

R. S. CATHCART.
Millstone Bush and Spindles.

No. 137,418.

Patented April 1, 1873.

Fig. 1.

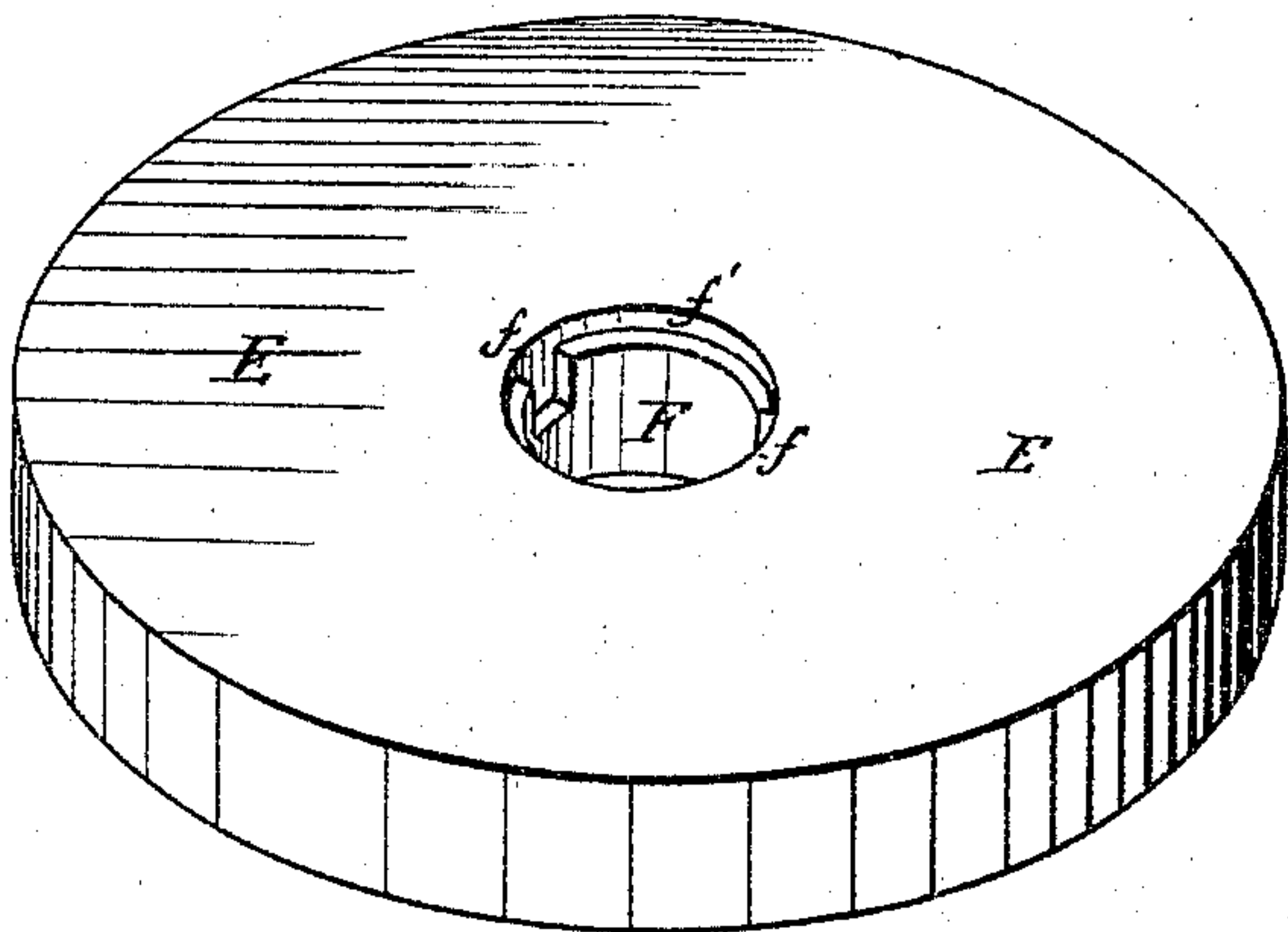


Fig. 2.

