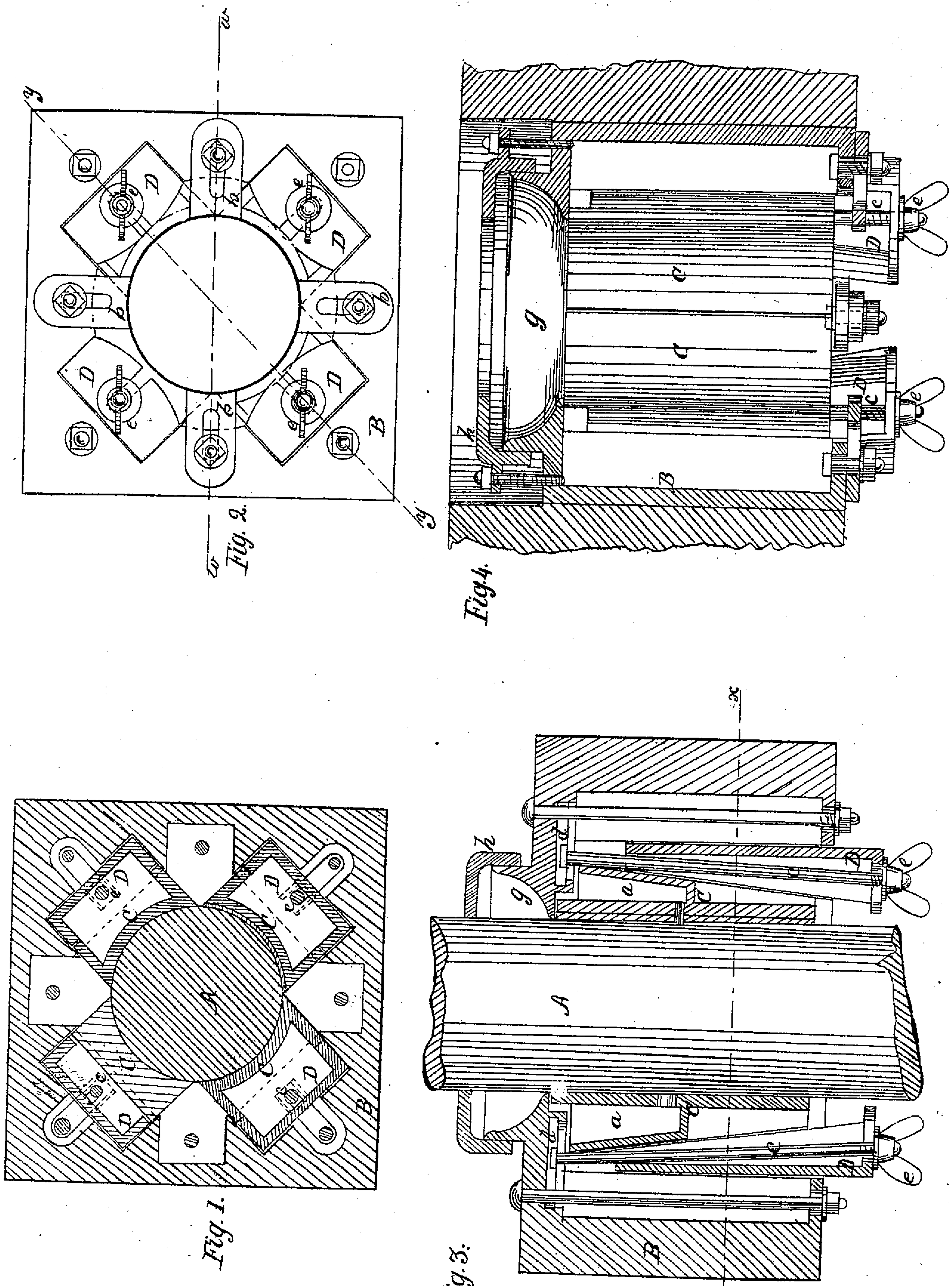
C. Custer.

