J. Q. ADAMS.

Millstone Exhaust Apparatus.

No. 213,963. Patented April 8, 1879.

Fig: 1.

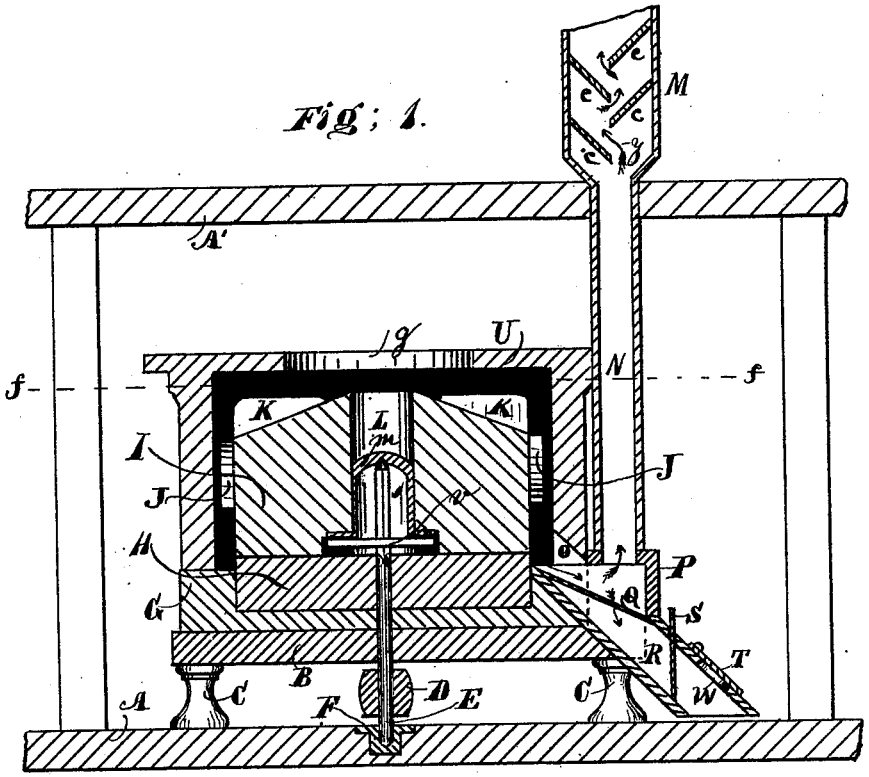
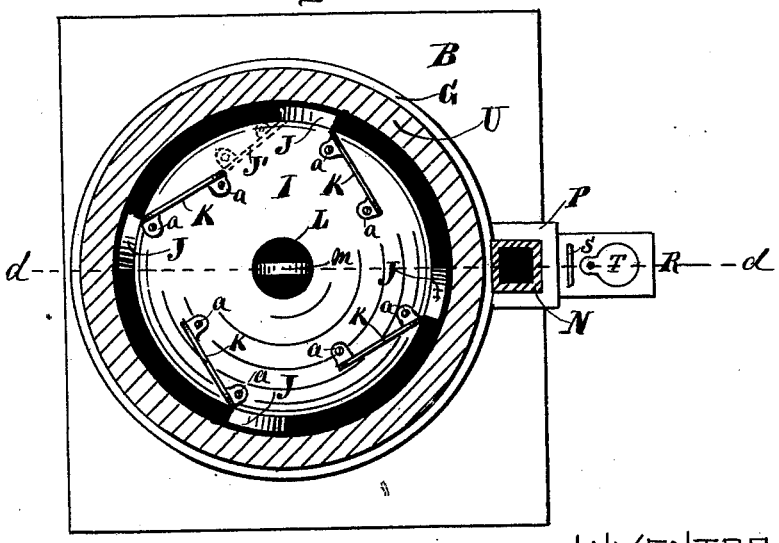


Fig: 2.



WITNESSES;

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UNITED STATES PATENT OFFICE.

JOHN Q. ADAMS, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN MILLSTONE-EXHAUST APPARATUS.

Specification forming part of Letters Patent No. **213,963**, dated April 8, 1879; application filed July 10, 1878.

