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Patented Nov. 22, 1898.

J. H. RAWLINS.

TRAVERSE BAR ACTUATING MECHANISM FOR SPINNING MACHINERY.

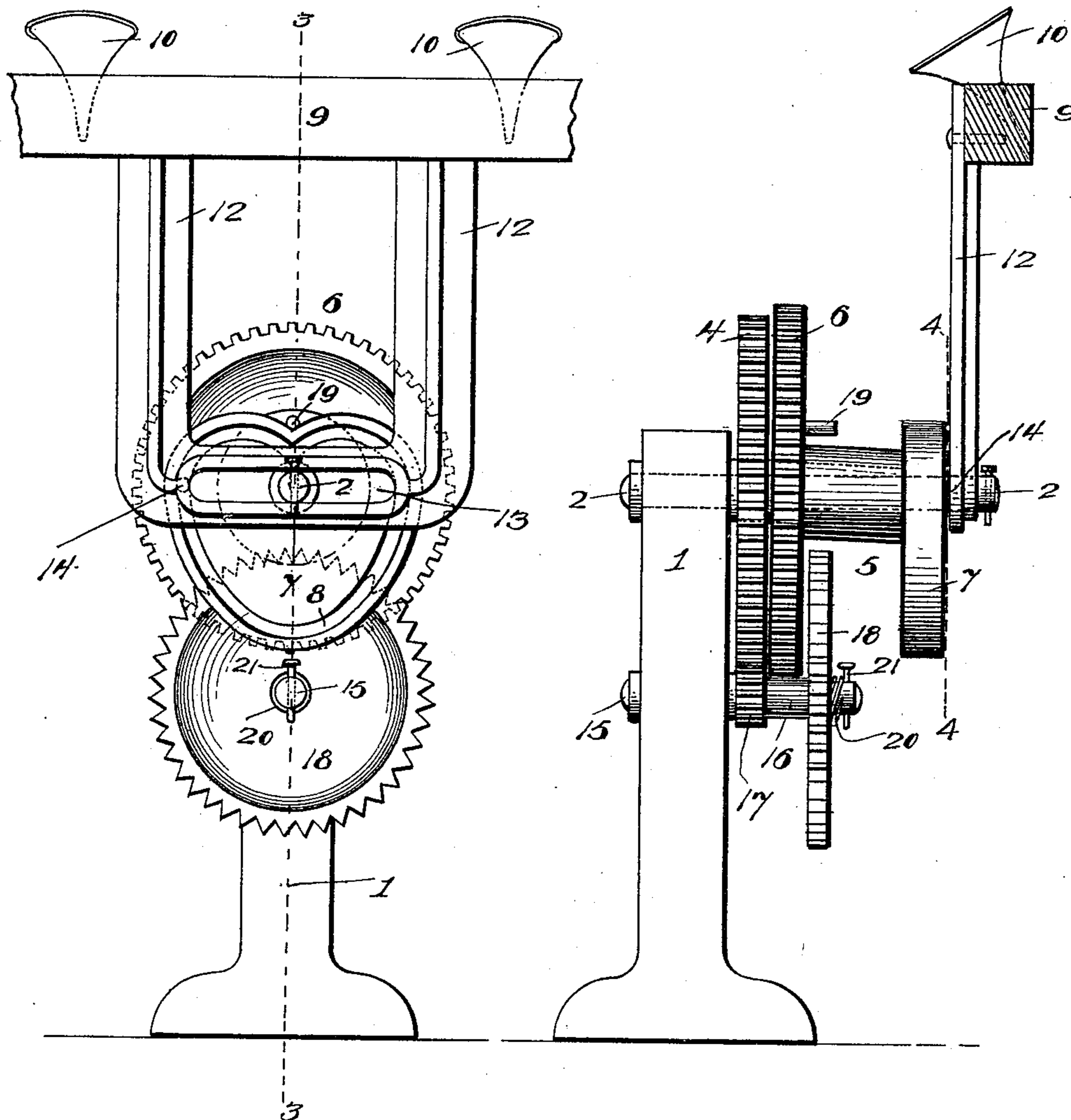
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(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

FIG. 2.



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# UNITED STATES PATENT OFFICE.

JOHN H. RAWLINS, OF CHESTER, PENNSYLVANIA.

TRAVERSE-BAR-ACTUATING MECHANISM FOR SPINNING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 614,576, dated November 22, 1898.