Millstone-Bush.

No. 72812 — Patented Dec. 31, 1867.



Witnesses.
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C. CUSTER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 72,812, *dated December* 31, 1867.

IMPROVEMENT IN MILLSTONE-BUSHES.

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, C. CUSTER, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Millstone-Bush; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a transverse section of my improved millstone-bush, taken in the line *x x*, fig. 3.

Figure 2, a bottom view of the same.

Figure 3, a diagonal vertical section, taken in the line *y y*, fig. 2, with the spindle in the box.

Figure 4, a vertical cross-section, taken in the line *w w*, fig. 2.

Similar letters of reference indicate like parts.

This invention relates to improvements in the construction of boxes for bushing the spindles of millstones, whereby a spindle may be adjusted with perfect accuracy by means of thumb-screws, and wedges operating on loose wedges lying against the spindle, which wedges are made of iron, brass, or wood, or may be faced with Babbit metal, leather, or any other anti-friction material. Lubrication is also fully provided for by chambers to hold oil, made in the bushing-wedges, and all extraneous substances are excluded from the bushing by a chamber containing packing-yarn on the top of the bush around the spindle, as hereinafter more particularly described.

A represents a mill-spindle, and B an external bushing-box or shell, to be set in the eye of the bed-stone of a pair of millstones. The bushing consists of four quarter segments C C, which are formed of iron, brass, or wood in wedge-shape, to be placed with their points downwards, and having their faces fitted exactly to the spindle. They may be faced, if desired, with Babbit metal, leather, or any other anti-friction material. In the upper part or head of the bushing-wedges C C are chambers *a a*, for containing oil which flows through holes at the bottom directly against the neck of the spindle to lubricate it. On the under side of the main box B are secured four radial slides *b b*, that are held in place by screws and nuts, for the purpose of supporting the bushing-wedges C C, when they are put in the box B for adjustment to the spindle. In each corner of the box or shell B are formed radial recesses, as wide as the segment-bushing wedges C C, for receiving corresponding wedges D D, that lie in reverse position at their back, and are drawn up to bear against the bushing-wedges, and draw them in place to adjust them to the spindle. This is done by means of adjusting-screws *c c*, which run through the binding-wedges D D from the top to the bottom of the box B, as shown clearly in fig. 3. These adjusting-screws *c c* are suspended by their heads *d d*, within the upper part of the box B, in such manner that they can slide nearer to or farther from the spindle, and they fit within vertical slots in the large or bottom ends of the binding-wedges D D, to admit of their adjusting radial movement nearer to or further from the spindle. The screws *c c* project through the lower ends of the binding-wedges D D, and are provided with wing-nuts *e e*, for bearing them up against the bushing-wedges C C, and thus adjust the spindle exactly as desired. On the top of the box B is placed a chamber, *g*, which is to be filled with cotton, yarn, or any other suitable packing to prevent the admission of dust or any extraneous substances, and the chamber *g* is covered with a cap or follower, *h*, which fits around the spindle, and is screwed upon the top of the box B.

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

1. The millstone-bushing, constructed as described, consisting of the segmental wedges C, having chambers *a* in the upper ends, placed in the four corners of the shell B, with their concave faces fitting against the spindle, and supported by the adjustable radial plates *b*, upon the under side of said shell, and adjusted by the reverse wedges D fitting against the wedges C in the same radial recesses, and adjusted from the under side, by means of the screw-bolts *c* and nuts *e*, as herein described for the purpose specified.

2. The combination and arrangement of the hollow wedges C, reverse wedges D, radial slides *b*, screw-bolts *c*, shell B, follower *h*, and chamber *g*, as herein described for the purpose specified.

3. The radial slotted slides *b*, in combination with the hollow segmental wedges C, when such slides support said wedges by passing across their inner corners, as herein set forth for the purpose specified.

C. CUSTER.

Witnesses:

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