

J. ELLSTON,
Grinding Mill.

No. 75,135.

Patented March 3, 1868.

Fig. 1.

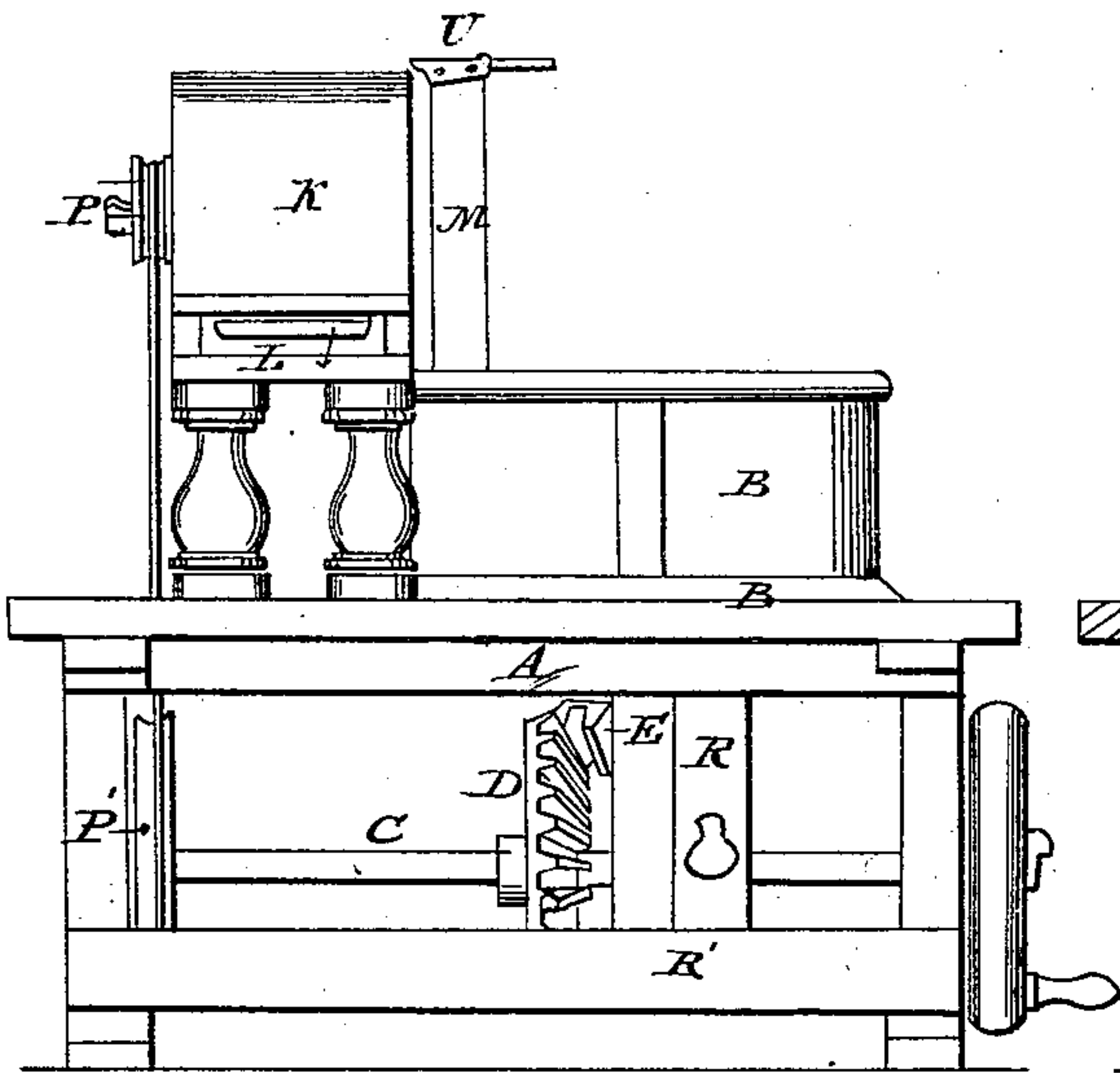


Fig. 3.

