

Geo. W. Eggleston's Impd. Mill Stone Curb.

Fig. 1.

PATENTED JUL 18 1871

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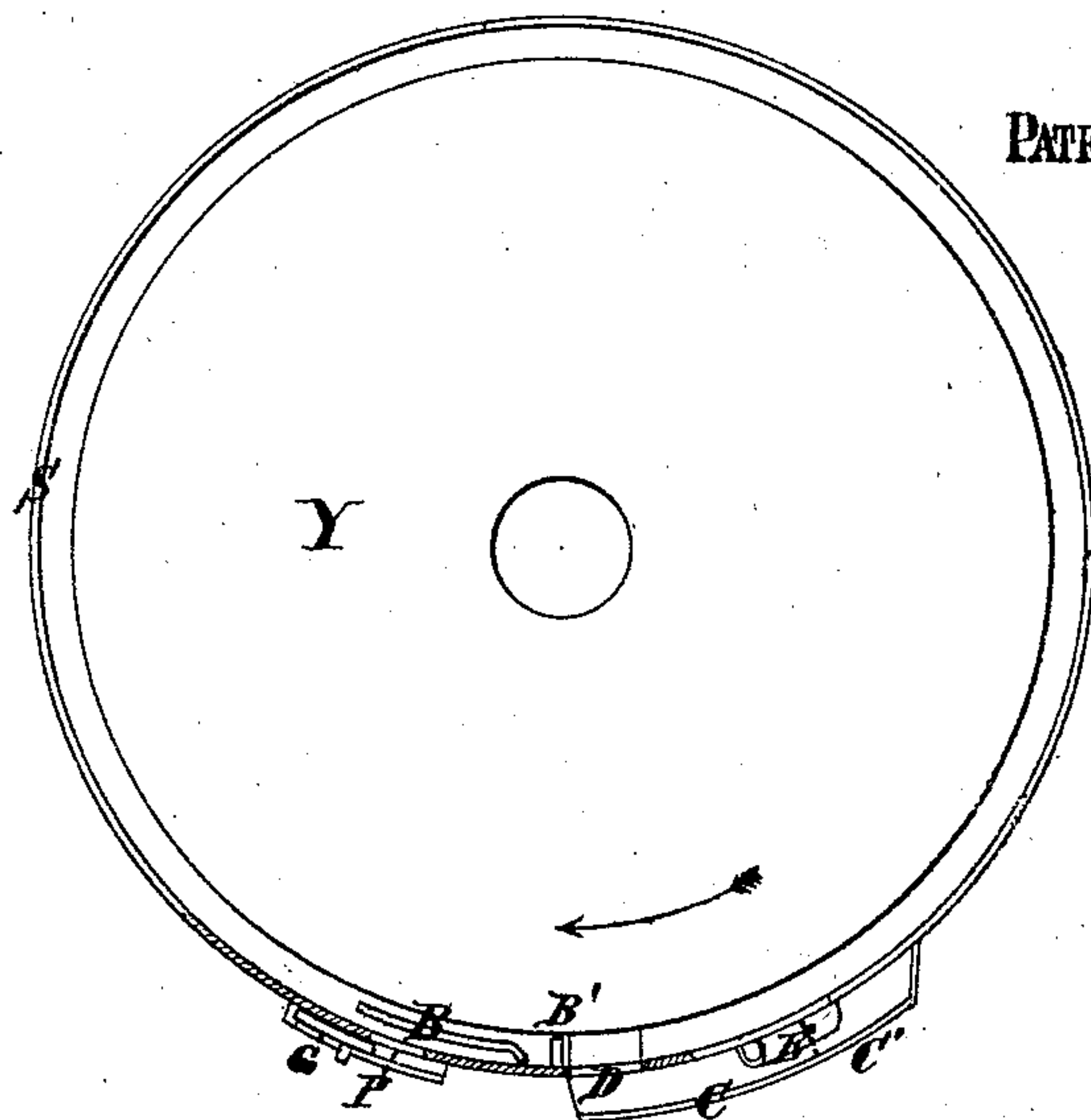


Fig. 4.

