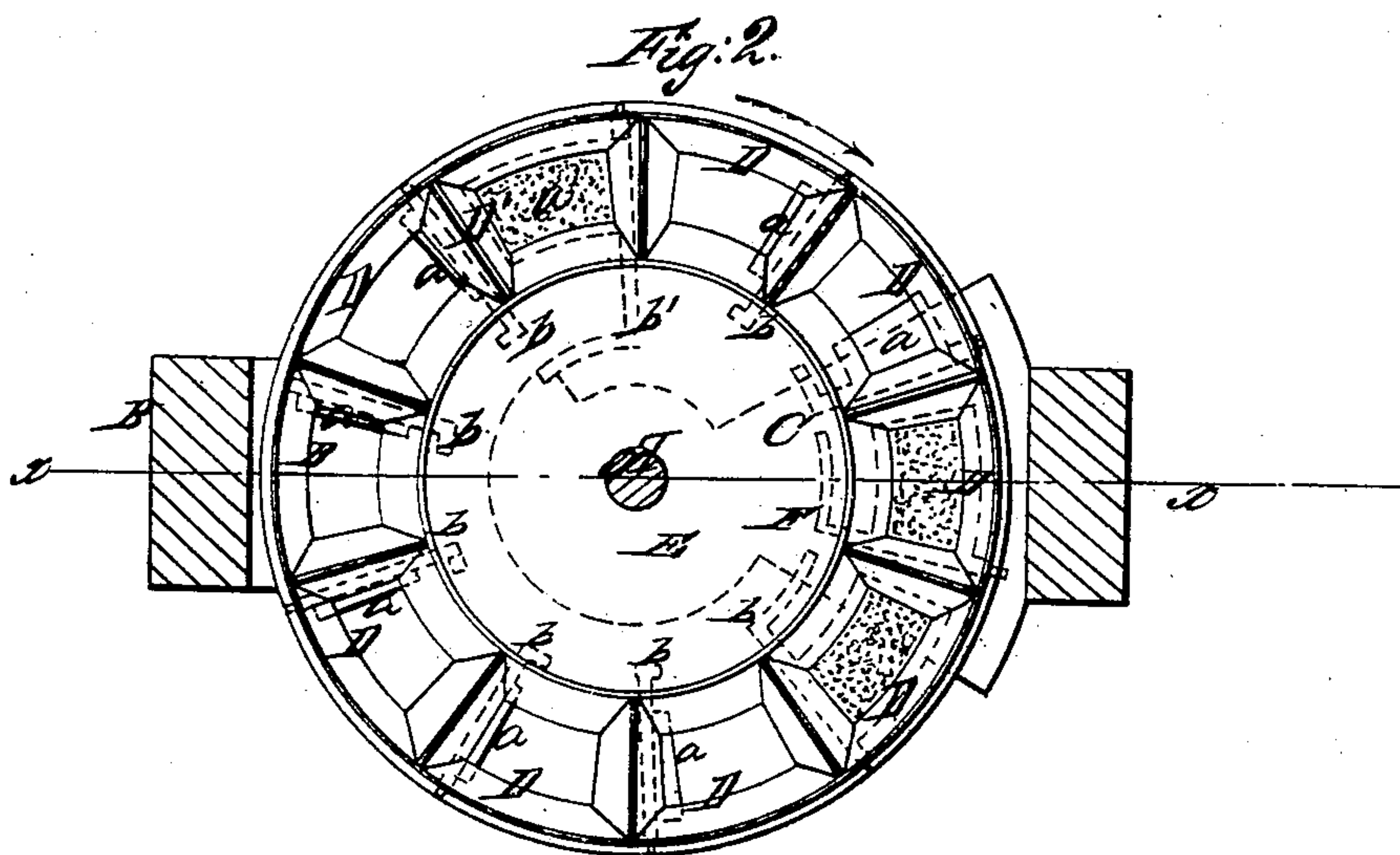