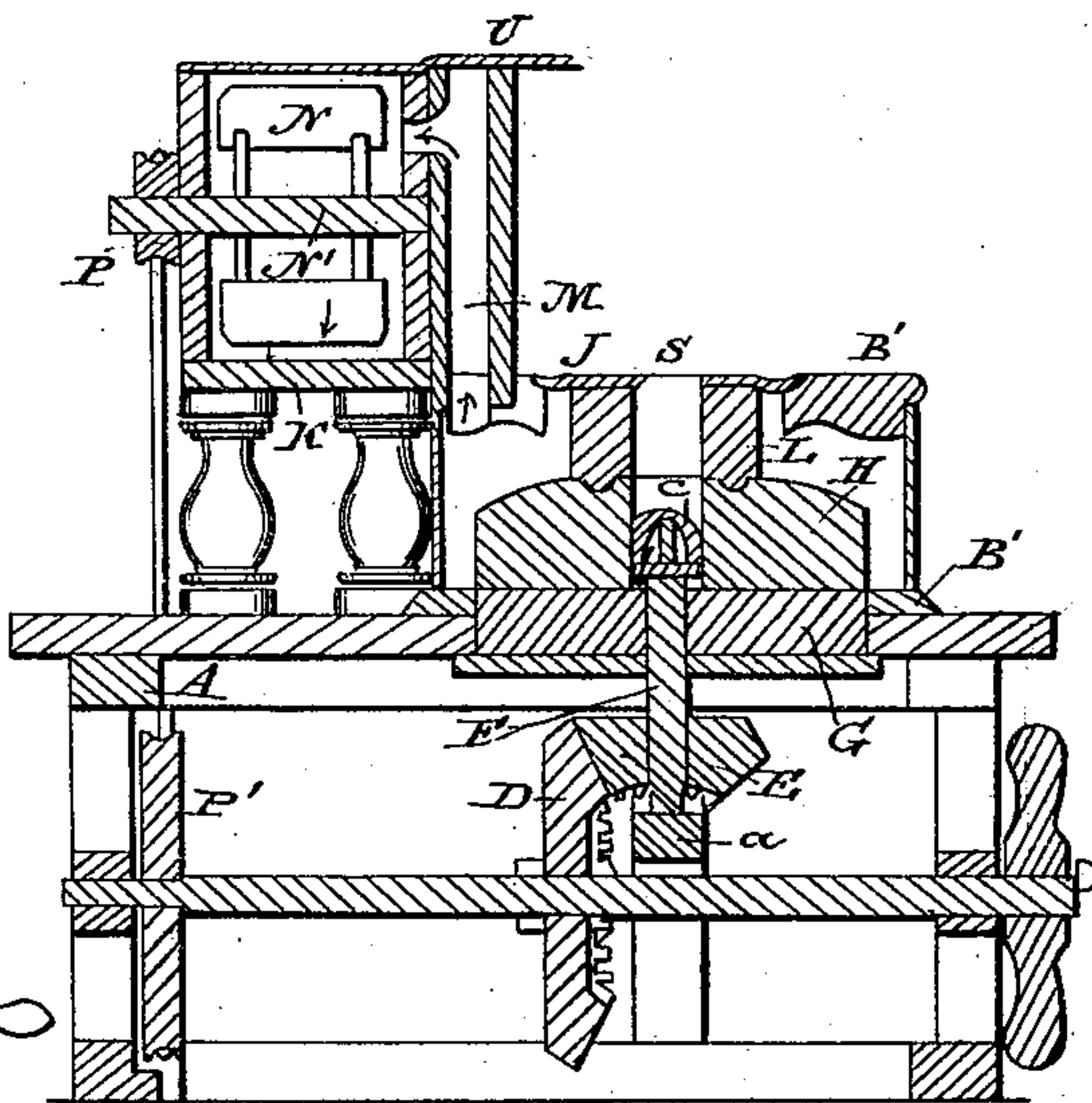


Fig. 2.