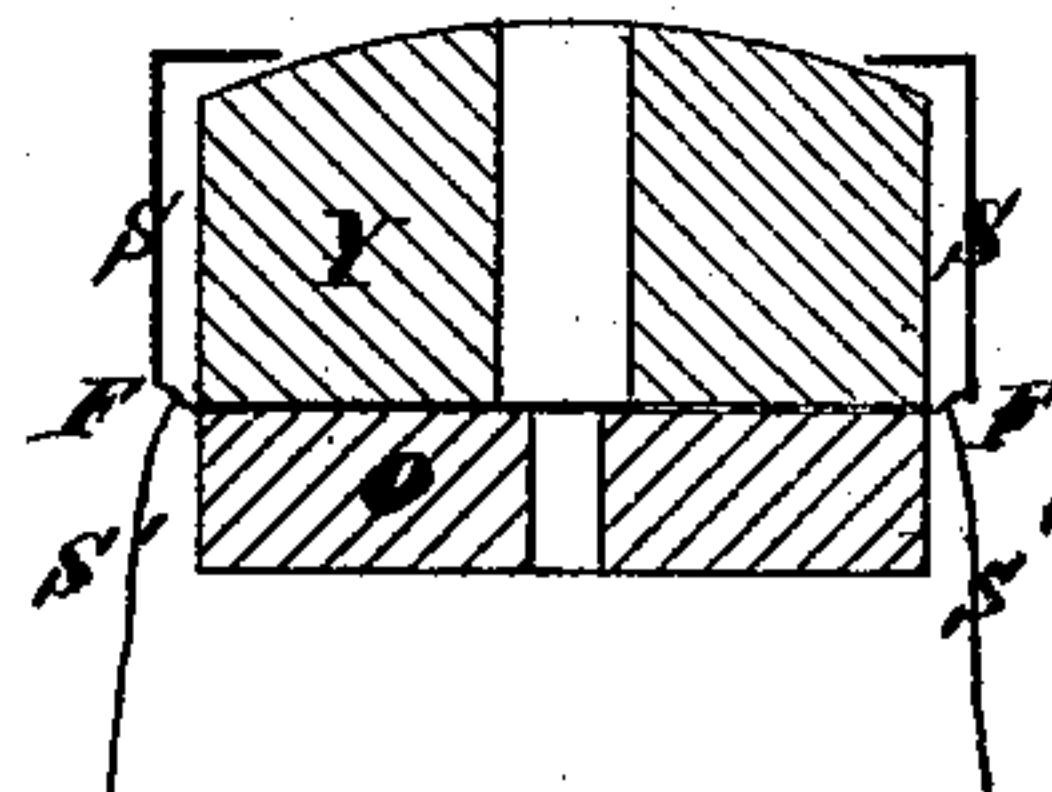


Fig. 2.