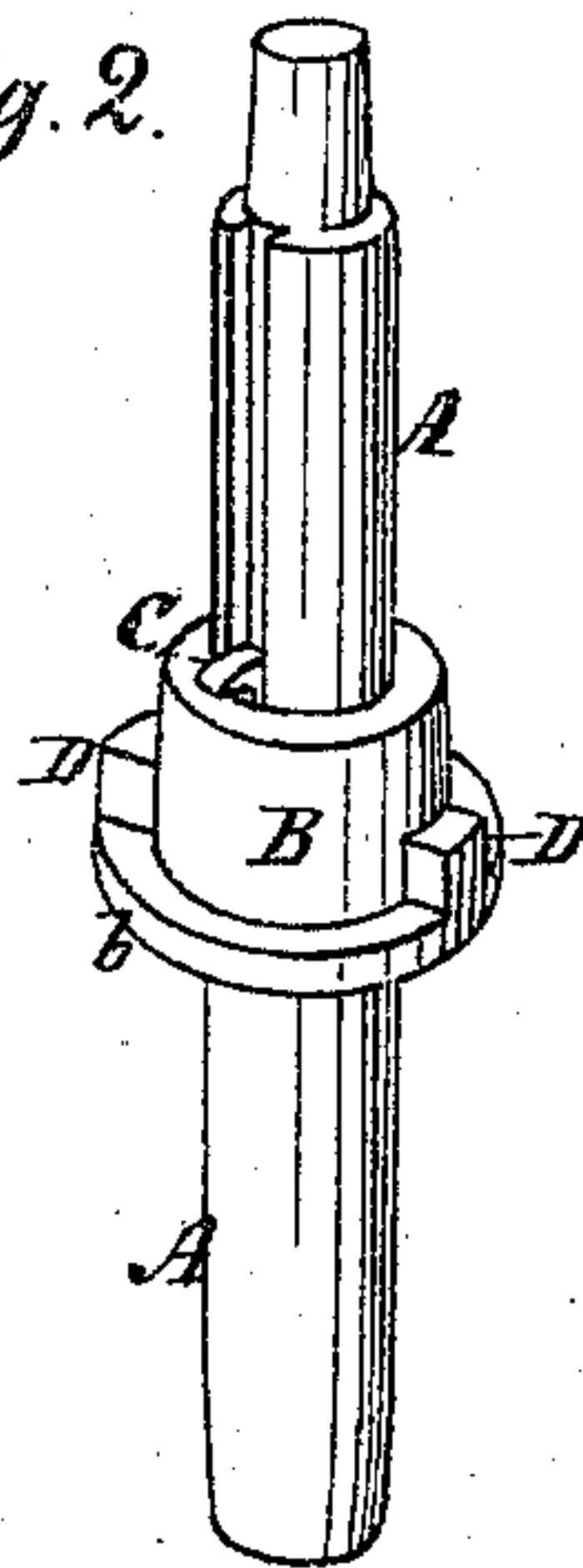


Fig. 3.

