JACOB H. SAWYER.

Improvement in Spindle-Bearings for Spinning Machines.

No. 118,282. Patented Aug. 22, 1871.

Fig. 1.

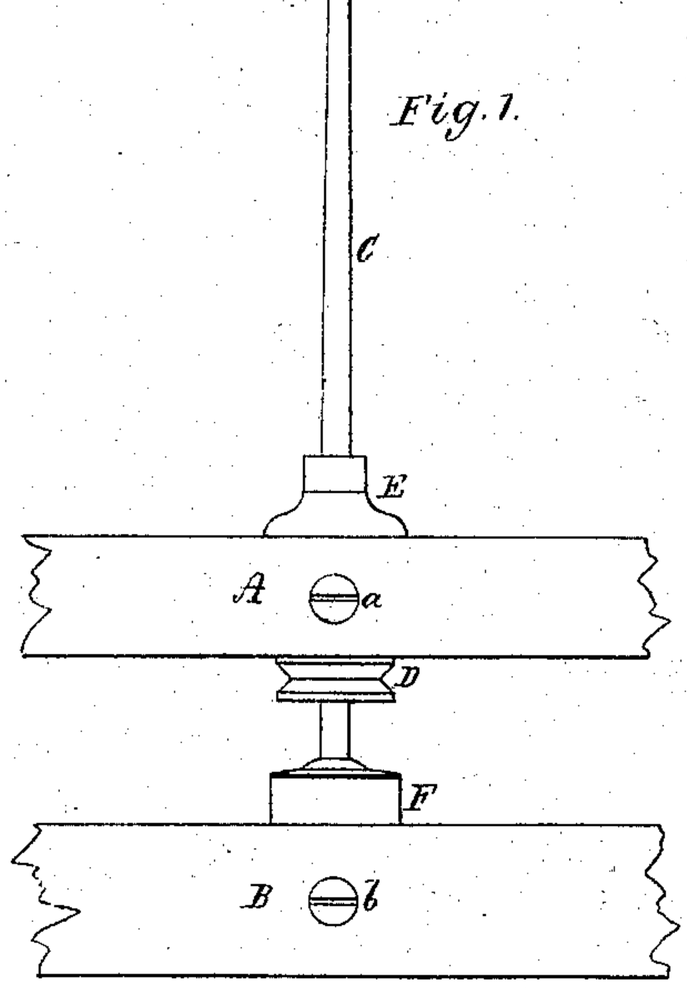


Fig. 2.

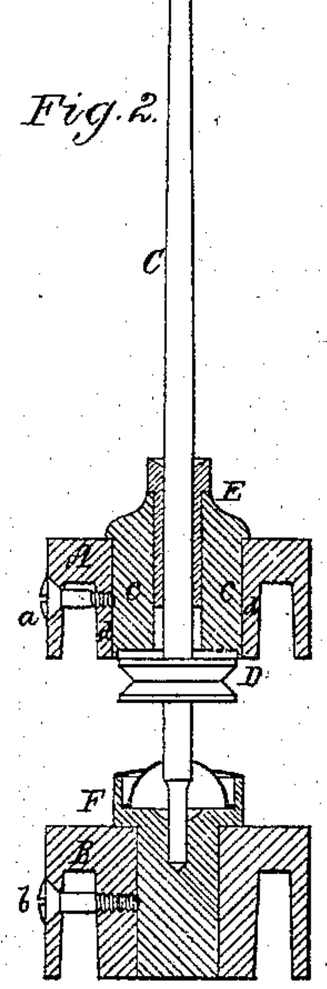


Fig. 3.

