

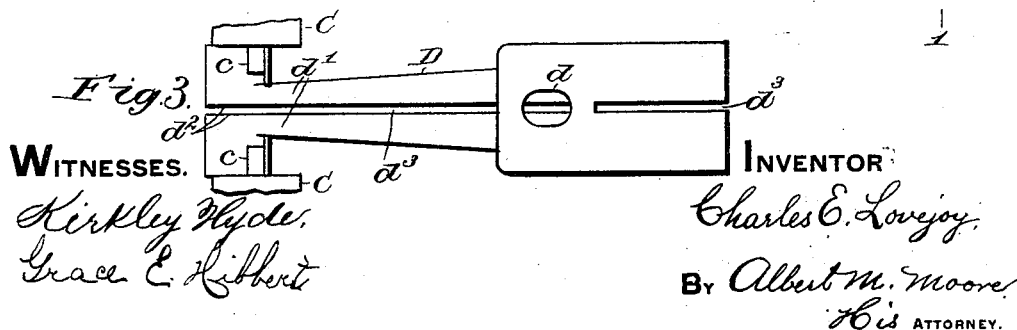
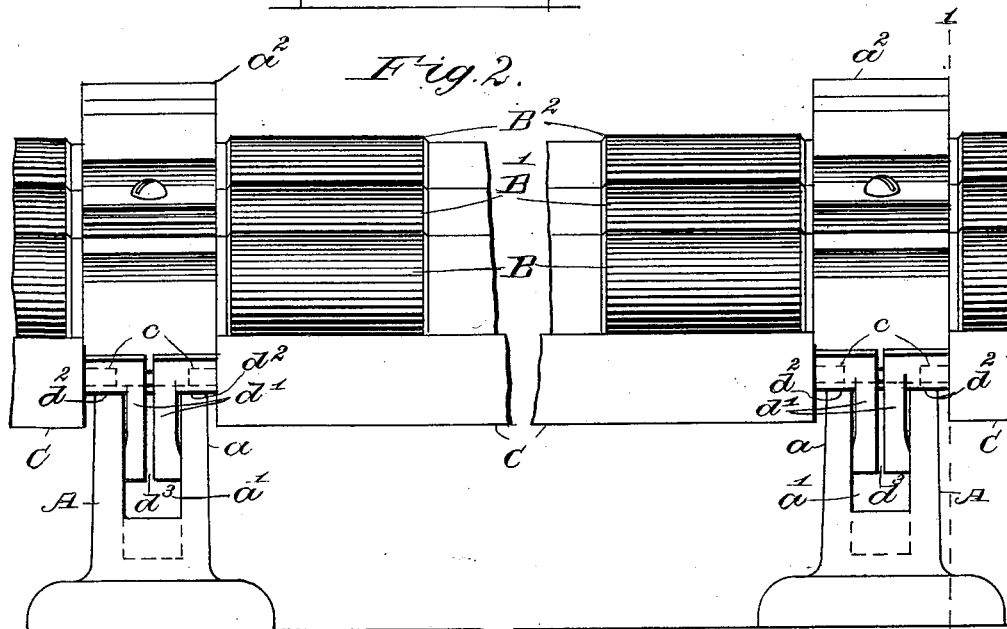
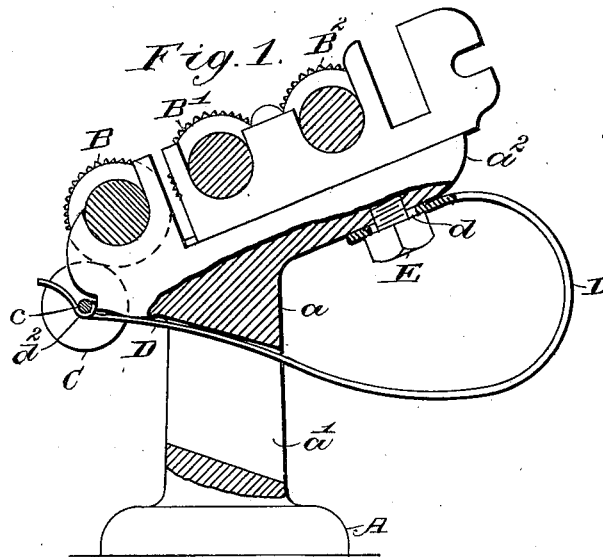
No. 649,063.

Patented May 8, 1900.

C. E. LOVEJOY.  
SCAVENGER ROLL SUPPORT.

(Application filed Apr. 18, 1898.)

(No Model.)



WITNESSES.

Kirkley Hyde,  
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# UNITED STATES PATENT OFFICE.

CHARLES E. LOVEJOY, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THOMAS C. ENTWISTLE, OF SAME PLACE.

## SCAVENGER-ROLL SUPPORT.

SPECIFICATION forming part of Letters Patent No. 649,063, dated May 8, 1900.

Application filed April 16, 1898. Serial No. 677,810. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. LOVEJOY, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Scavenger-Roll Supports, of which the following is a specification.

My invention relates to scavenger-roll supports; and it consists in the construction, devices, and combinations hereinafter described and claimed.

