

(No Model.)

J. L. O. KING.
ANTI FRICTION MILL BUSH.

No. 248,476.

Patented Oct. 18, 1881.

Fig. 1.

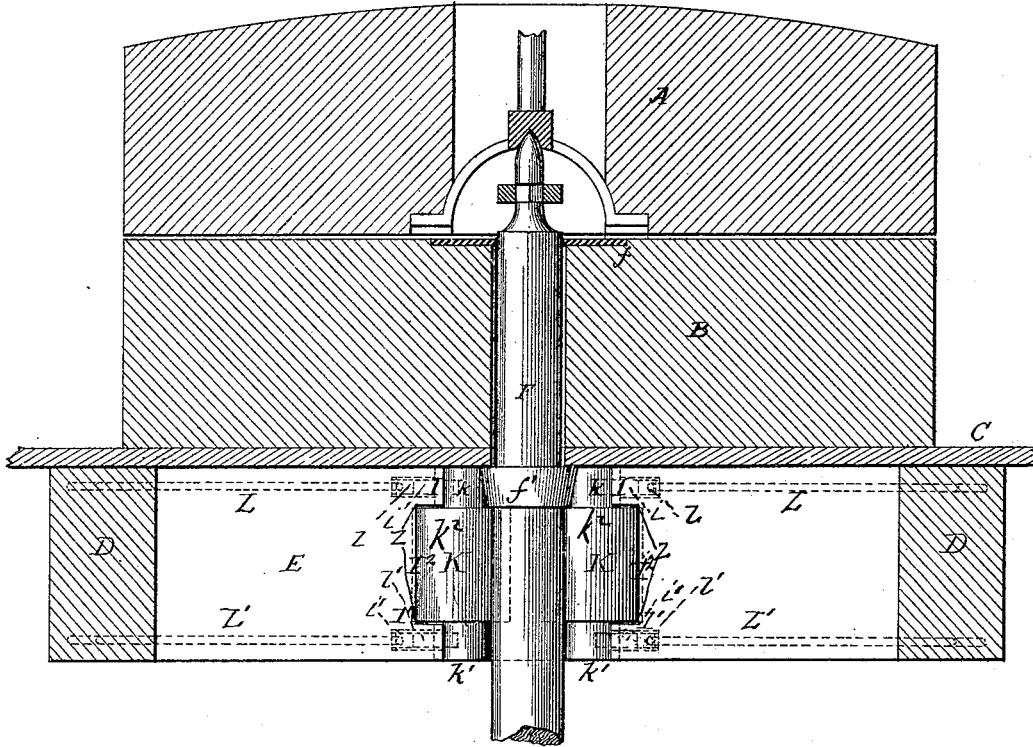
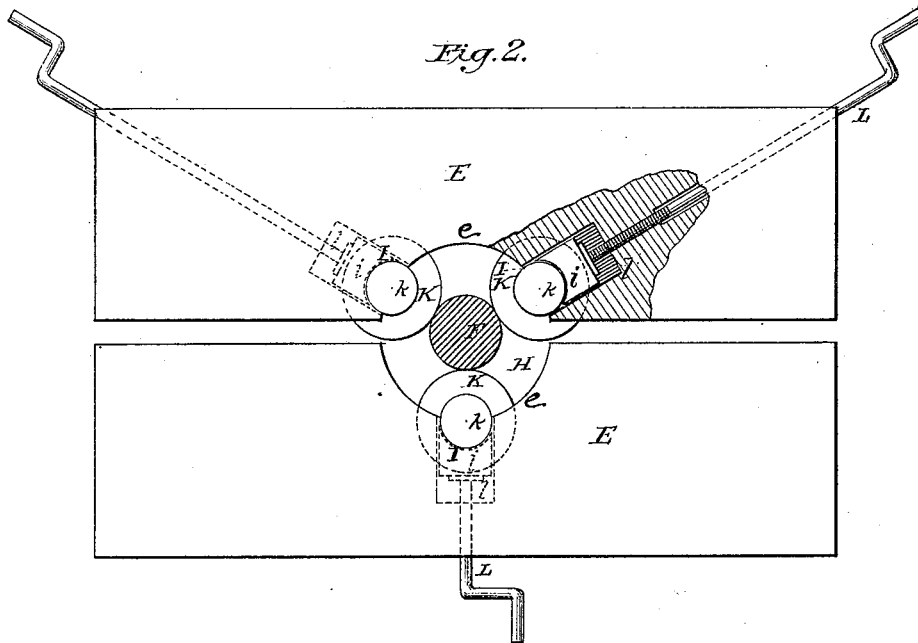