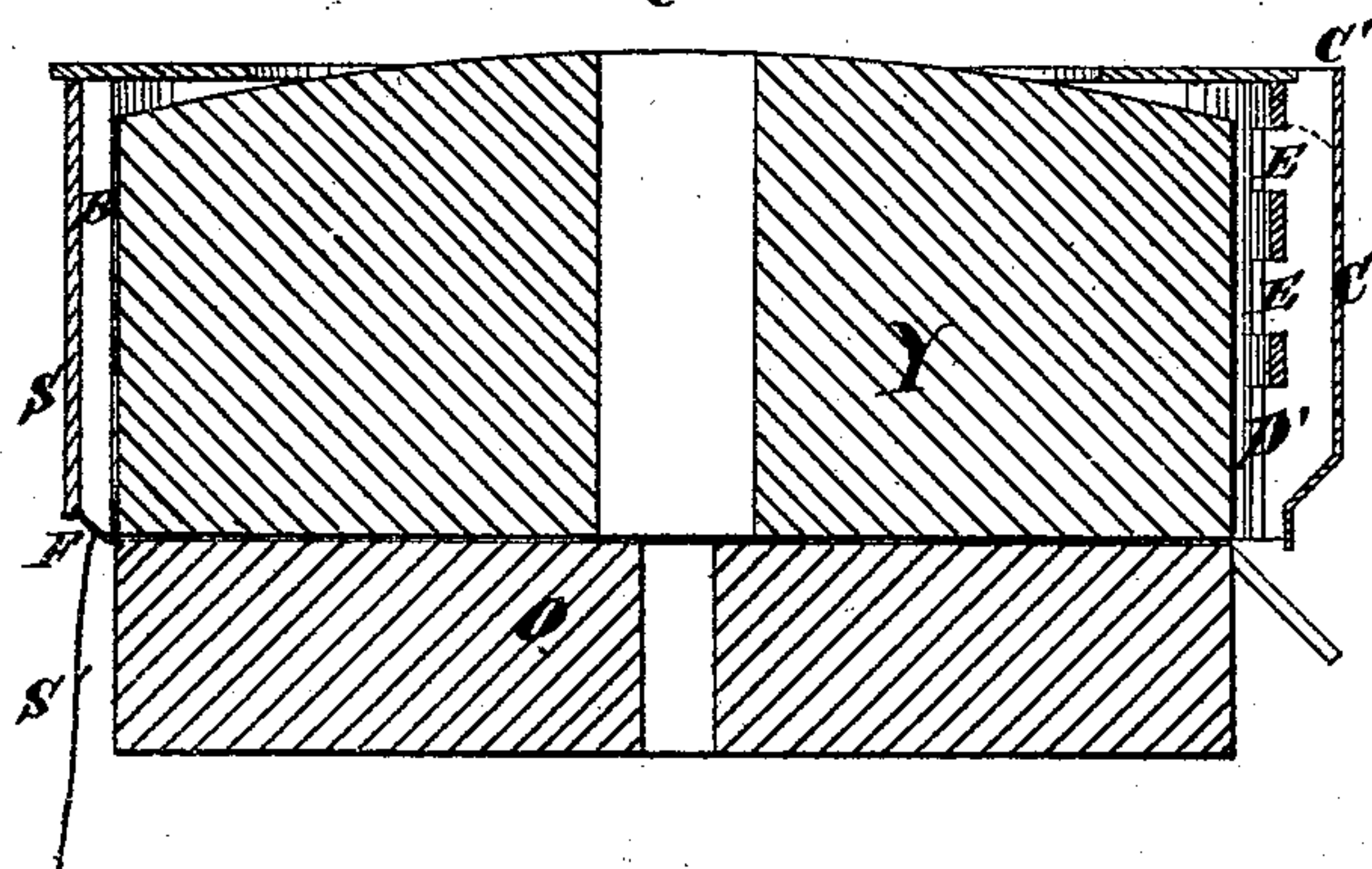
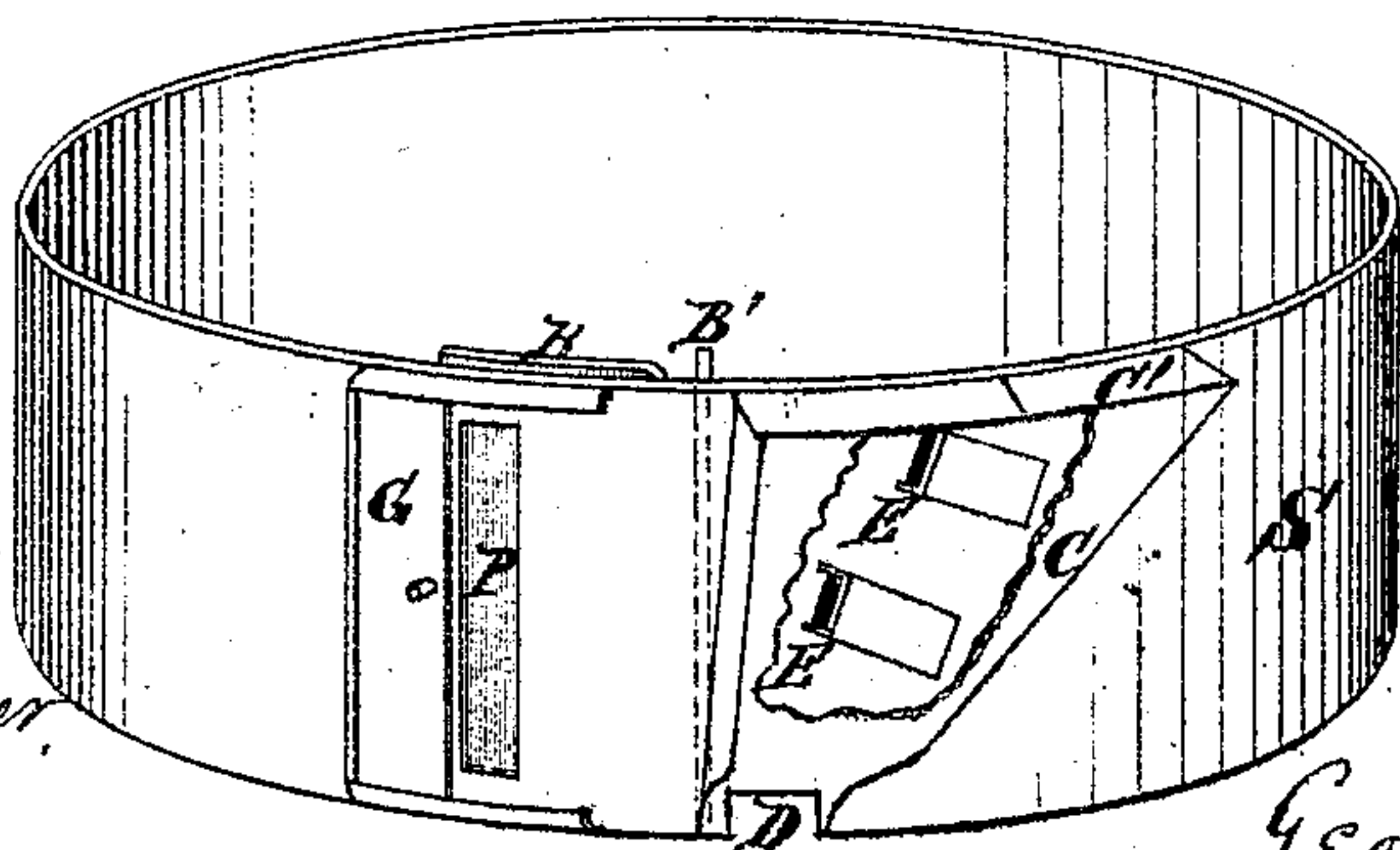