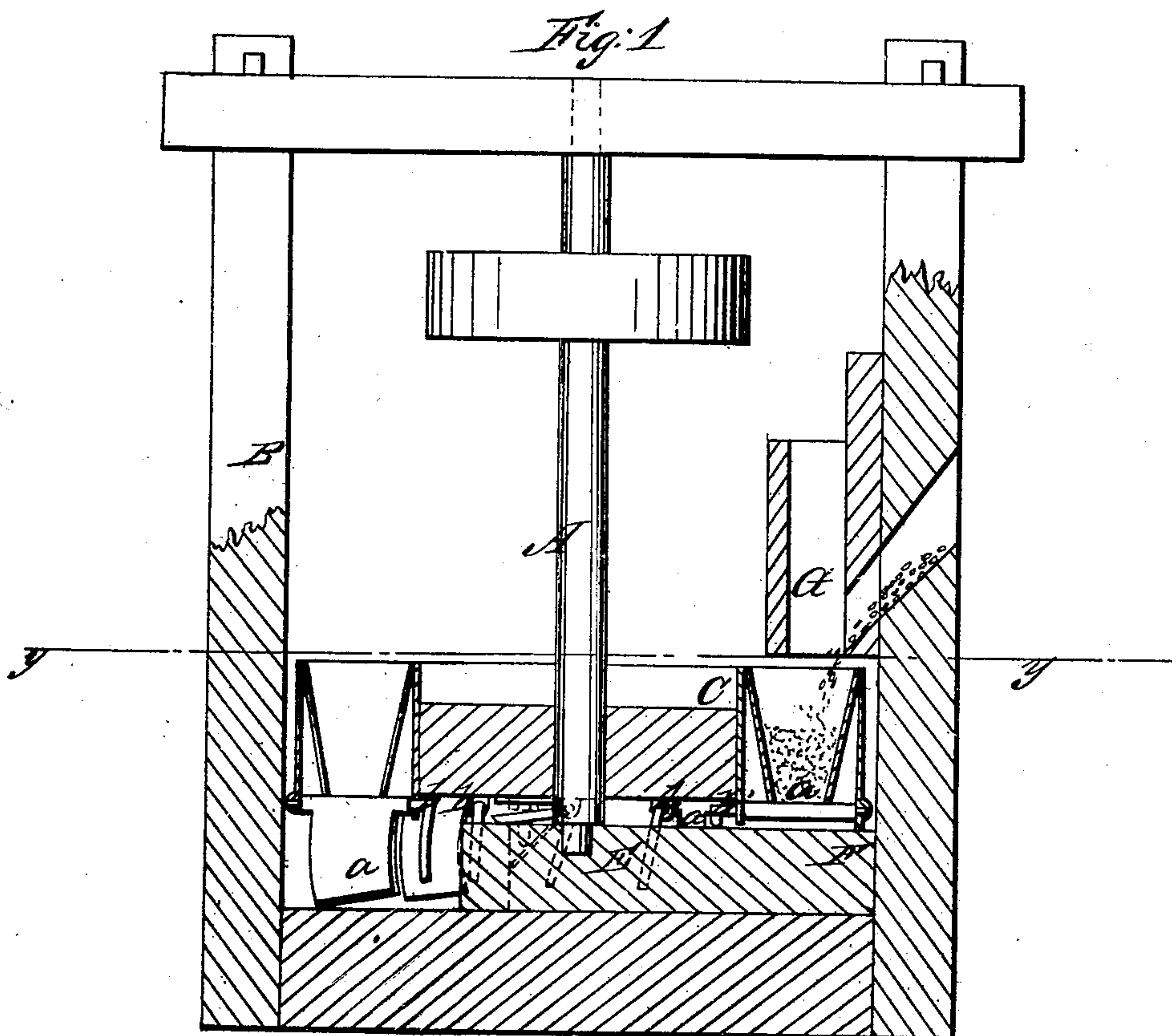


