J. H. TEAHL.

BEARINGS FOR UPRIGHT SHAFTING.

No. 169,864. Patented Nov. 9, 1875.

Fig. 1.

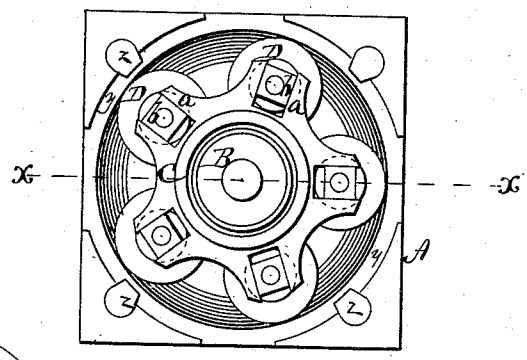


Fig. 3.

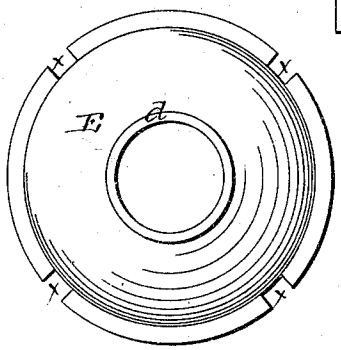


Fig. 2.

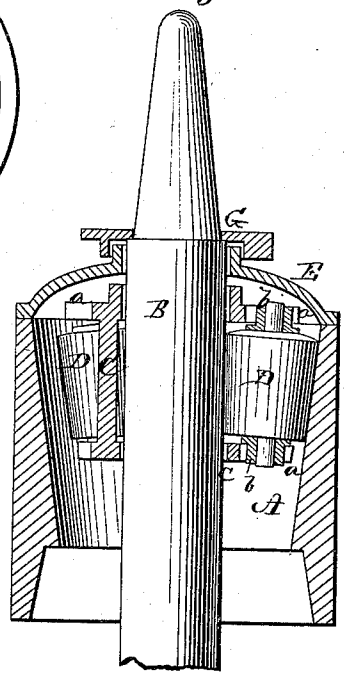
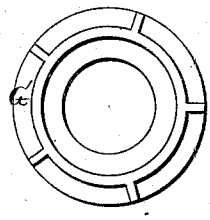


Fig. 4.



WITNESSES

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IMPROVEMENT IN BEARINGS FOR UPRIGHT SHAFTING.

Specification forming part of Letters Patent No. **169,864**, dated November 9, 1875; application filed October 21, 1875.

To all whom it may concern:

Be it known that I, JOHN H. TEAHL, of Reading, in the county of Berks and in the State of Pennsylvania, have invented certain new and useful Improvements in Bearings for Upright Shafting; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a bushing or bearing for mill-spindles, upright shafts, &c., as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my invention, with the lid or cover of the receiver removed. Fig. 2 is a vertical section taken through the line *x x* of Fig. 1. Fig. 3 is a plan view of the cover. Fig. 4 is a bottom view of a washer used with the cover.

A represents a receiver of any suitable dimensions, and of any desired exterior form. The interior of the receiver is made in funnel shape, as shown in Fig. 2. B represents the upright mill spindle or shaft, which passes up through the center of the receiver A, and has a loose cage, C, placed around it within said receiver. The top and bottom of this cage is provided with five radial arms, *a a*, at equal distances apart, which arms are slotted from the outer ends inward, for a suitable distance. The arms at the top and bottom correspond with each other, so as to form pairs for the reception of five tapered rollers, D D, the journals of which have their bearings in boxes *b b*, placed and sliding in the slotted arms *a a*, of the cage *c*. The rollers D D are tapered so as to engage with the inside tapering surface of the receiver, and on the inner side, the rollers engage with the spindle B, making the bushing anti-friction and self-tightening, the spindle serving as a guide for the cage or skeleton C. The arms with the sliding boxes keep the rollers perpendicular with the spindle, at the same time allowing them to find the center between the receiver and the spindle, keeping the spindle in the center of the receiver. The lid or cover E, for closing the top of the receiver is formed with notches *x* in its edge. It rests upon an annular shoulder, *y*, and is turned under lips or flanges *z*, to be held in place. Above the lid E is a washer, G, fitting over the flange or rim *d* on the lid, and resting on a shoulder, *e*, of the spindle, to keep the bushing from leaking, and allow the air to pass up through the bush in the burrs. The spindle may, if desired, be made tapered in the same proportion as the receiver and rollers.

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

1. The combination of the funnel-shaped receiver A, cage C, with slotted arms *a*, having sliding boxes *b*, and the tapering rollers D, with the spindle B, substantially as and for the purposes set forth.

2. The lid or cover E, having notches *x*, and top flange *d*, in combination with the receiver A, having shoulder *y*, and flanges *z*, and the washer G, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of October, 1875.

JNO. H. TEAHL.

Witnesses:

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H. A. HALL.