S. S. Bartlett,

Spindle Bolster.

No. 47,271. Patented Apr. 18, 1865.

Fig. 1.

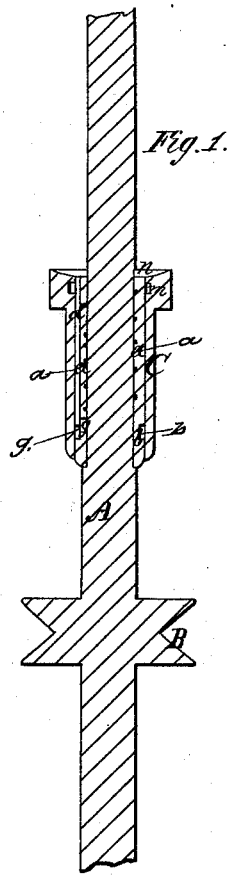


Fig. 2.

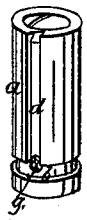


Fig. 3.

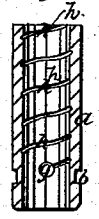


Fig. 4.

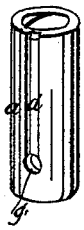
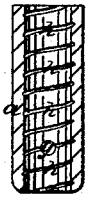


Fig. 5



Witnesses

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UNITED STATES PATENT OFFICE.

STEPHEN S. BARTLETT, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN SELF-LUBRICATING SPINDLE-BOLSTERS OF SPINNING FRAMES.

Specification forming part of Letters Patent No. **47,271.** dated April 18, 1865.

To all whom it may concern:

Be it known that I, STEPHEN S. BARTLETT, of the city and county of Providence, and State of Rhode Island, have invented a new and Improved Device for Lubricating Spinning-Frame Spindles; 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 accompanying drawings, in which—

Figure 1 represents a vertical central section through the spindle and bolster of a spinning-frame spindle. Figs. 2 and 4 represent perspective views of a self-oiling casing which I employ within the bolster of the spindle. Figs. 3 and 5 represent, respectively, vertical central sections through the casings represented at Figs. 2 and 4.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a spindle of a spinning-frame, which is driven by means of its pulley B. C represents the bolster which is set into the rail of the spinning-frame to sustain the spindle, and *a* represents a removable metal casing, which is set within the bolster C, and in which the spindle revolves. The casing *a* is accurately turned so as to fit nicely within the bolster C, and its lower rim is fitted therein air-tight, and when the casing is driven home in the bolster it becomes secured thereto firmly without any other fastenings. A circular groove, *b*, is made near the lower end of the casing, which communicates with a vertical groove, *d*, the latter extending up to the top of the casing. A hole, *g*, is bored through the casing at the junction of the grooves *b* and *d*, so that one half of it is in the groove *b* and the other half within the groove *d*. This hole communicates with a spiral groove, *h*, made on the inner circumference of the casing, *a*, which is in contact with and serves as the bearing of the spindle A. The turn and inclination of the spiral groove *h* is such that any oil which reaches the spindle A through the hole *g* is by the revolution of the spindle forced in and upward through the groove *h*.

The operation of the device is as follows: The oil being supplied to the upper concave, *n*, formed in the top of the rim of the bolster C, it passes down the vertical groove *d*, thence into the horizontal groove *b*, and through the hole *g* into the spiral groove *h*, wherein it is forced upward by the action of the revolving spindle A, and up again into the concave *n* of the bolster, and thus returns in its course down the groove *d*. Thus the oil is made to circulate automatically down the groove *d* and up the spindle A, lubricating the spindle automatically without any loss.

m represents an annular groove, which is turned in the circumference of the bolster C, near its upper rim, for the purpose of catching any surplus oil over and above that which descends through the vertical groove *d*. This circular groove may be cut in the upper part of the casing *a* instead of the bolster, and in place of making the groove *b* near the lower end of the casing *a* a corresponding groove may be turned on the inner face of the bolster C.

In some cases the annular groove *b* may be dispensed with, and the inner spiral groove, *h*, may be made to extend from bottom to top of the casing, in which case the groove should be very fine at the bottom, should increase in size toward the top, and should communicate in its course with the hole *g* in the casing, as represented at Figs. 4 and 5.

By the latter arrangement any fibers that may get in at the bottom of the casing will be forced up the groove *h* and out at the top of the bolster.

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

1. The combination, with the bolster and casing of a spinning-frame spindle, of a vertical groove, *d*, and oil-hole *g*, substantially as and for the purposes described.

2. The combination of the groove *m* in the upper part of the bolster C with the vertical groove *d* and oil-hole in the casing, substantially as and for the purposes described.

3. The combination of the circular grooves in the bolster and casing with the vertical groove *d* and oil-hole *g*, substantially as and for the purposes specified.

4. The combination, with the bolster C, of a casing, *a*, having a vertical groove, *d*, oil-hole *g*, and inner spiral groove, *h*, substantially as and for the purposes specified.

STEPHEN S. BARTLETT.

Witnesses:
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