To all whom it may concern:

Be it known that I, JOHN Q. ADAMS, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Delivery-Spout for Millstone-Curbs, of which the following is a description, reference being had to the accompanying drawings.

My invention relates to certain improvements in the construction and arrangement of parts in a delivery-spout of millstone-curbs.

The object of my invention is to provide the delivery-spout of a millstone-curb with an enlarged chamber outside of the curb, a screen, a blast-pipe, a gate, and a hand-hole, whereby the meal, as it leaves the curb, is distributed and conveyed away after being subjected to the action of an air-blast in the enlarged chamber, where the impurities are carried up through the blast-pipe, and the meal carried through a screen to the delivery-spout, where it can be inspected in its passage to the conveyers or receiving-bins.

My invention consists of the new construction and arrangement of parts and in the new combination of devices, as will be hereinafter fully set forth and described.

In the accompanying drawings, in which like letters of reference in the different figures indicate like parts, Figure 1 represents a vertical section of a millstone and curb embodying my invention, taken at the line *d d* of Fig. 2. Fig. 2 is a plan view of the same with the top of the curb removed at the line *f f* of Fig. 1.

A represents the floor below, and A′ the floor above, the millstone. G represents the bed-plate, mounted on the frame or base B and supported by the legs C C. The bed-stone H and the running stone I are mounted and operated in the usual manner—*i. e.*, the bed-stone H is embedded in the bed-plate G, and the running stone I is mounted on the spindle E and revolved by the pulley D and driver *v*, and over all is placed the curb U, as shown.

The running stone I is provided with a series of fan-wings, K K, that are secured by screws *a* on its back. Said wings do not radiate from the eye of the stone, but are perpendicular and set at an angle similar to that of the furrows in the face of said stone, for the purpose of drawing the air in at the opening *g* and forcing it out at the aperture O. These wings may be reversed, as shown by the dotted lines at J″, Fig. 2, if the stone I should run in an opposite direction.

On the periphery of the running stone are also secured wings J, which project outward on a straight line radiating from the eye of the stone, and extend downward spirally about one-half the depth of the stone. Said wings are also made reversible.

As the stone I revolves the wings K and J, moving around inside of the curb, force the air that enters at the opening *g* of the curb downward and out of the curb at the exit O into the enlarged chamber P, carrying with it the moist vapor and fine flour arising from grinding, as will be hereinafter described.

The delivery-spout R connects the space between the curb and stone with a conveyer below and the blast-pipe N above. Said spout is provided with a gate, S, for regulating the flow of air and shutting off the blast when the hand-hole W is opened, for the purpose of testing the meal. The hand-hole W is provided with a cover, T, for closing the spout after the meal has been tested.

The enlarged chamber P connects the delivery-spout with the space between the stone and curb, and is provided with a screen, Q, for the purpose of distributing the meal, so that every particle is subjected to the action of the blast, thereby removing in a great measure the heat, moisture, and offensive odor attending the grinding of moist or musty wheat and purifying the meal. The enlarged chamber P is also provided with an air-blast pipe, N, that extends upward. Said pipe may be provided with an enlarged chamber, M, and also provided with inclined partitions or shelves *c c*, as shown. The blast, after leaving the curb through the aperture or exit O, strikes the screen Q, where part of the blast passes through with the distributed meal and part is forced up the pipe N, carrying with it fine flour, dust, and moist vapor. The fine particles of flour, as they are carried up said spout, strike against the inclined shelves *c c*, and are then returned down the pipe to the

chamber P, while the damp vapor and offensive odors are carried with the blast upward in the direction of the arrow *y*.

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

1. In a millstone-exhaust apparatus, the delivery-spout R, having the screen Q, the gate S, and hand-hole W, with cover T, whereby the meal is distributed, examined, and conveyed away after being subjected to the action of the air-blast, substantially as shown and described.

2. In combination with the delivery-spout R, the enlarged chamber P, with screen Q, and the blast-pipe N, with inclined shelves *c c*, in the manner substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN Q. ADAMS.

Witnesses:

E. O. FRINK,

H. H. FULTON.