N. B. LEWIS.

Bush for Mill Spindles.

No. 166,210. Patented Aug. 3, 1875.

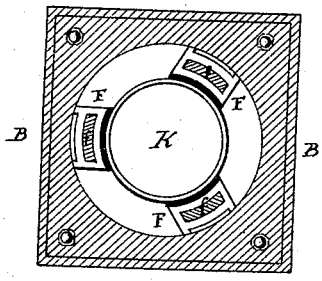


Fig. 1

Fig. 2

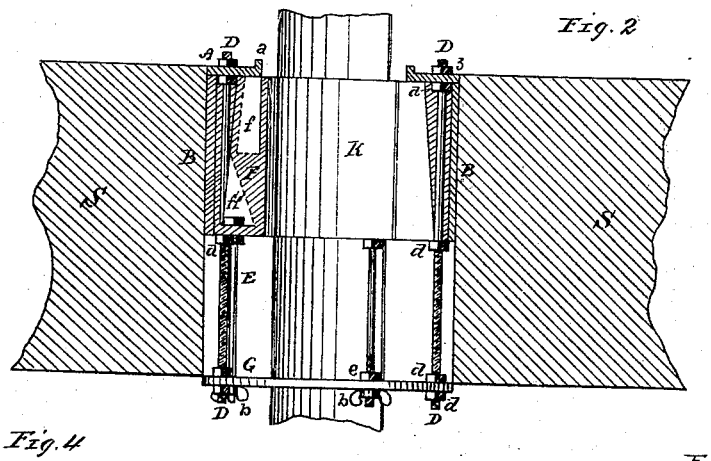


Fig. 4

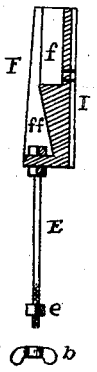


Fig. 3

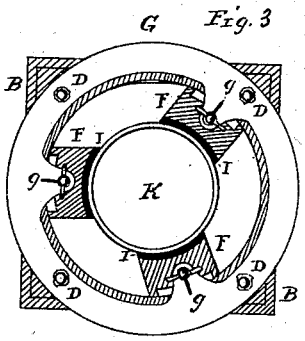
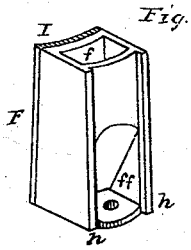


Fig. 5



WITNESSED.

W. B. Miley

Jacob Stauffer

INVENTOR.

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UNITED STATES PATENT OFFICE.

NEWTON B. LEWIS, OF COLUMBIA, PENNSYLVANIA.

IMPROVEMENT IN BUSHES FOR MILL-SPINDLES.

Specification forming part of Letters Patent No. **166,210**, dated August 3, 1875; application filed November 11, 1874.

To all whom it may concern:

Be it known that I, NEWTON B. LEWIS, of the borough of Columbia, in Lancaster county, State of Pennsylvania, have invented certain Improvements in Millstone Bush and Followers, of which the following is a specification:

The nature of my invention consists in the combination of a basal ring with the shell and cover of a mill-bush, and the adjustable lubricating followers, in a more simple, cheap, and efficient manner.

This combination and construction are shown in the accompanying drawings, making a part of this specification. A brief explanation, and reference had to the letters marked thereon, will enable those skilled in the art to make and use the same, in which—

Figure 1 is a top view, with the cover A removed; Fig. 2, a vertical section of the several parts of the bush. Fig. 3 shows the under side of the ring and slotted lugs. Fig. 4 is a sectional side view of the rod and follower; Fig. 5, a perspective view of the follower detached.

The shell B with its cover A is of the usually square form externally, having a central circular bore, gradually increased in its diameter downward to adapt the sides to the wedge-shaped followers F, hereinafter more fully explained. The basal iron ring G is connected with the shell B by four screw-rods, D, passing up and through the same, and screw-nuts set in the wood flush with the upper face, so that the screw ends also pass through perforations in the lid A, near the four corners, which are held in place by a nut and washer on the ends of the same screws. The said ring G is firmly drawn up against the under side of the bed-stone, while the shell is securely wedged into the eye of the stone above, in the usual manner, firmly combining the cover and shell with the ring and stone. Jam-nuts are shown on said screw-rods D, also below the shell and top of the ring, with an adjusting-thumb or binding-screw beneath. This ring G has three slotted lugs, *g*, at points equidistant from each other, on its inner edge, radiating toward the center of the shaft, so that a headed screw-bolt, E, from the base *f' f'* of each follower will enter through its respective slot *g* of the ring G, by which arrangement the followers F can be drawn down or pushed up on the spindle K, or removed altogether, without displacing the head-stone. These followers F are formed of a single piece, faced on their concave side I with leather or its equivalent. The upper half *f* is hollowed out to form a cup or lubricating-chamber. The lower portion has a recess, *f' f'*, boxed out, with a perforated bottom for the headed screw-bolt E, which latter connects with the slotted basal ring, to which the adjustment is held by a jam-nut, *e*, and thumb-screw *b*. These followers are confined in their lateral motion by ledges *h* on the inner face of the shell or bore in B.

I have found by experience that tallow forms a better and cleaner lubricating material than oil. The chambers *f* being filled with melted tallow, by closing the perforation through the inner wall I at starting, sufficient friction may be allowed to heat and melt the tallow; after which the friction may be diminished. It will be found also that three followers, placed at the angles of an equilateral triangle made to agree with the circumference of the spindle, give all the support necessary, and reduce the points of friction; besides, I gain space enough between them to remove any dirt or clogging, so liable to lodge, and avoid the intermediate slotted plates and extra screws by means of my slotted-ring attachment beneath the stone yielding all the facilities for adjusting the followers to the spindle, either for centralizing or giving it a true perpendicular support.

I am aware that segmental wedges, with chambers in them, placed opposite the four corners of a shell, having radial slotted plates between them, together with reverse wedges made adjustable from the under side, as seen in Patent No. 72,812, is a complication or arrangement which I do not claim.

What I claim as my invention is—

The followers F, provided with lubricating-chamber *f* and recess *f' f'*, in combination with screws E, basal ring G, having slotted lugs *g*, shell B, cover A, and screw-rods D, all constructed and arranged to operate substantially in the manner described.

NEWTON B. LEWIS.

Witnesses:

WM. B. WILEY,

JACOB STAUFFER.