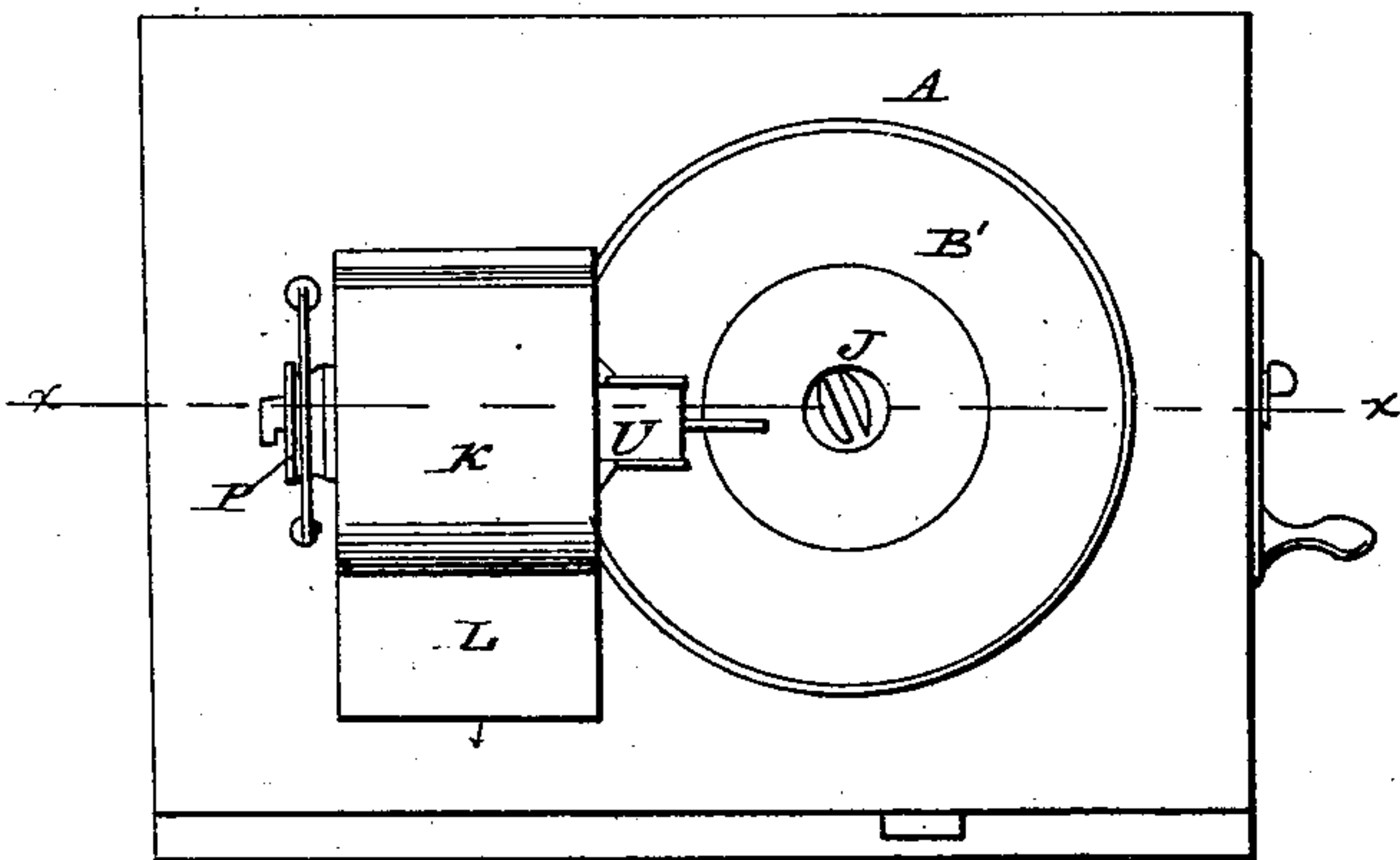


Fig. 4.

