

(No Model.)

R. W. WELCH.

ROLLER MILL.

No. 297,890.

Patented Apr. 29, 1884.

Fig. 1.

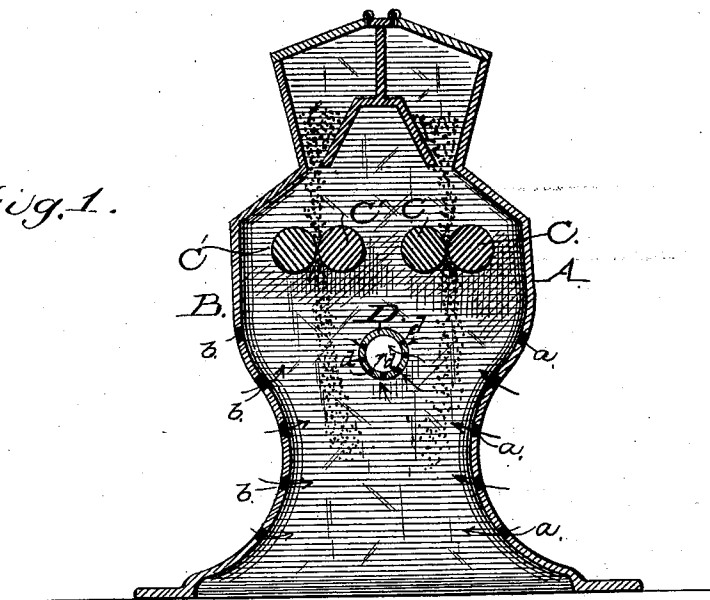
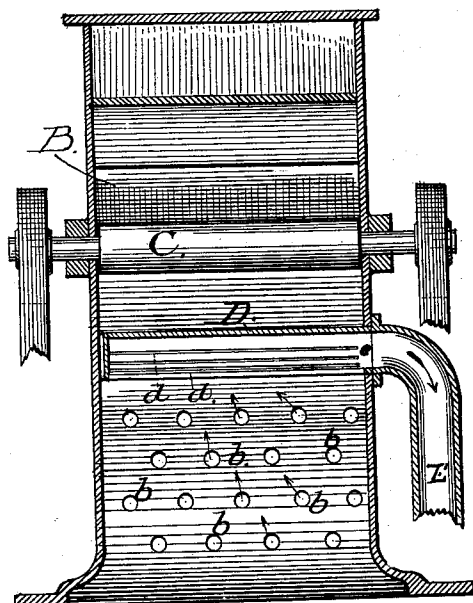


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROSIA W. WELCH, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO
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ROLLER-MILL.

SPECIFICATION forming part of Letters Patent No. 297,890, dated April 29, 1884.

Application filed February 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROSIA W. WELCH, of Baltimore, in the county of Baltimore and State of Maryland, have invented certain Improvements in Roller-Mills; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical central cross-sectional view of a roller-mill provided with my improvements. Fig. 2 is a vertical central sectional view on a plane at right angles to the plane of Fig. 1.

My invention relates to the purification of the meal by air-currents immediately after the crushing has taken place, and is an improvement on the devices shown in the patent to C. M. Roberts, No. 193,039, dated July 10, 1877; and my invention consists in the details of construction and combination of parts, as herein-after fully described, and specifically set out in the claim, whereby I provide a suitably-constructed housing or casing for roller-mills to practice the process of purifying the meal by means of air-currents immediately after the grain is ground or crushed, as is set out in the second claim of the said Roberts patent referred to.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A B are the sides of the casing, in which are mounted the two pairs of rollers C C', in the usual manner. Across the casing, in a central line parallel to and below the rollers, I fix a tube or drum, D, having longitudinal slots *d d*, and an open end, *e*, connecting with a pipe, E, in which a suction

is produced by a fan or similar device. The pipe E leads to a dust-catcher, or to any desired place where it is desired to carry the light fluffy material which becomes separated from the meal. The sides of the housing are provided with numerous openings or perforations, *b b*, for the ingress of air, and the meal, in falling from the rolls, drops in a line between the sides provided with the perforations *b b* and the central slotted pipe, D. The slot *d* in the center of the bottom of pipe D renders it self-cleaning. The exhaust through pipe E draws a current of air through openings *b* across the path of the falling meal into slotted tube D, and this current of air, properly regulated, traverses the path of the falling meal and picks up the light fluffy "specks" and "fuzz," which constitute the chief obstacle to the purification of flour and middlings.

I am aware it is not broadly new to introduce an air-blast at or near the rolls in a roller-mill casing, and hence I confine and limit my invention to the construction and arrangement set out in the claim.

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

The rolls C C' and their casing, having the lower portions of the sides perforated at *b b*, in combination with the central interior tube, D, arranged below the rolls, and provided with slots *d d*, the lower central slot rendering said tube self-clearing, and the exhaust-pipe E, all constructed, arranged, and operated as set forth.

ROSIA W. WELCH.

Witnesses:

WM. CAMMACK,
H. A. HALL.