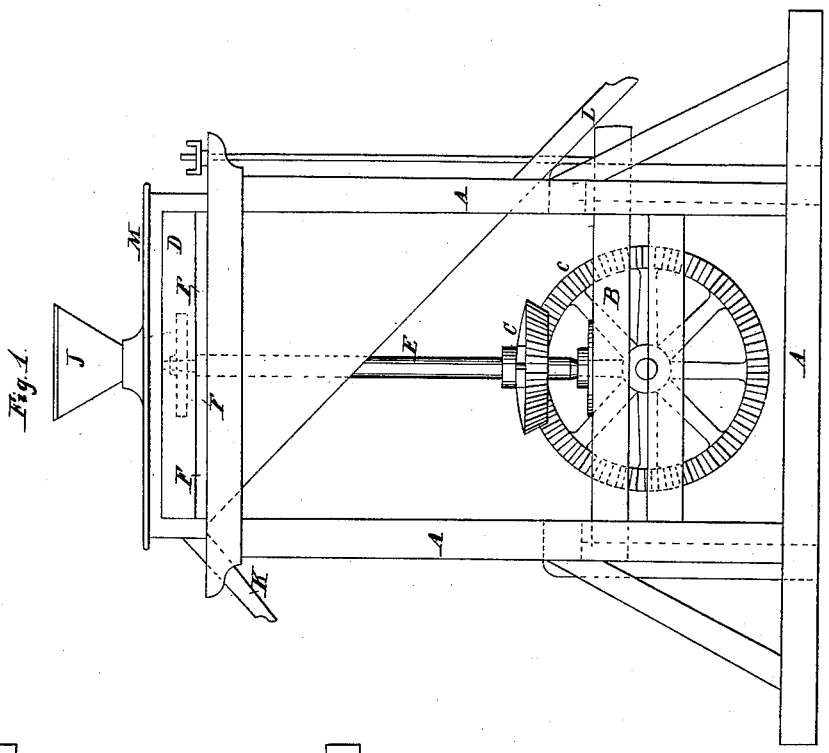


Fig. 3.

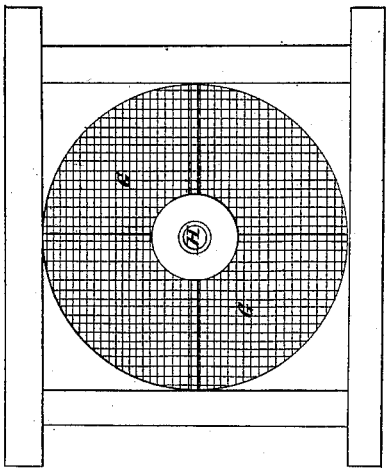


Fig. 2

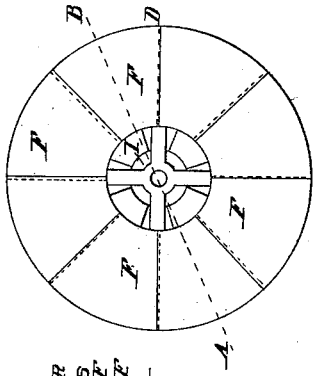
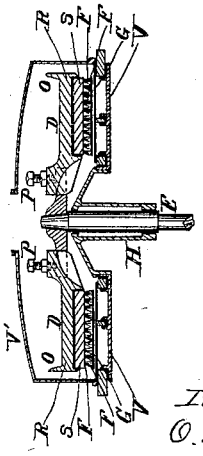


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

O. J. BUTTS, OF GEORGETOWN, SOUTH CAROLINA.

MACHINE FOR BRUSHING RICE.

Specification of Letters Patent No. 18,496, dated October 27, 1857.

To all whom it may concern:

Be it known that I, OLIVER J. BUTTS, of the town of Georgetown, State of South Carolina, have invented a new and useful Machine for Brushing Rice; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view geared ready for operation; Fig. 2 a bottom view of the runner or brush; Fig. 3 a top view of wire bed upon which the rice is brushed; and Fig. 4 a sectional view of runner or brush.

In Fig. 1, A A A represents the frame—B the bridge-tree—C C the driving wheel and pinion—E the spindle, by which the brush D is driven—F F F the wool and basils for brushing the rice, working upon wire beds as represented in Figs. 2 and 3—L the flour spout—K the clean rice spout—*m* the curb—and J the hopper.

In Fig. 2, F F F F represents the wool and basils—I the rhine or driver which is secured upon the spindle E in Fig. 1, for driving the brush D.

In Fig. 3 G G represents the wire bed through which the flour passes and is delivered from flour spout L in Fig. 1—H the stuffing box through which the spindle E in Fig. 1 passes—and K the clean rice spout.

In Fig. 4, R R represents the cast iron plate with its facings of wood S S—F F F F wool and basils which are secured to the facings of wood S S—G G the wire bed—H the stuffing box with its arms V V—E the spindle—D D the runner or brush with flanges O O for preventing the rice from flying on the top of brush—P P set bolts for adjusting brush upon wire bed—*m* the curb—I the rhine or driver.

The frame work of this machine is constructed of wood. The brush D is a cast iron plate faced on the bottom side with wood, to which the wool and basils are attached by tacks. The wool being first cut into segments as represented in Fig. 2 is tacked, on one edge of the same, upon the wooden facings of the runner and closely around its eye—and the basils being then also cut into segments are tacked in like manner upon the wooden facings over the wool—which forms a soft cushion for brushing the rice. The stuffing box H is a cast iron center or spider with four or more arms the upper edge of which is faced with wood—the boss or center of spider forming the stuffing box. The wire being tacked to the upper edge of these arms forms the wire bed G, G.

The mode of operation is as follows: The brush is driven at the rate of 100 revolutions per minute. The rice is fed through the eye or center of brush, the centrifugal force of which throws it upon the wire bed where it receives its polish from the friction occasioned by the revolutions of the skins upon the same—the flour at the same time passing through the wire bed into the flour spout. The chief characteristic of this machine is the use of the flat wire bed and runner instead of the ordinary cylinder brush. By the use of a flat surface the rice is made to pass upon its side, through the brush, instead of the end as is, in a great measure the case in the cylinder brush—thus preventing it in a much greater degree from breakage. The advantage of the basils is that they prevent the wool from becoming clogged with flour, and in presenting a more even and firmer surface gives the rice a higher and more uniform polish—at the same time being more durable than the wool by itself. By attaching the wool and basils to the runner only around the eye and at one edge of each segment they are made to drag loosely upon the wire bed, and the rice is thereby kept in constant contact with them, which could not be so effectually done if the segments were attached to the runner on all sides. The object in attaching the wool and basils closely to the eye of the runner is to prevent the rice, when thrown into the center, from passing in between the skins instead of under them, upon the wire bed.

This machine is constructed upon the same principle as that of a common grist or flour mill and is driven either by steam or water power. It takes less power than the old cylinder brush and gives the rice a much higher polish with no breakage whatever.

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

The application of a flat brush for brushing rice consisting of a flat runner dressed with sheep skins and basils in connection with a wire bed constructed and operating as above described.

O. J. BUTTS.

Signed in the presence of—
P. BACOT. ALLSTON,
C. J. COE.