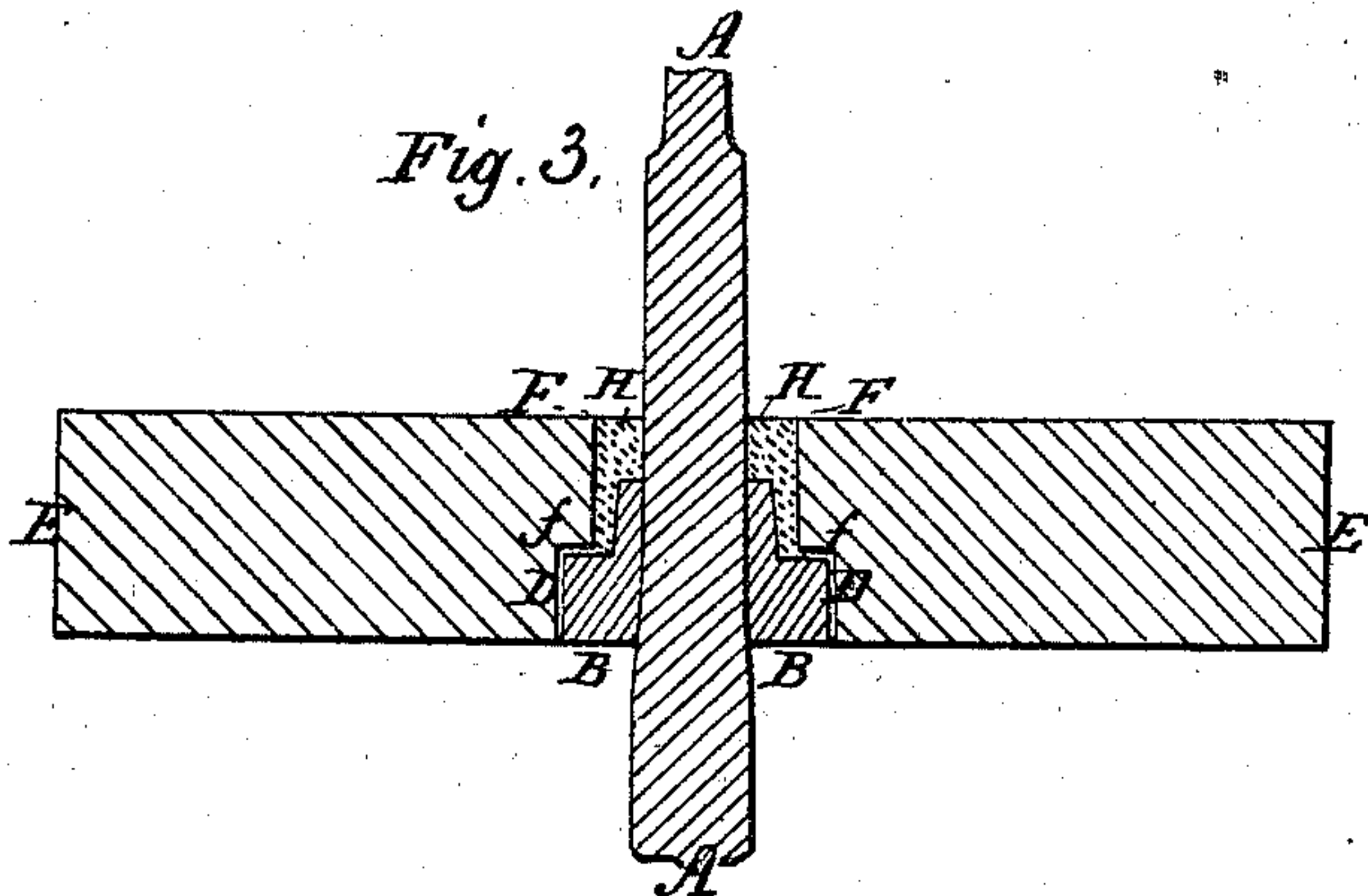
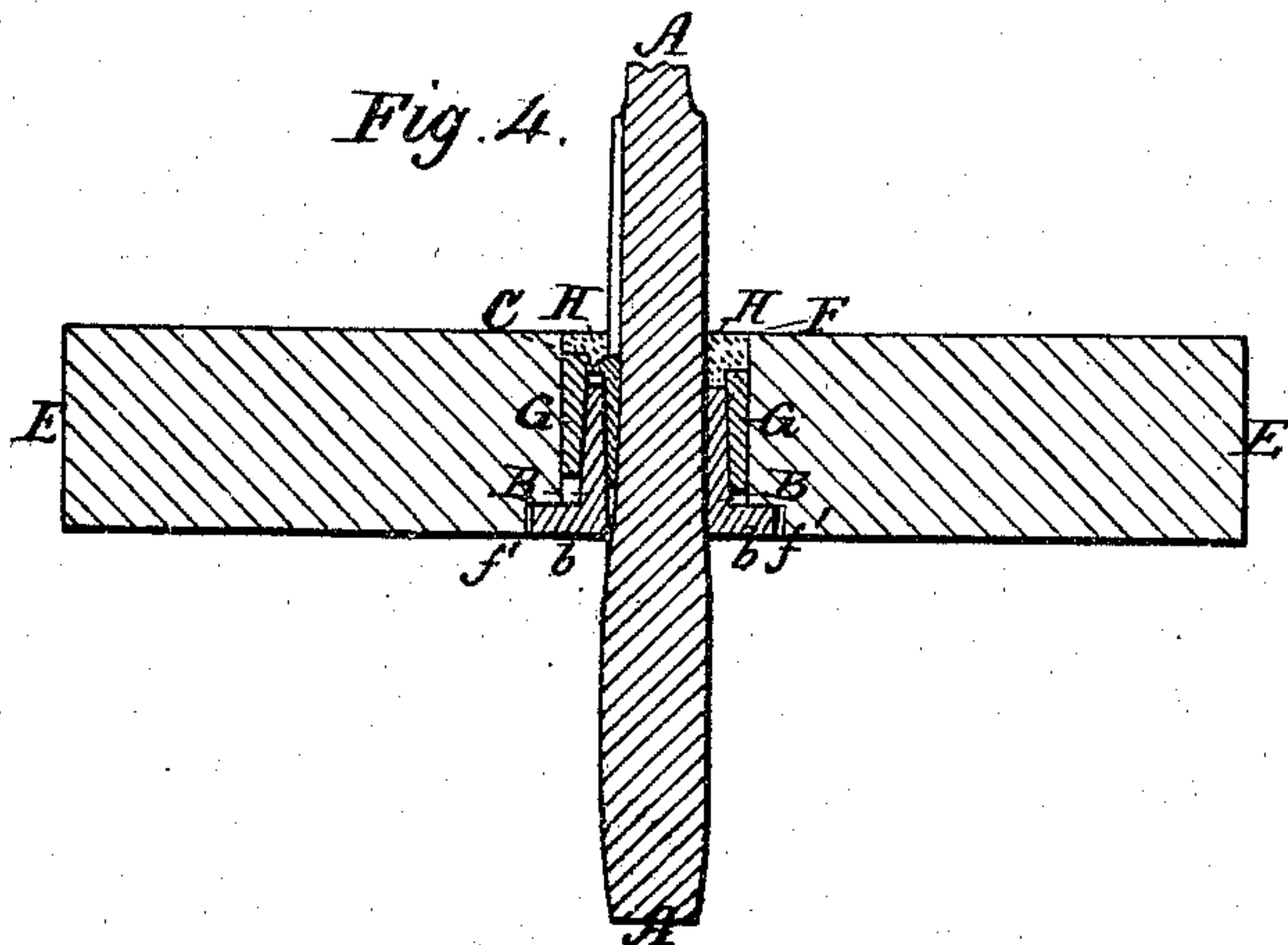