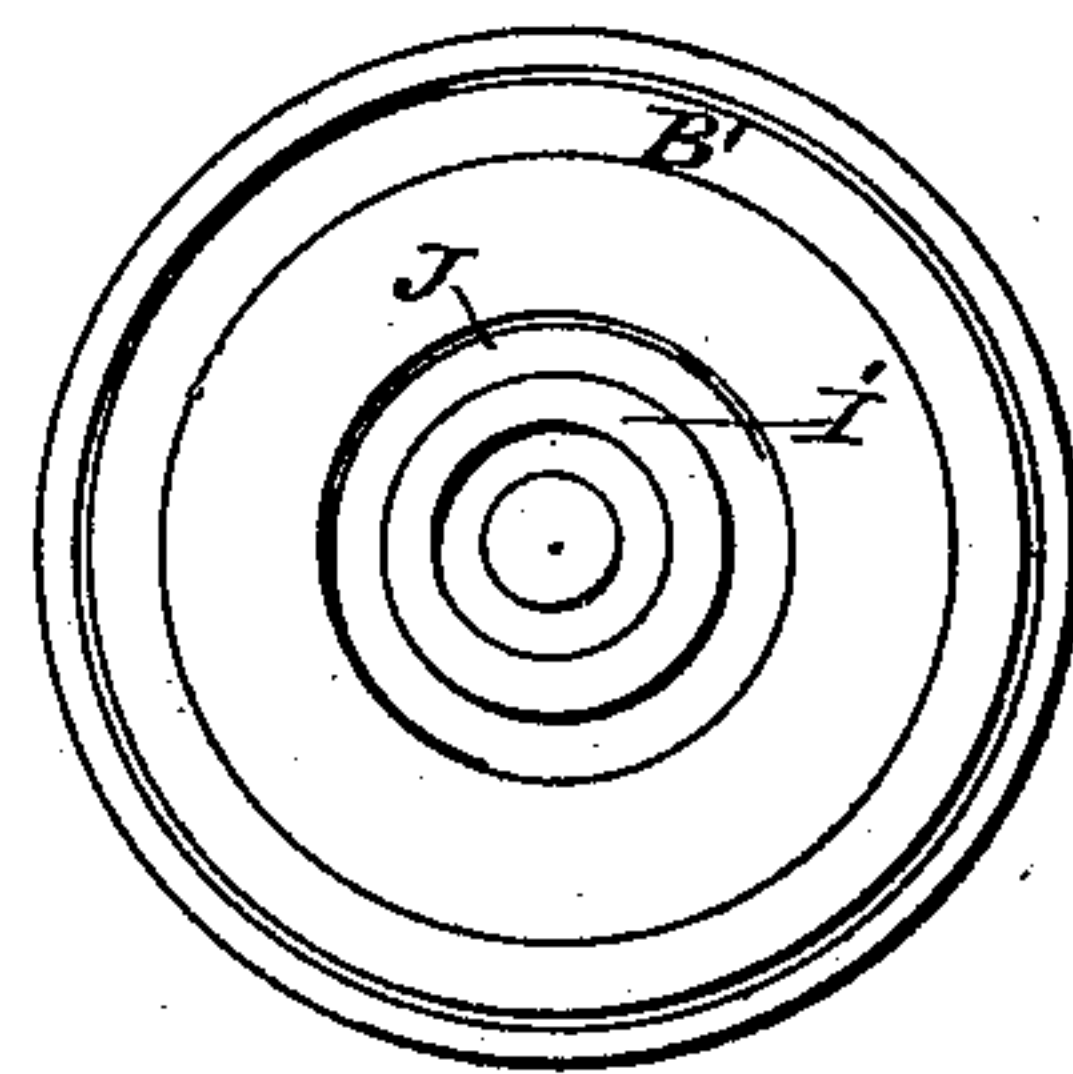
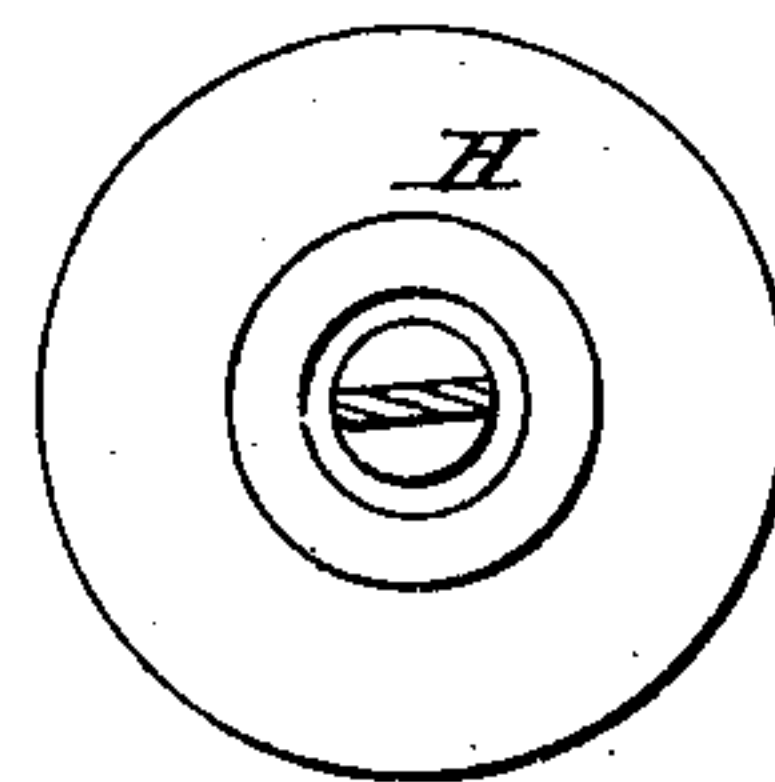