Fig. 2.



WITNESSES

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JAMES L. O. KING, OF ANDERSON COURT-HOUSE, SOUTH CAROLINA.

ANTI-FRICTION MILL-BUSH.

SPECIFICATION forming part of Letters Patent No. 248,476, dated October 18, 1881.

Application filed October 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. O. KING, of Anderson Court-House, in the county of Anderson and State of South Carolina, have invented a new and valuable Improvement in Anti-Friction Mill-Bushes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a vertical central section of this invention. Fig. 2 is a plan view with spindle in section.

This invention relates to improvements in the anti-friction bushings used in mills; and it consists in the construction and novel arrangement of parts, hereinafter set forth and claimed.

Many means have been devised for furnishing roller-bearings for spindles; and it is the object of the present invention to so construct such bearings, their seats, and adjusting devices that irregularity of wear is corrected and a true contact obtained.

In the annexed drawings, the letter A represents the upper, and B the lower, millstone, the latter being supported on floor C and joists D. Under the lower stone, and fastened between the joists D, are the cross-sills E, in which the spindle F has its bearing. These sills E are concaved out at opposite points, *e e*, forming the circular opening H, through which the spindle passes. Formed at and leading outwardly from the periphery of this opening are the three vertical bearings for the anti-friction-rollers K. These bearings are arranged around the circle equidistant one from another. They consist of upper and lower elongated angular seats, I I', for the journals of the rollers, and an intervening concave, I², for the body of the rollers. Located at the extreme ends of the seats I I' are stationary taps *l l'*, and inside of these are the movable boxes *i i'*. Passing through sills E, entering the seats I I', and passing through taps *l l'*, and bearing against boxes *i i'*, are the adjusting-rods L L', by means of which the boxes are forced up.

K are the rollers, which are placed, with their journals *k k'*, in seats I I', resting against boxes *i i'*, and their bodies *k²* projecting part in the concaves I² and part out into the opening H. By this construction the rollers are placed loosely into position and all play is prevented. Their bodies, extending into the concave, keep them from endwise slip by catching against the end shoulders, *l*. The spindle F passes down amid these rollers, its collar *f'* resting on the projecting edges of their bodies at the journals *k*.

At the top of the lower stone there is placed around the spindle a rubber or metal cap, *f*, which tightly closes the opening around the spindle. The location given the rollers, their bearings, and adjusting devices, compels the adjustment in right lines, and, whether the adjustment be much or little, the distance of the rollers apart will always be constant. The double adjustment given each roller enables the latter to be forced up for any irregularity of wear, either at bottom, or top, or both.

I claim—

1. The cross-sills E, having spindle-opening H, and the three bearings arranged equidistant from one another and consisting of end seats, I I', and concaves I², in combination with rollers K, having journals *k k'* resting in the seats, and bodies *k²*, projecting part in the concaves and part in the opening, and the spindle F passing amid the rollers, as set forth.

2. The sills E, having opening H, and three bearings equidistant from one another and consisting of seats I I' and concaves I², and boxes *i i'*, stationary taps *l l'*, and adjusting-rods L L', in combination with rollers K, having journals *k k'* and bodies *k²*, whereby the rollers have a double adjustment and end-play is prevented, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES L. O. KING.

Witnesses:

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