H. C. FENTON & W. H. CHAMPLIN.

Top-Roll for Spinning-Machines.

No. 212,670. **Patented Feb. 25, 1879.**

fig. 1.

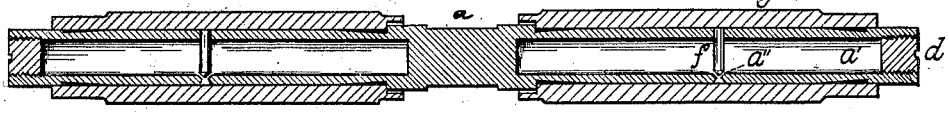


fig. 2.

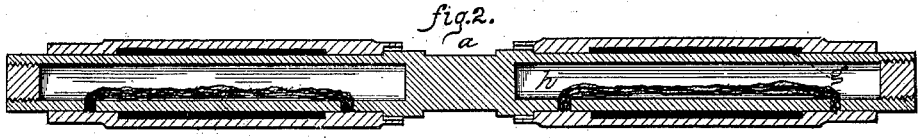


fig. 3.

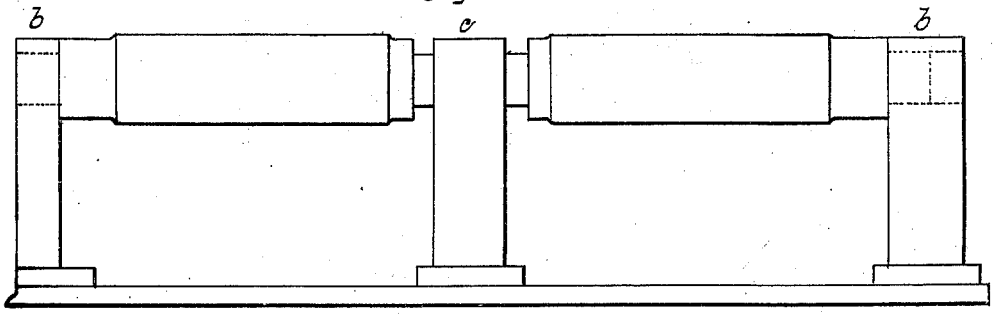
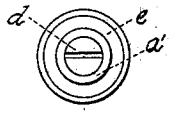


fig. 4.



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UNITED STATES PATENT OFFICE.

HIRAM C. FENTON, OF WETHERSFIELD, AND WILLIAM H. CHAMPLIN, OF STAFFORD SPRINGS, ASSIGNORS TO THEMSELVES, CALEB M. TALCOTT, OF HARTFORD, AND AARON W. C. WILLIAMS, OF BROOKFIELD, CONN.

IMPROVEMENT IN TOP ROLLS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. **212,670**, dated February 25, 1879; application filed September 16, 1878.

To all whom it may concern:

Be it known that we, HIRAM C. FENTON, of Wethersfield, in the county of Hartford and State of Connecticut, and WM. H. CHAMPLIN, of Stafford Springs, county of Tolland, State of Connecticut, have invented certain new and useful Improvements pertaining to Top Rolls for Spinning-Machines, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 shows a central longitudinal section of a top roll constructed in accordance with our invention. Fig. 2 is a similar view of a modification. Fig. 3 is a view of the exterior of the roll and its bearings. Fig. 4 is an end view of the top roll.

The so-called "top rolls" are used in spinning-machines, drawing-frames, and the like.

We will first describe the construction and operation of our top roll, and then specify the improvement in a claim.

The letter *a* denotes a shaft or arbor, hollow through its length, to form the oil-reservoir *a'*. This arbor is not, ordinarily, rotary, but sits in bearings *b*, and is held down by a weighted saddle, *c*. An end (or the ends) of the hollow arbor is stopped by a screw-plug, *d*, serving as a means to introduce oil to the reservoir *a'*. On this arbor is a shell-roll, (or shell-rolls,) *e*, which is rotary on the arbor, being driven by a bottom roll, between which and the shell-roll the sliver of cotton passes.

The oil contained in the reservoir *a'* is for lubricating the contact-surfaces of the arbor and shell-roll.

The oil finds exit from the reservoir to the exterior of the arbor through the orifice *a''*, which is nearly filled by the pin *f*, so that oil cannot flow freely, and preferably the fit is so close that oil will only flow through by capillary attraction.

The effect of this arrangement is, that one filling of the oil-reservoir answers for some months of lubrication.

As to the modification shown in Fig. 2, the shell-roll may have, and preferably has, the chamber *g*, to lessen weight and friction; and in place of the pin *f*, and as an equivalent therefor, the wick *h* is used.

We claim as our invention—

The shaft *a*, containing the reservoir *a'* and the orifice *a''*, the pin *f*, fitting to the orifice, and the shell-roll *e*, all combined and arranged for operation and use substantially as shown and described.

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