Fig. 4.



Witnesses:

Edmund Masson

John R. Young

Inventor.

R. S. Cathcart, by
Orindle and Co. his Attys

UNITED STATES PATENT OFFICE.

RODNEY S. CATHCART, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO THE STRAUB MILL COMPANY, OF SAME PLACE.

IMPROVEMENT IN MILLSTONE BUSHES AND SPINDLES.

Specification forming part of Letters Patent No. **137,418**, dated April 1, 1873; application filed March 15, 1873.

To all whom it may concern:

Be it known that I, RODNEY S. CATHCART, of Cincinnati, in the county of Hamilton and in the State of Ohio, have invented certain new and useful Improvements in Grinding-Mills; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of a millstone prepared to receive my improved bushing. Fig. 2 is a like view of a spindle with said bushing attached; and Figs. 3 and 4 are vertical central sections of said stone and spindle upon lines passing, respectively, through the driving-lugs of the bushing and through the adjusting-keys.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to render more easy the relative lateral adjustment of the stone and bushing, and to enable said parts to be more firmly connected together than has heretofore been practicable; to which end it consists principally in the combination of the tapered spindle and the bushing provided with a corresponding opening, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for adjusting the bushing to and securing it in horizontal position within the stone, substantially as and for the purpose hereinafter shown.

In the annexed drawing, A represents a spindle, having at and below the point upon which the millstone-bushing B is to be secured a tapered form, the increase in size being from above downward. The bushing B is provided with a central opening, which corresponds in size and shape to the portion of the spindle A upon which it is to be fitted, and is held in relative circumferential position thereon by means of a key, C, that fits into suitable vertical key-ways provided within the contiguous surfaces of said parts. Exteriously the bushing has a cylindrical form, has a slight increase in size from its upper end downward, and is provided at its lower end with a flange, b, which extends horizontally outward to a distance somewhat greater than the thickness of its wall. Upon opposite sides of said bush-

ing, and upon the upper side of its flange, are provided two lugs or drivers, D, which have a general rectangular form, as seen in Fig. 2. The millstone E is provided with a central opening, F, which, while somewhat larger than the bushing B, corresponds in general shape to the exterior of the same, and is provided with suitable recesses *f* for the reception of the drivers D.

As constructed, the bushing, when placed within the opening F, is adjusted to and secured in a central position by means of four wedges, G, which are driven into the space between the exterior of said bushing and the interior of said opening, after which the relative positions of said parts are insured by filling said opening with molten lead H.

Although a circular form is preferably employed for the bushing and opening in the stone, a rectangular form may be given said parts, in which event no driving-lugs would be required.

The means employed for centering the spindle and bushing and for securing the same in place within the millstone is simple, inexpensive, efficient, and durable, while, at the same time, the spindle can be easily and quickly removed, when necessary, for the purposes of shipment or for repairs.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In combination with the tapered spindle A, the bushing B provided with a corresponding central opening, and secured in relative circumferential position by means of the key C, substantially as and for the purpose specified.

2. The means employed for adjusting the bushing to and securing it in a central position within the stone E, consisting of the wedges G driven into the space F between said bushing and stone, and the lead H caused to fill the remainder of said space, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of March, 1873.

RODNEY S. CATHCART.

Witnesses:

R. SIMPSON,
J. W. BREWSTER.