Fig. 5.



Witnesses,
W. H. Burridge
J. Holmes

Inventor,
John E. Ellston

United States Patent Office.

JOHN ELLSTON, OF CLEVELAND, OHIO.

Letters Patent No. 75,135, dated March 3, 1868.

IMPROVEMENT IN GRINDING-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN ELLSTON, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Grain-Mills; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view.

Figure 2 is a top view.

Figure 3 is a transverse vertical section in the direction of the line *x x*, fig. 2.²

Figures 4 and 5 are detached views, which will be referred to in the description.

Like letters of reference refer to like parts in the views.

In the drawings, A represents the frame, C the driving-shaft, on which is hung the cog-wheel D, which gears into the smaller wheel E, secured on the spindle F. This spindle rests in the step *a*, passes up through the lower stone G, and can be provided, in the ordinary way, with a bush, the upper end being connected to the running-stone H by means of the bail *c* and centre-bar *b*, as in ordinary cases. The lower stone is surrounded with a collar, B, on which rests the curb B' of the stone, leaving a space between said curb and stone. The upper part of this curb is provided with an adjustable collar, I, which is connected to the curb with an elastic diaphragm, J. This curb, detached, is shown in fig. 4, which is a view of the under side; fig. 5 showing the top of the stone, H. The lower end of this collar forms a circular boss, I', the upper stone being concave, to receive this boss, which, as the air passes in through the eye S, has a tendency to press the said collar firmly against the stone, thus forming a tight joint, causing the air to pass down between said stones. K is the fan-case, which can be placed near the stone, or in any other part of the building, said case connecting with the curb by means of the pipe M, which may be of any proper length for this purpose. In this fan-case are the fans N, P, which connects with the pulley P' by a band passing over them, thus operating the fans from the driving-shaft. R is a spout, the upper end terminating in the space between the curb and stone, and through which the meal passes from the stone to the spout R', from whence it is taken by carriers in the usual way.

As the fans are operated by the gear-wheels and pulleys, as shown, the air is, by means of said fans, drawn in through the eye S of the stone, (through which eye the grain is also fed in to be ground,) and passes between the two stones up through the pipe M to the fan-case, and out at the exit-flue L, fig. 1, indicated by the arrows. By this means fresh air is constantly passing between the stones, keeping the meal and said stones always cool. Hinged to the top of the pipe M is a lid, U, provided with an arm, on which is to be hung a weight, and when the mill is not in operation, the weight will cause said lid to open, and thus all foul and heated air rising from the stones, and meal is allowed to pass out through the spout M. Thus the meal is always sweet and fresh, the cool air passing constantly between the stones, while in operation, and the foul and heated air passed off while the stones are not in use. By this means the curb is constantly kept dry, preventing pasting of meal to the curb.

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

1. The elastic diaphragm J and collar I, in combination with the stone, substantially as and for the purpose set forth.

2. In combination with the above, I claim the pipe M, hinged cover U, with the curb and fan-case, arranged as and for the purpose substantially as set forth.

Witnesses:

W. H. BURRIDGE,
J. HOLMES.

JOHN ELLSTON.