

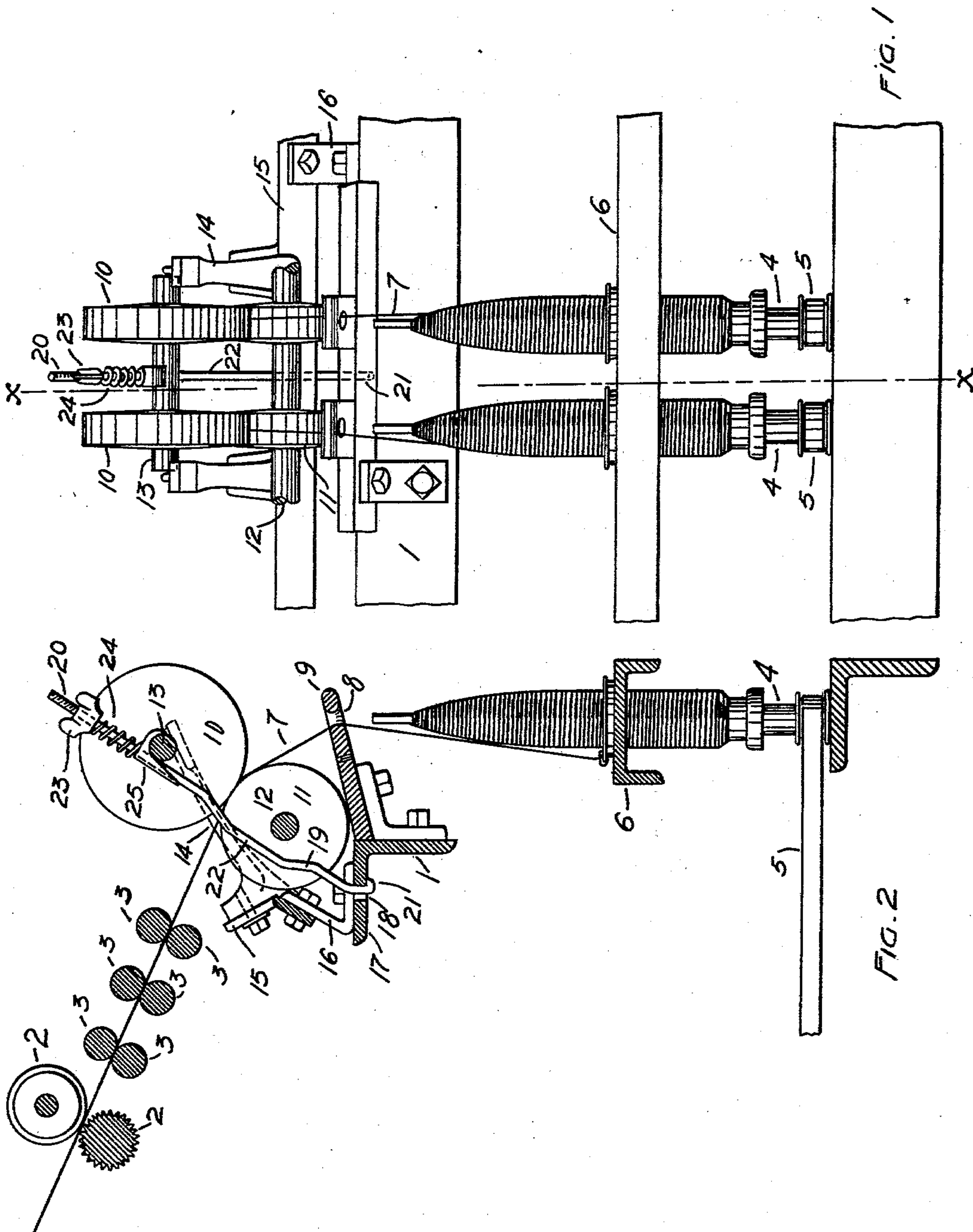
No. 744,114.

PATENTED NOV. 17, 1903.

A. A. SACK.  
SPRING HOLDER FOR TOP ROLLERS.

APPLICATION FILED MAY 11, 1903.

NO MODEL.





## UNITED STATES PATENT OFFICE.

AUGUST ALBERT SACK, OF PROVIDENCE, RHODE ISLAND.

## SPRING-HOLDER FOR TOP ROLLERS.

SPECIFICATION forming part of Letters Patent No. 744,114, dated November 17, 1903.