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE W. EGGLESTON, OF MONROE COUNTY, NEW YORK.

IMPROVEMENT IN MILLSTONE-CURBS.

Specification forming part of Letters Patent No. 117,160, dated July 18, 1871.

To all whom it may concern:

Be it known that I, GEORGE W. EGGLESTON, of the county of Monroe and State of New York, have invented certain new and useful Improvements in Millstone-Curbs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a top view with the deck of the curb removed. Fig. 2 is a vertical section of the curb with the stones inclosed. Fig. 3 is a perspective view of the curb with the deck removed. Fig. 4 is a vertical section taken at right angles to that shown in Fig. 2.

Similar letters of reference denote corresponding parts in all the figures.

The invention relates to that class of curbs commonly known as ventilating-curbs, so called because they have suitably-arranged inlet and outlet-openings, through which air is caused to circulate in the annular space between the runner and the curb for the purpose of partially cooling the meal and of carrying off the vapors given off during the process of grinding. It has been found, in practice, that the current of air thus produced within the curb carries with it a portion of the finest of the meal and discharges it through the outlet-openings, thus wasting it; and to obviate this difficulty the first part of my invention consists in combining with the curb a supplemental shell or chamber in which the outlets terminate, and from which the meal thus collected is delivered to the throat or spout through which the main body of the meal is conducted from the stone. The second part of the invention consists in combining with the inlet-passage a stationary guard or diaphragm, forming a vacuum-chamber, and an adjustable slide or damper for controlling the current of air. The third part of the invention consists in combining with the inlet-passage and the adjustable slide a stationary stop or abutment, which checks the movement of the current of air. The invention further consists in certain details of construction, which will be fully explained.

