

L. RACINE.
Millstone Exhaust.

No. 20,818.

Patented July 6 1858.

Fig: 1.

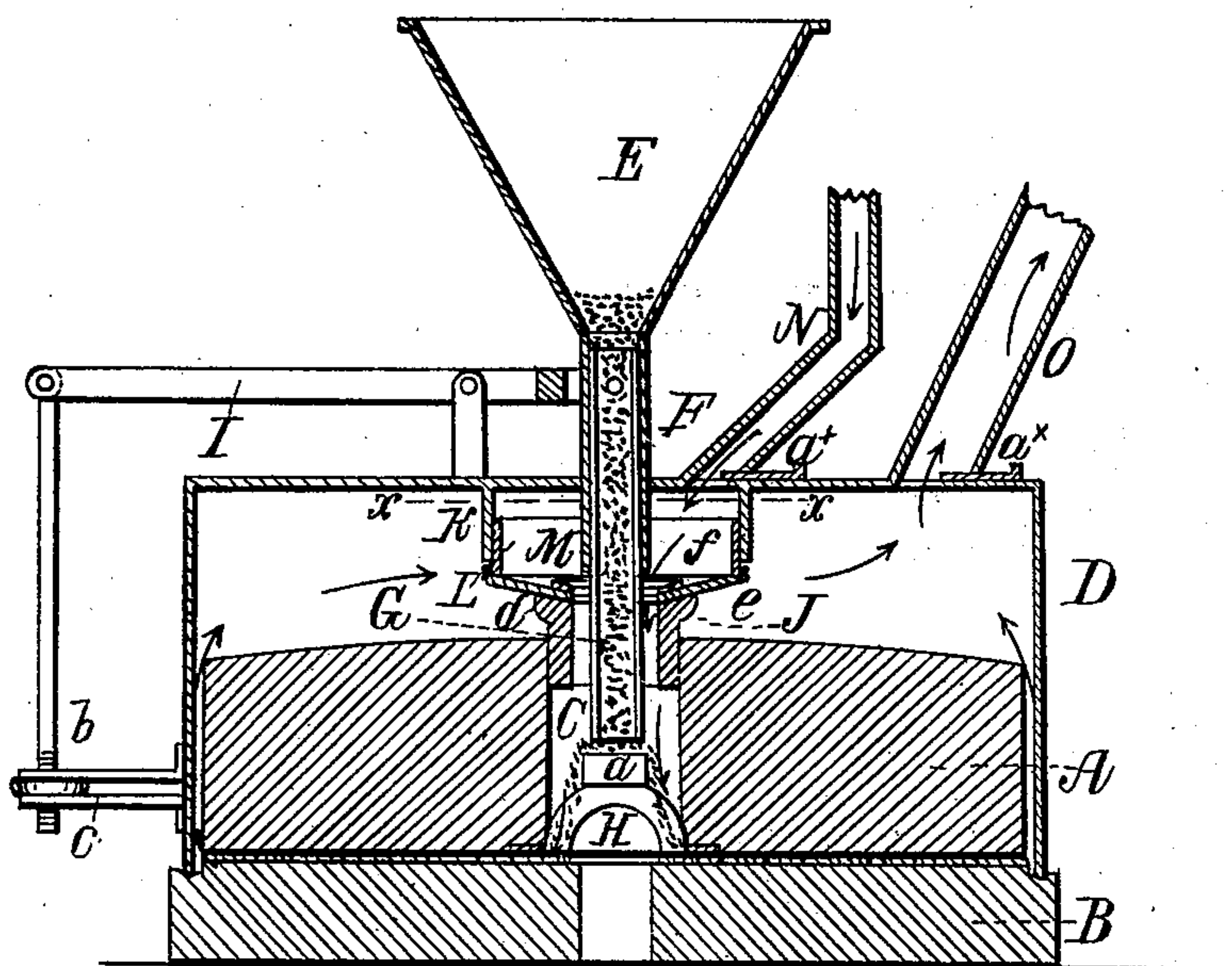
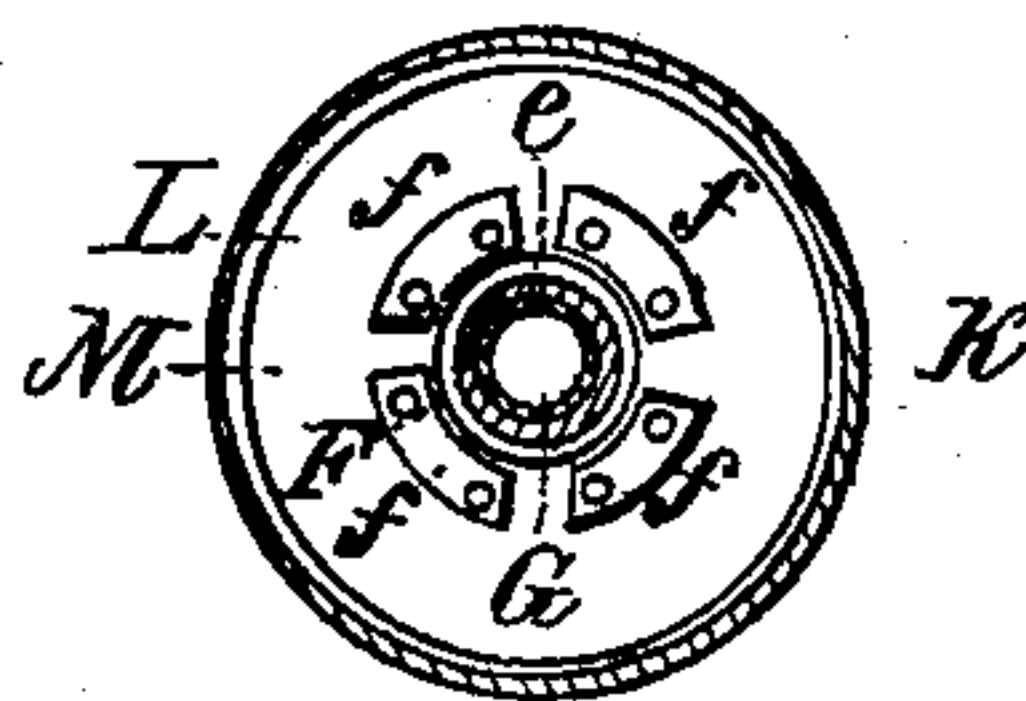


