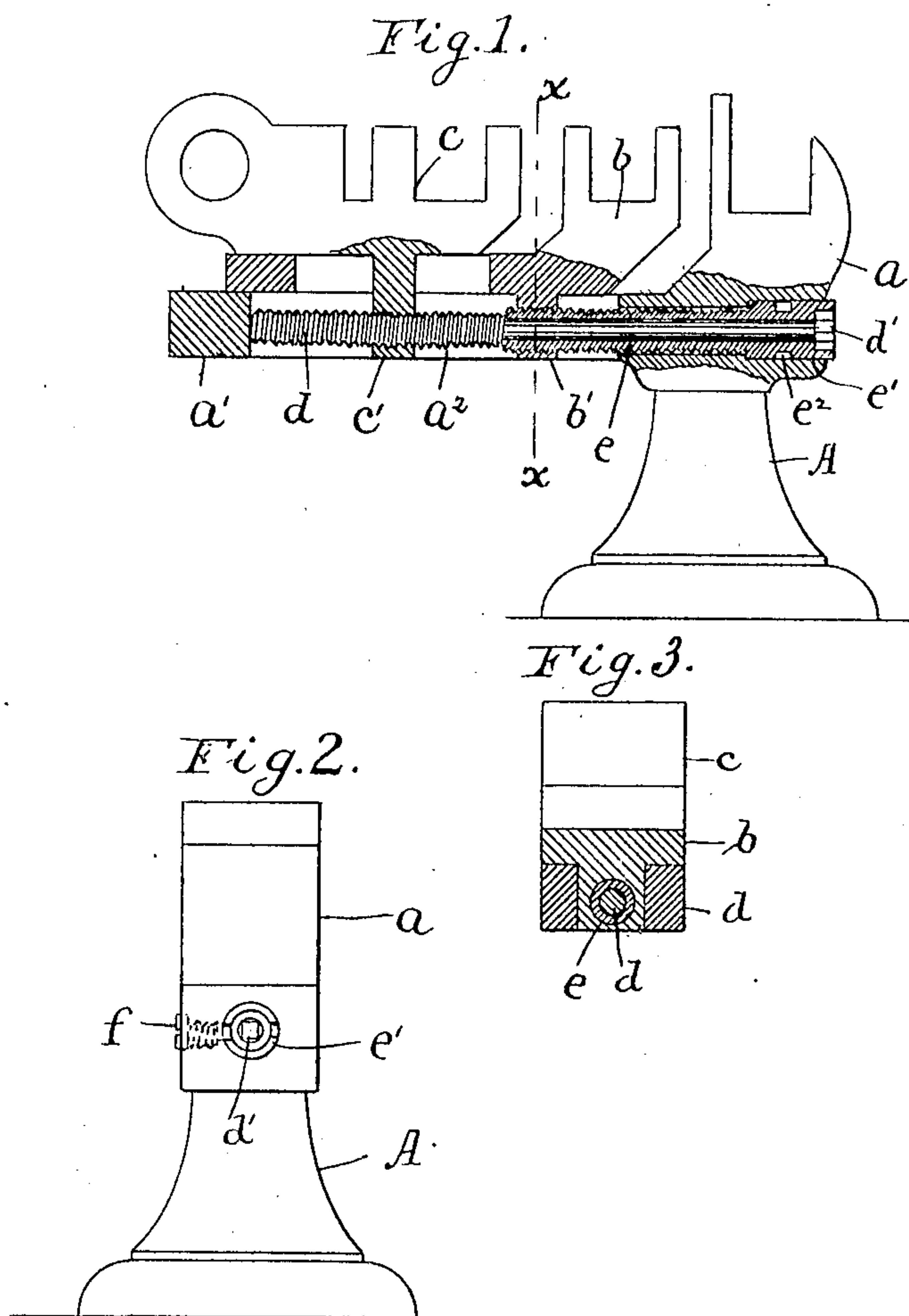


No. 888,102.

PATENTED MAY 19, 1908

E. D. LIBBY.  
ROLL STAND FOR SPINNING MACHINES.

APPLICATION FILED JUNE 20, 1907.



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# UNITED STATES PATENT OFFICE.

EDWARD D. LIBBY, OF WESTBROOK, MAINE.

## ROLL-STAND FOR SPINNING-MACHINES.

No. 888,102.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed June 20, 1907. Serial No. 379,888.

*To all whom it may concern:*

Be it known that I, EDWARD D. LIBBY, a citizen of the United States of America, and resident of Westbrook, county of Cumberland, State of Maine, have invented certain new and useful Improvements in Roll-Stands for Spinning-Machines, of which the following is a specification.

My invention relates to roll stands and it relates particularly to roll stands used on jack frames, fly frames, intermediates, slubbers, draw frames etc. which are used for twisting roving in the card room of textile mills.

These roll stands have usually a fixed roll support or bearing in the front of the stand and two and sometimes three adjustable roll supports in the rear, these latter supports being adjustable with relation to each other and to the fixed roll. The distance apart of these three or more sets of rolls is determined by the amount of draft given to the roving and consequently it is essential that the two rear rolls should be readily adjustable so that their distance apart may be regulated as well as the distance of both from the front roll.