The object of this invention is to allow the working surface of the scavenger-roll to come close up to the side of the roller-stand, and thus prevent the broken ends and sliver taken from the drawing-rollers getting between the scavenger-roll and the roller-stand and winding about the scavenger-roll pin or arbor, which winding or accumulating of waste on the pin or arbor causes the pin to be forced off from the spring-support and to drop, while the other end of the scavenger-roll may or may not be retained on its support. In either case some of the broken ends will not be taken care of by the scavenger-roll and are likely to be caught by the next yarns and carried out to the spindles, thus spoiling the yarn, which after being spoiled is carried through the spooler, warper, and slasher and into the loom and shows as an uneven ragged thread in the cloth. When the opposite ends of the scavenger-roll are at different elevations or when said roll is out of parallelism with the lower front drawing-roller, said scavenger-roll can be in contact with only a part of the bosses on said drawing-roller and will not properly perform its function, and when one of said ends is much depressed the corner of the other end is brought into contact with the fluted boss at the opposite end of said drawing-roller and is ground or cut thereby, the scavenger-roll being a wooden cylinder covered with cloth, or sometimes with paper.

By arranging the scavenger-roll support wholly within the planes of the sides of the head of the roller-stand the ends of the scavenger-roll may be brought close to said stand.

The springs which commonly support the scavenger-rolls are usually entirely outside of these vertical planes and are commonly each

about seven-sixteenths of an inch in width at their supporting-points and prevent the body of the scavenger-roll from approaching within that distance of the roller-stand.

It is customary to remove the scavenger-rolls from the spinning-machine, one at a time, about once in an hour and a half, while the machine is running, in order to strip said rolls, and while said rolls are out the spring-supports press up against the end bosses of the front fluted drawing-roll and wear away the flutes, the drawing-roll being much softer than the tempered-steel springs.

Each sliver or "end" while passing through the drawing-rolls is given a traverse motion nearly from end to end of the corresponding fluted boss on the lower front drawing-roll, and after the flute has been worn away by the spring the sliver in passing between the worn flutes and the corresponding leather-covered top roll is not properly drawn and is not properly held, but comes out in irregular or varying sizes and is almost certain to be broken by the tension caused by the traveler in a ring-spinning frame or by the direct pull of the spindle in a mule. The spring when placed below the head of the roller-stand cannot possibly come in contact with the fluted roll, and this cause of breakage is thus entirely removed.

In the accompanying drawings, Figure 1 is a vertical central longitudinal section on the line 1 1 in Fig. 2 of a drawing-roll stand provided with my improvement, a scavenger-roll, and steel-rollers or fluted drawing-rollers supported on said stand; Fig. 2, a front elevation of two roller-stands with scavenger-roll, said improvement, and fluted drawing-rollers; Fig. 3, a plan of my improved scavenger-roll support detached from the roller-stand and adjacent parts of two scavenger-rolls.

Each drawing-roller stand A is of the usual construction, except that its vertical part or post *a* is provided with a vertical slot *a'*, which runs through said post from front to back of the same. On the inclined heads *a*<sup>2</sup> of two or more such stands A are journaled the lower fluted steel drawing-rolls B B' B<sup>2</sup>, of the usual construction.

The scavenger-roll C is of any usual con-

struction, being preferably a wooden roll covered with cloth and provided with metallic pivots or arbors *c*, which serve as journals, there being a scavenger-roll between  
5 each roller-stand A and the next; but the body of each scavenger-roll is represented as long enough to reach from one stand to the next.

The scavenger-roll support D is represented as a spring of sheet metal bent to a  
10 semielliptic form and having a slot *d*, through which the bolt E passes up into the under side of the head *a*<sup>2</sup>, said slot *d* being of sufficient length to permit the support D to be adjusted back and forth in the usual manner.  
15 In front of its semielliptical portion the spring D is narrowed at *d'* sufficiently to admit of the part *d'* rising and falling freely in the slot *a'* of the post *a*, through which slot said spring projects. The free end portion of the spring  
20 D is wider than the slot *a'* (but not wide enough to project beyond the sides of the head *a*<sup>2</sup> of the stand A) and is provided with a depression *d*<sup>3</sup>, which serves as a half journal-box for a scavenger-roll arbor *c*, and the  
25 spring being slit or divided longitudinally at *d*<sup>3</sup> from its free end to near its point of attachment serves to support the adjacent ends of two scavenger-rolls, as shown in Fig. 2. The spring-supports D hold the scavenger-rolls  
30 against the bottom of the front fluted roll.

I claim as my invention—

1. The combination of the roll-stand, having a head, drawing-rolls, supported therein, and a scavenger-roller support, secured to

said head and lying wholly within the vertical planes of the side walls of said head. 35

2. The combination of the roll-stand, having a head and having a post provided with a vertical slot extending through said post from front to rear thereof, and a roller-support  
40 secured on said stand in the rear of said post and extending through said slot.

3. The combination of the roll-stand, having a head and having a post provided with a vertical slot extending through said post from  
45 front to rear thereof, a roller-support secured on said stand in the rear of said post and extending through said slot, and provided with a depression to form a bearing in front of said post and a roll, provided with a pivot or  
50 journal, supported in said depression.

4. A roller-supporting spring, having a comparatively-broad rear end and a split shank, and adapted to be attached to a roll-stand,  
55 provided with a head and with a post, having a vertical slot, extending through said post from front to rear thereof, said spring being adapted to be secured to said head in the rear of said post and to extend through said slot and to press against the under side of said  
60 head in front of said post.

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 8th day of April, A. D. 1898.

CHARLES E. LOVEJOY.

Witnesses:

ALBERT M. MOORE,  
GRACE E. HIBBERT.