Application filed June 2, 1898. Serial No. 682,378. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. RAWLINS, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Traverse-Bar-Actuating Mechanism for Spinning Machinery; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in the roving devices employed in cotton machinery, such as slubbers, speeders, spinning frames and mules, and the like; and the object is to provide a simple and effective means for varying the movement of the traverse so the rove will pass between different surfaces of the drawing-rolls each time the traverse reverses, whereby the rove is prevented from forming a groove in the rolls at this point, as would be the case if the traverse stopped at the same point at each stroke.

To this end the invention consists in the construction, combination, and arrangement of the device, as will be hereinafter more fully described, and particularly pointed out in the claim.

The accompanying drawings show my invention in the best form now known to me; but many changes in the details might be made within the skill of a good mechanic without departing from the spirit of my invention as set forth in the claim at the end of this specification.

The same reference characters indicate the same parts of the invention.

Figure 1 is a front elevation of my improved traverse-operating device. Fig. 2 is an end view. Fig. 3 is a longitudinal vertical section on the broken line 3 3 of Fig. 1. Fig. 4 is a transverse vertical section on the broken line 4 4 of Fig. 2.

1 denotes a fixed standard, and 2 a horizontal stud-shaft fixed in the upper end thereof and on which is journaled a sleeve 3, the inner end of which is concentric with said shaft, and on this concentric end is fixed a gear-wheel 4. The outer end of this sleeve is eccentric with its axis, as shown. 5 denotes a second sleeve, which is concentric for its entire length and is mounted on the eccentric

sleeve 3. The inner end of the sleeve 5 carries the driving-gear 6, while its outer end carries a heart-shaped cam 7, the face of which is provided with a correspondingly-shaped groove 8.

9 represents the traverse-bar, and 10 the funnels.

12 represents a U-shaped bracket fixed to the traverse, and its lower end is formed with a longitudinal guide-slot 13 to receive the outer end of the stud-shaft 2. The inner face of the lower end of the bracket 12 is provided with an integral stud 14, which engages the groove 8, so that as the cam is rotated a horizontal reciprocating movement will be imparted to the traverse.

15 denotes a stud-shaft fixed in the standard 1, and 16 a sleeve journaled on said shaft. The inner end of this sleeve 16 carries a pinion 17, which meshes with the spur gear-wheel 4 on the eccentric sleeve 3, and the outer end of the sleeve 16 carries a star-wheel 18, the teeth of which project into the path of a pin 19, fixed on the driving-gear 6.

A friction-spring 20 encompasses the outer end of the shaft 15, between the star-wheel 18 and a transverse retaining-pin 21, fixed in the outer end of said shaft 15, to impart sufficient resistance to the sleeve 16 to prevent its movement except when positively operated by the engagement of the pin 19 with the star-wheel 18.

The operation is as follows: Suitable motion is imparted to the driving-gear 6, which, through the medium of its sleeve 5 and cam 7, imparts a longitudinal reciprocating movement to the bracket 12 and traverse 10. By way of digression it may be stated here that if the cam 7 rotated on a fixed axis the movement of the bracket would be positive—that is to say, it would begin and end at the same point at each end of its stroke. This continuous stopping of the rove at the same point soon wears a groove in the rollers and necessitates their re-covering. However, in the present instance the cam rotates on the eccentric end of the sleeve 3, and as at each revolution of the driving-wheel 6 the pin 19 engages a tooth on the star-wheel 18 and moves the sleeve 16, pinion 17, gear-wheel 4, and sleeve 3, and thereby changes the axis of the cam, consequently the cam rotates on a

constantly-changing axis, and therefore the limit-points of the movements of the bracket and traverse are likewise constantly changing, so that the rove will not pass at the same point between the rollers at the same ends of the stroke as it would if the cam rotated on a fixed axis.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

In a roving-machine, the traverse 9, the bracket 12, the concentric sleeve 5, the driving-gear 6 fixed on one end of said sleeve, the pin 15 19 fixed on said gear and the cam 7 fixed on the opposite end of said sleeve and arranged to impart a reciprocating movement to said

bracket and traverse in combination with the eccentric sleeve 3 on which the concentric sleeve 5 is mounted, the spur-gear 4 fixed on said sleeve 3, the pinion 17 meshing with said spur-gear, the sleeve 16 carried by said pinion and the star-wheel 18 carried by said sleeve 16 and having its teeth projecting into the path of said pin 19, substantially as shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN H. RAWLINS.

Witnesses:

BENJAMIN W. CLARK,  
P. M. WASHABAUGH.