Hitherto it has been common practice to form on the stand a longitudinally slotted rearward extension through which vertical bolts passed into the adjustable roll supports these latter being clamped into place by suitable nuts located on the lower ends of said bolts. These rolls have also been adjusted by a single screw extending through from the front of the stand and engaging lugs which extended downward into the slotted extension, this screw having threads of two different pitches whereby the rolls would separate when they were moved backward and would approach when they moved forward. Both these arrangements were defective, the former because of the inconvenience of reaching back and beneath the stand to manipulate the nuts and the latter because with a single screw with two threads the position of the movable rolls could not be established where they were needed but the adjustment was limited to certain relative positions, that is, if either of the rear rolls was in a certain position with relation to the front roll, then the other rear roll must occupy a certain position which could not be changed.

The object of my invention is to hold the movable rolls by means of screws terminating in the forward portion of the stand and at a point where they may readily be operated

without interfering with the work and to provide each roll with an independent adjustment so that it may be placed in any desired position relative to the other movable roll or to the fixed roll. I accomplish this object by operating each of the movable roll supports by a screw extending through from the front of the stand, the outer screw or screws being hollow and engaging the front support or supports and the inner one extending centrally through to the rear support.

I illustrate my invention by means of the accompanying drawing in which is shown a roll stand of ordinary construction having applied thereto my invention.

In the drawing, Figure 1 is a side elevation of the stand with portions showing in section, Fig. 2 is a front elevation and Fig. 3 is a section on the lines  $x x$  of Fig. 1.

A represents the standard, on the upper end of which is the head  $a$  and extending back from the head is a rearward extension  $a'$  here shown as horizontal, the extension  $a'$  having formed therein a longitudinal groove or slot  $a^2$ .

$b$  and  $c$  are movable rolls supports carried by the extension  $a'$  and adapted to move longitudinally of said extension. As here shown, the forward support  $b$  has a lug  $b'$  extending down into the slot  $a^2$  and the support  $c$  rests on a rearward extension of the support  $b$  and has a lug  $c'$  which extends down through a longitudinal groove in the support  $b$  and into the slot  $a^2$ . Both the lugs  $c'$  and  $b'$  are provided with screw threaded openings adapted to engage a screw disposed longitudinally in the slot  $a^2$ . The rear end of the slot  $a^2$  is closed by a transverse partition. The supports  $b$  and  $c$  are moved longitudinally by means of two screws which extend longitudinally through the slot  $a^2$  and terminate in the front of the stand when they can be readily adjusted.

The screw  $e$  which engages the lug  $b'$  of the outer support is made hollow and the screw  $d$  which engages the lug  $c'$  of the rear support is formed on the rear end of a spindle which passes through the hollow screw  $e$ . The screw portion of the spindle  $d$  is larger in diameter than the forward or spindle portion and its rear end abuts against the partition at the rear of the slot  $a^2$  the forward end of the screw forming a shoulder which bears against the rear end of the hollow screw. Thus the screw  $d$  is prevented from moving longitudinally by these two bearings. The



hollow screw *e* is prevented from moving longitudinally by a set screw *f* which enters the head *a* and terminates in an annular slot *e*<sup>2</sup> formed on the outside surface of the enlarged head *e'* of the screw *e*.

The screw spindle *d* terminates in a head *d'* adapted to be worked by a wrench and the heads of both screws are so formed and located that with a suitable wrench either or both screws may be turned.

If more than two movable rolls are used as in the case of draw frames, the screws are arranged one inside the other as in the present case.

In a roll stand constructed in this manner the operator has perfect control over the position of the rolls and they can be quickly and easily set in any desired relation to each other.

I claim:—

1. The herein described roll stand having a standard, a rearward extension on its upper end provided with a longitudinal slot to form a guide way, a plurality of roll supports carried on said extension and adapted to move longitudinally thereof, each of said supports having a downward extending lug provided with a screw threaded opening and forming a guide adapted to slide longitudinally in said slot, a hollow screw extending from the front of the roll stand and engaging the forward lug and a spindle extending through said hollow screw having a screw thread on its rear end engaging the rear lug and means for preventing the longitudinal motion of said screw and spindle.

2. The herein described roll stand having a standard, a rearward extension on its upper end provided with a longitudinal slot with a transverse partition at its rear end, to form a guide way, a plurality of roll supports carried on said extension and adapted to move longi-

tudinally thereof, each of said supports having a downward extending lug provided with a screw threaded opening and forming a guide adapted to slide longitudinally in said slot, a hollow screw extending from the front of the roll stand and engaging the forward lug and a spindle extending through said hollow screw having its rear end screw threaded and of larger diameter than the opening in the hollow screw, said spindle bearing against said transverse partition and engaging the rear lug and means for preventing the longitudinal motion of said screw and spindle.

3. The herein described roll stand having a standard, a rearward extension on its upper end provided with a longitudinal slot with a transverse partition at its rear end to form a guide way, a plurality of roll supports carried on said extension and adapted to move longitudinally thereof, each of said supports having a downward extending lug, provided with a screw threaded opening and forming a guide adapted to slide longitudinally in said slot, a hollow screw having an annular groove on the outer surface near the forward end, said screw extending from the front of the roll stand and engaging the forward lug and a spindle extending through said hollow screw having its rear end screw threaded and of larger diameter than the opening in the hollow screw, abutting against said transverse partition and engaging the rear lug, the forward ends of said screw and spindle terminating at the face of the stand and each being provided with a head adapted to be engaged by a suitable wrench and a set screw entering said annular groove.

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Witnesses:

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