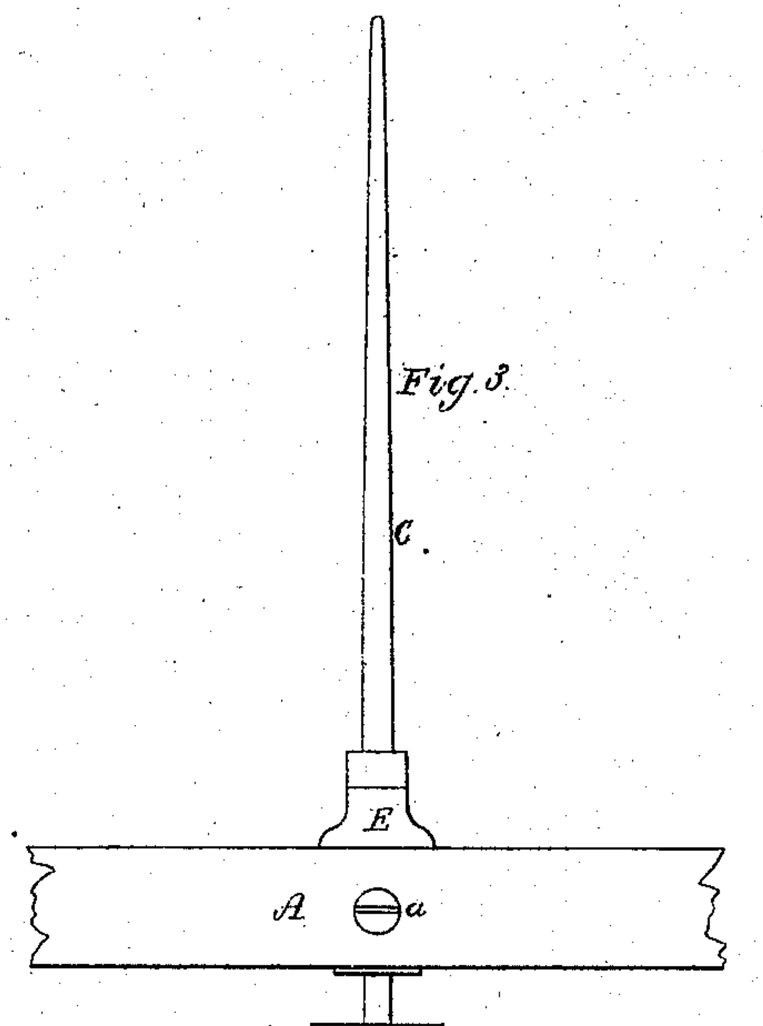
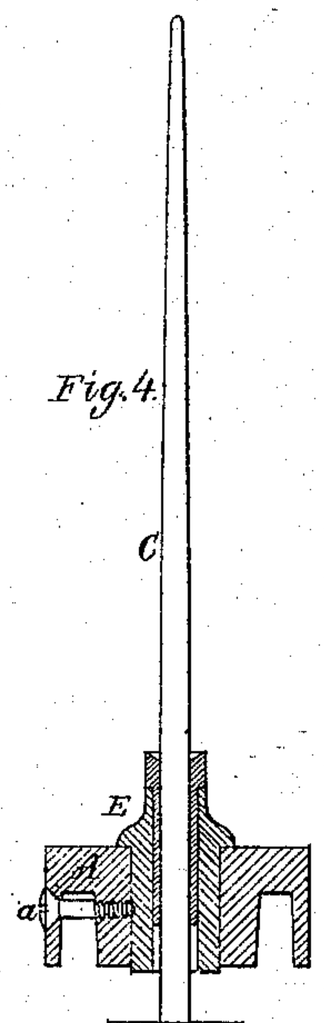


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

JACOB H. SAWYER, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN SPINDLE-BEARINGS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. 118,282, dated August 22, 1871.

To all whom it may concern:

Be it known that I, JACOB H. SAWYER, of Lowell, of the county of Middlesex and State of Massachusetts, have made a new and useful invention having reference to the Spindles and their Supports of Spinning and Twisting Machinery; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a front elevation, and Fig. 2 a vertical section of one construction of my invention. Fig. 3 is a front view, and Fig. 4 a vertical section of another construction of my invention.

In spinning-frames where two rails have been employed for supporting the bearings of the spindle, and the whirl of such spindle has been arranged between the two rails, it has been deemed a necessity to arrange the two rails at such a distance apart as would admit of the spindle being removed from its bearings and the rails, by being drawn obliquely out of the space between such rails. This, as a matter of course, required the spindle to be made correspondingly long, and, besides, of a diameter sufficient to obviate its vibration while in use.

With my improvement the two supporting-rails may be brought very near together, the spindle reduced greatly in length and diameter, comparatively, and the spindle and whirl be extracted from the rails and one of the bearings by being drawn vertically with the other bearing through its rail-socket.

In carrying out my invention I make the bearing-socket in the rail through which the spindle and its whirl are to be extracted of a diameter or size so much larger than the whirl as to admit of the said bearing and the spindle and whirl being drawn, simultaneously, perpendicularly through the rail.

In the drawing, A and B are the two supporting-rails; C, the spindle; D, the whirl; E, the bolster or upper bearing; and F the step or lower bearing of the spindle, both bolster and step being socketed in the rails and held therein by clamp-screws *a b*. In Figs. 1 and 2 the bolster is represented as constructed with the tenon or part C, which enters its rail as large if not a little larger in diameter than the whirl, and having a corresponding socket, *d*, in the upper rail, the whole being so that the bolster, the spindle, and the whirl may together be simultaneously raised and drawn through and out of the upper rail without rendering it necessary to extract the spindle by drawing it obliquely out of the space between the two rails. In Figs. 3 and 4 the step and its socket are represented as each having a diameter larger than that of the whirl, the same being so as to enable the step, the whirl, and the spindle to be drawn vertically down through the lower rail. In either case it will be perceived that the spindle and bearing may readily be put in place in the rail and other bearing by vertical movements through the two rails.

I claim as my invention—

In a spinning-machine, having the spindle-whirl arranged or to be arranged between the two supporting-rails, as set forth, a spindle-bearing and its holding-socket constructed larger in size or diameter than the whirl, so as to enable the spindle, the whirl, and such bearing (whether the bolster or the step) to be inserted or withdrawn together through the rail and the spindle, to be inserted into or drawn out of the other bearing, substantially in manner as described, and as occasion may require.

JACOB H. SAWYER.

Witnesses:

R. H. EDDY,

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