J. BARTHOLOMEW.  
MECHANICAL TOLLER FOR GRIST MILLS.

No. 20,540.

Patented June 15, 1858.





# UNITED STATES PATENT OFFICE.

JOSEPH BARTHOLOMEW, OF DUNDEE, NEW YORK.

MACHINE FOR GATHERING THE TOLL IN GRIST-MILLS.

Specification of Letters Patent No. 20,540, dated June 15, 1858.

*To all whom it may concern:*

Be it known that I, J. BARTHOLOMEW, of Dundee, in the county of Yates and State of New York, have invented a new and useful machine for grist-mills, designed for gathering or collecting the toll from grists, which machine I term a "mechanical toller;" 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 my invention,  $x, x$ , Fig. 2, indicates the plane of section. Fig. 2, is a horizontal section of ditto,  $y, y$ , Fig. 1 indicates the plane of section.

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

This invention consists in having a series of chambers formed in a rotating cylinder and provided with valves, the chambers as the cylinder rotates passing under a spout and receiving the grain, and the valves being so operated that the necessary toll will be discharged from one or more chambers into a separate receptacle while the grist will be discharged from the other chambers either direct into the hopper or into any receptacle prepared to receive it.

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

A, represents a vertical shaft which is fitted in a proper framing B, and C, is a cylinder which is placed on the lower end of the shaft A, said cylinder having a series of chambers D, formed at its edge and extending entirely around it. The chambers are all of equal capacity and as one of them performs a different office from the others as will presently be described it is designated by D', see Fig. 2.

The bottoms  $a$ , of the chambers D, are allowed to open and close, and are in fact valves, hinged or connected to the lower ends of the chambers at one side by joints. These joints are formed by having the bottoms  $a$ , attached to rods  $b$ , which are fitted in proper bearings at the under side of the cylinder. The rods  $b$ , are bent at their inner ends at right angles to the portions to which the bottoms or valves  $a$ , are attached, and the bottoms or valves would remain open by their own gravity if not otherwise acted upon.

The bottom or valve  $a'$ , of the chamber D', is arranged precisely the same as the others with the exception that its rod  $b$ , is rather longer than those  $b$ , of the bottoms or valves  $a$ , see dotted lines Fig. 2.

The lower end of the shaft A, is stepped in a semi-circular ledge or block E, which is connected with a ledge F, having oblique sides, see dotted lines in Fig. 1.

G, is a spout attached to the framing B, and so placed that as the cylinder C, is rotated the several chambers D, as well as the chambers D', will pass underneath it.

The operation will be readily seen. The shaft A, is rotated by any proper means and the grain passes down the spout G, into the chambers D, the bottoms  $a$ , of which are closed as they pass underneath the lower end of the spout G, in consequence of the bent ends of the rods  $b$ , and also the bottoms striking against the ledge F, said ledge keeping the bottoms  $a$ , closed until the chambers D, have passed from underneath the spout, and when the bottoms  $a$ , have passed beyond the ledge F, and the bent ends of the rods  $b$ , pass off from said ledge, the bottoms or valves  $a$ , will drop or open by their own gravity and the grain will drop into the hopper of the mill stones or into any receptacle that may be prepared to receive it. The rod  $b'$ , however of the valve  $a'$ , of chamber D', being longer than the rods  $b$ , the valve  $a'$ , will remain closed for the bent end of rod  $b'$  will remain on the semi-circular ledge or block E, and when it passes off said ledge, the valve  $a'$ , will also open by its own gravity and the contents of chamber D', will escape into a proper receptacle. It will be seen therefore that the chamber D', has its contents discharged at a different point from that of the chambers D, and that the grain is kept separate.

In the drawing there are ten chambers in the cylinder C, and the contents of chamber D', is the toll it being the one tenth of the grist or the amount that passes through spout G. This is the usual amount, although any proportion may be taken by means which would readily suggest themselves to any mechanic, for instance, a greater or less number of chambers may be used and one or more toll chambers D', may be employed.

I do not confine myself to the precise arrangement of the parts as herein shown and described for a modification of the same may be used and made to answer a good

purpose. The valves for instance may be operated by a different arrangement of parts, &c. The machine however would be substantially the same as regards its principle  
5 of operation.

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

The employment or use of a rotating cylinder provided with chambers and having

valves or movable bottoms, so arranged and operated, that as the cylinder rotates, the grist will be conveyed to the hopper of the stones or any proper receptacle, and the toll gathered or taken from the grist substantially as described. 15

JOS. BARTHOLOMEW.

Witnesses:

J. J. DIEFENDORF,  
JAMES SKIEN.