Fig: 2.



UNITED STATES PATENT OFFICE.

L. RACINE, OF JOLIET, ILLINOIS.

VENTILATING MILLSTONES.

Specification of Letters Patent No. 20,818, dated July 6, 1858.

To all whom it may concern:

Be it known that I, L. RACINE, of Joliet, in the county of Will and State of Illinois, have invented a new and useful Improvement in Ventilating Millstones; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical central section of a pair of mill stones with my improvement applied to them. Fig. 2, is a horizontal section of the improvement taken in the line (x) (x) Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in having the eye of the runner or upper stone so inclosed that while the grain is readily admitted into the eye a perfectly air tight blast passage is formed through the eye of the stone, between the stones, and through the curb, the blast by this arrangement being rendered much more efficient than by any of the ventilating devices with which I am acquainted.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents the runner, and B, the bed-stone; C, is the eye on the runner, and D, is the curb which encompasses the runner. These parts being of usual construction do not require a minute description.

E, is hopper which is fitted in the curb D. This hopper may be of inverted conical form and its lower end terminates in a tube F, which passes through the curb D, and projects a short distance below it.

G, is a tube the upper end of which is fitted in the tube F. The lower end of this tube passes down within the eye C, and nearly reaches a cap or saucer (a) which is placed on the bail H, the distance between the lower end of the tube G, and the saucer (a) may be varied as occasion may require by adjusting a lever I, which is connected to its upper end, said lever being adjusted by means of a screw rod (b) and nut (c).

In the upper end of the eye C, a thimble J, is placed or fitted permanently. This thimble may be constructed of hard wood or metal and its upper end projects a short distance above the upper surface of the runner A. The upper end of the thimble at its outer side has a flanch (d) formed on it in

order to increase its thickness without contracting its bore or inner diameter.

To the under side of the top of the curb D, an annular flanch K, is secured or attached. This flanch is concentric with the tube F, but is considerably larger in diameter than said tube. The flanch K, receives a rim L, which has a bottom M, of leather or other flexible substance, said bottom having a circular hole (e) at its center to allow the tube G to pass through. The leather M, has weights (f) attached to it, said weights causing the edges of the leather or bottom M, around the hole (e) to rest firmly on the upper end of the flanch (d) of the thimble.

N, is a tube or spout which communicates with the eye C, through the thimble J, and the chamber formed by the flanch K and rim L. The outer end of this tube or spout communicates with the box of a fan. O, is a tube or spout which is connected with the curb D, above the runner A. The outer end of this tube communicates with the box of a suction fan.

The operation is as follows: The hopper E, is filled with grain which is fed into the eye through the tube G, the feed being regulated by adjusting said tube, that is, raising or lowering it so that its lower end may be at the acquired distance above the saucer (a).

The fan, which is connected with the tube or spout N, forces a blast down through the eye C, between the stones A, B, and up around the edge of the runner A into the curb D, and up through the tube or spout O, see arrows. The blast being accelerated or augmented by the suction fan at the end of tube or spout O. The eye C, it will be seen is inclosed air-tight so that an effectual blast is forced between the stones a perfect blast passage being obtained. The leather or bottom M of the flanch is pressed or kept snugly down on the upper end of the thimble by means of two weights (f) and the force of the blast generated by the fans. The rim L, may also be adjusted or drawn down as the stones wear, so that the proper relative position of the leather M, and thimble J, may always be maintained.

By this arrangement the stones are not only kept perfectly cool, and also moisture absorbed, but the fine flour dust which usually escapes and is wasted or lost may be collected and preserved by having the tube or

spout enter a chamber having sides formed of bunting or other porous cloth which will allow the air to escape but not the dust.

I would remark that the tubes or spouts N,
5 O, may be provided with slides (a^x) (a^x) to regulate the strength of the blast.

I am aware that a blast of air has been forced through or between mill stones in order to keep them in a cool state, and to
10 absorb the moisture which the grain may contain and I therefore do not claim broadly forcing a blast of air between the stones, but

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is—

The arrangement and combination of the blast pipe N, curb D, flanch K, rim L, flexible bottom M, tube G, and exhaust pipe O, as and for the purposes herein set forth.

LEWIN RACINE.

Witnesses:

O. L. HAWLEY,
THOS. Q. HILDEBRANT.