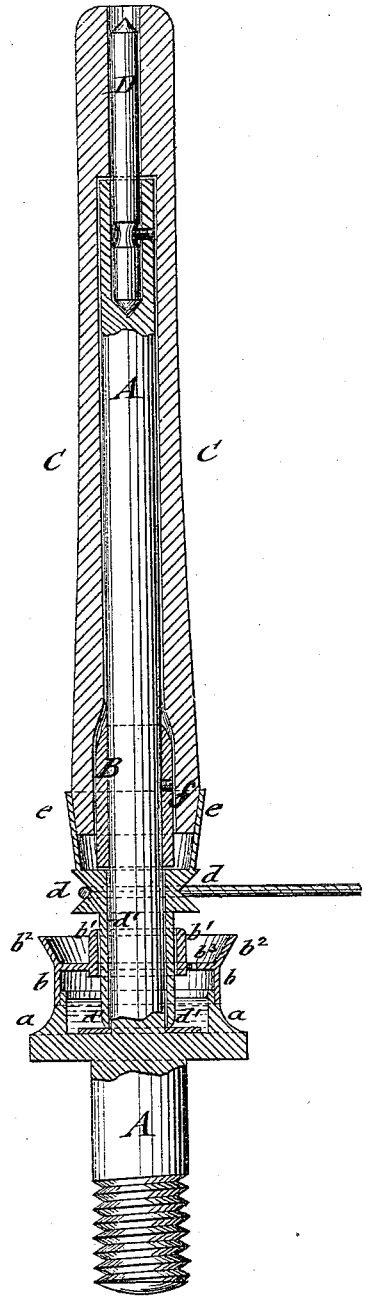
G. P. WHITMAN.

SPINDLE.

No. 192,473. Patented June 26, 1877.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GILBERT P. WHITMAN, OF ROCKPORT, MASSACHUSETTS.

IMPROVEMENT IN SPINDLES.

Specification forming part of Letters Patent No. **192,473**, dated June 26, 1877; application filed March 12, 1877.

To all whom it may concern:

Be it known that I, GILBERT P. WHITMAN, of Rockport, in the county of Essex and State of Massachusetts, have invented a new and Improved Spindle, of which the following is a specification:

The accompanying drawing represents a vertical central section of my improved spindle.

The object of my invention is to provide an improved spindle for ring-spinning or twisting.

By my construction the spindle is merely intended to steady the bobbin without driving the same, so that high speed without vibration is obtained.

The invention consists of a fixed standard or post supporting a small spindle loosely at the top, which insures steady motion to the bobbin, revolved by a combined cup, whir, and sleeve, and lubricated by an oil-cup at the base of the post, provided with a dished cap or drip-cup. A bulging collar is fastened to the post above the whir to prevent raising of oil, facilitate seating of bobbin, and prevent whir from rising.

In the drawing, A represents a fixed standard or post that is attached in suitable manner to the supporting-frame. The post is made in one piece with an oil-cup, *a*, at the base of the same that is covered to prevent entrance of dust by a lid, *b*, which is fitted over the oil-reservoir, and by a central sleeve, b^1, on the post, the lid *b* being provided with a dishing-cap or drip-cup, b^2, that takes up any lubricating material drawn up on the outside of the sleeve b^1, so as to prevent waste of oil. The drip-oil passes back to the cup *a* by a small perforation, b^3, in the lid *b*. The whir *d* is arranged above the drip-cup, and made in one piece with a downward-extending sleeve, *d'*, and with a cup, *e*, at the top to receive the bobbin C. The combined sleeve, whir, and cup revolve on a rawhide-washer in the oil-cup for reducing friction, the oil being supplied to the bearing of the combined sleeve and whir on the post A from the oil-receptacle. The bobbin C is seated in the slightly-tapering cup or socket *e*, and steadied at the upper perforated end by a small spindle, D, that is loosely inserted in the top of the post, so as to revolve by the action of the bobbin.

The steady motion and small friction of the bobbin produces hardly any wear and no loss of power.

The post A is provided with a bulging collar, B, that is rigidly attached to the post by a set-screw, *f*, above the whir, the collar serving for the purpose of preventing the oil from being drawn up along the post, so as to soil the bobbin; also for holding the whir in position while doffing; and, lastly, for facilitating the seating of the bobbin in its cup.

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

1. The combination, with bobbin, spindle, and whir, of the bulged collar guiding the bobbin, holding the whir in position, and preventing oil from working up, as shown and described.

2. The combination of the combined sleeve, whir, and cup with an oil-cup at the base of the post, and with a lid having a center sleeve drip-cup and oil-returning drip-hole, substantially as specified.

GILBERT P. WHITMAN.

Witnesses:

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