In the drawing, S represents the body of the curb, and S² the top or deck, these parts being made ordinarily of wood and of any usual or desired construction. F is the meal-guide or carrier, made of metal, and attached to the lower edge of the curb and forming an extension there-

of. This carrier is, by preference, made concave in form, its lower and inner edge extending below the furrows in the bed-stone; thus it is made to serve as a conduct for the meal after it (the meal) leaves the grinding-faces of the stones; and as its surface can be made much smoother than a wooden one can, and as its circular form permits the meal to pass readily over it, all liability to clogging is avoided. S¹ are wires or other suitable conductors running from the carrier to the ground, to carry off the electricity evolved by friction during the process of grinding. D represents the throat or spout through which the meal is delivered after being ground, this being of any usual or desired construction. P is the inlet-passage through the curb. G is a sliding door, mounted in suitable lips or grooved flanges at top and bottom, so that it can slide freely for the purpose of diminishing the size of the opening through the inlet P. B is a wing or guard, rigidly secured to the inner side of the curb in front of the inlet and extending a short distance past it. The rear or free end of the guard is bent inward so that it nearly touches the stone Y, as in Fig. 1, thus forming a vacuum-chamber about the inlet and assisting materially in creating the draught. The form in which the guard is bent may not be essential—that is, it may, when preferred, extend diagonally across the annular space about the stone instead of lying nearly parallel, as shown in the drawing. B' is a stop or abutment, extending nearly or quite from the top to the bottom of the curb. It is attached to the curb, and fills, as nearly as may be practicable, the space between it and the stone, for the purpose of effectually checking the current of air which is carried around with the stone. E E are the outlets, located in front of the stop B'. C is a supplemental case or shell attached to the outside of the curb and inclosing the open ends of the outlets. In Fig. 3 a portion of this shell is broken away to show the outlets.

Shell C is triangular in form, and is, in practice, closed upon all sides except at two points—that is, at its lower corner, as at D', Fig. 2, where it communicates with the throat D and conducting-spout, and at its front upper corner, as at C', same figure. This latter aperture may be provided with a hinged or sliding lid.

As the stone revolves in the direction indicated by the arrow in Fig. 1, air is drawn in through

the inlet P and carried around until it meets the stop B', when it is discharged through the outlet E and throat D, the fine meal, which is taken up and carried through outlets E, being stopped by shell C and delivered to the spout through the openings D'. I am aware that curbs have been constructed with inwardly-projecting adjustable flanges or wings, which served as dampers to control the amount of air which is admitted; but they are very imperfect in their operation, so far as creating a draught is concerned, because when they are partially closed they offer little or no obstruction to the passage of the air around the curb with the stone, and, as the air within the curb is more rarefied than that without, the natural tendency is to escape at all of the openings; but my abutment B' effectually stops the current and forces it out of the outlets, thus producing a continuous current around the stone and one which can be easily regulated. I have found, also, that a stationary shield or guard, as represented at B, is much more effectual in producing a vacuum than the adjustable ones now in use, because the former can be arranged in such relation to the inlet as shall be found most advantageous, while the latter have to be changed whenever it is desired to modify the size of the

inlet. It is well known that a great amount of electricity, and, consequently, heat, is evolved by the friction consequent upon the rapid revolution of the millstone, which is readily collected and carried off by my metallic guide or carrier F and the conductor or conductors S', the guide serving to collect the electricity so that it can be carried off by the conductor.

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

1. The combination of the inlet P, sliding door G, outlets E E, stationary guard B, and stop B' with the curb S, substantially as set forth.

2. In combination with the outlet or outlets E E, the supplemental case or shell C and stop B', operating as set forth.

3. In combination with the curb S, the concave metallic meal-carrier F, substantially as set forth.

4. In combination with the curb S, the metallic conducting-ring F and conductor S'.

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Witnesses:

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THOMAS WINTERS.