Application filed May 11, 1903. Serial No. 156,537. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST ALBERT SACK, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Spring-Holders for Top Rollers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in worsted spinning or twisting frames, but is limited to the top rollers and adjacent mechanism.

Heretofore the frictional spring-holder has comprised an upwardly-directed member whose lower extremity was looped through a hole in the extremity of an inclined bar which projected from the cross saddle-bar. As the angle of inclination of the former bar was not coincident with the saddles and as the hole before mentioned required considerable clearance-space to accommodate the loop of the pivoted holder, two serious results followed—namely, the friction upon the bearings of the rollers was excessive and the play of the upper portion of the holder, due to the looped joint, rendered it necessary to set the holder binding-screw extremely tight to escape lateral variation, thereby generating additional excessive friction. Besides, the integral saddle-support, such as heretofore been proposed, has the objection that the saddles cannot so readily adjust themselves to the requisite varying positions and, furthermore, are more costly in the first place and more expensive to repair.

To obviate the above disadvantages, my invention is primarily directed and consists in the novel construction and arrangement of parts hereinafter described, and illustrated in the accompanying drawings, wherein—

Figure 1 is a front elevation of a portion of a worsted-spinning frame embodying my invention, and Fig. 2 a transverse section of the same on line  $x-x$  of Fig. 1.

In the drawings the drawing-rolls 2 2 and wooden tumblers 3 of a worsted-spinning frame 1 are shown, together with the spindles 4, bands 5, and ring-rail 6. The roving 7 is shown passing through the guide-eyes 8 of the thread-board 9 after passing between the front top rollers 10 and bottom rollers 11.

The latter are mounted upon the usual power-shaft 12 and the former upon shafts 13, whose extremities have bearings upon the supports 14, projecting from the transverse bar or upper carrier 15. The latter is by braces 16 mounted upon the frame 1, whose horizontal portion 17 serves as a lower carrier and perforated, 18, at intervals to allow passage there-through of the holder-rod 19. In detail the rod is provided at its upper end with threads 20 and at its lower end with a hook 21, while its intermediate portion has a rearwardly-directed bend 22. Mounted upon the holder-rod are the usual thumb-screw 23 and spring 24 for forcing the brass or intermediate saddle 25 downwardly upon the top-roller shaft 13.

The adjustment of the parts is effected by turning down the thumb-screw 23, thereby increasing the downward pressure upon the shaft 13 and forcing the roller 10 more tightly upon the roller 11. This diminishes the thickness of the roving, while an upward turn of the screw has an opposite effect upon the size of the roving.

It will be noticed by reference to Fig. 2 that the incline of the holder-bar 22 and support 14 are substantially the same. This direct pull of the brass saddle 25 in a line nearly coincident with a line joining the shafts 12 and 13 takes away practically two of the three resistances involved in the old structures, where the holder-bar was pivoted to the end of a projection.

By my structure there is less wear upon the roller-coverings, a less degree of pressure required upon the brass saddle, and the driving-belts of the spinning-frame need be half their present width and run loosely.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a spinning-frame, the combination with the front bottom rollers and the front top rollers in contact therewith, of a transverse bar secured to the frame, independent supports projecting from said bar, a carrier-bar below and in front of the said bar and having openings, holder-rods engaged at one end in said openings, saddles adjustably mounted on said rods, said rods having inclined portions substantially parallel with the said independent supports whereby the direct



pull of the saddles is in line with the line joining the shafts of the top and bottom rollers, and adjustable tension devices on said rods independent of the saddles on the transverse  
5 bar, and acting directly on the saddles on the said rods, as and for the purpose specified.

2. In a spinning-frame, the combination with the frame having horizontal portion serving as a lower carrier and having openings,  
10 independent supports projecting from an upper carrier, said upper carrier and braces joining the same and said lower carrier, an upper-roller shaft mounted in said supports, holder-rods having their lower ends hooked  
15 and engaged in the openings of the lower car-

rier, and having rearwardly-directed bend intermediate the ends, saddles adjustable on said rods and adjusting tension means on said rods independent of the saddles on the upper carrier, and acting directly on said saddles at  
20 the end opposite the engagement of the holder-rods with the carrier, the incline of the holder-rods and of the saddles being in alinement, as and for the purpose specified.

In testimony whereof I have affixed my signature in presence of two witnesses.

AUGUST ALBERT SACK.

Witnesses:

GEORGE D. SACK,

HORATIO E. BELLOWS.