(No Model.)

J. & T. SHARPE.

WOOL COMBING MACHINE.

No. 492,169. Patented Feb. 21, 1893.

Fig. 1.

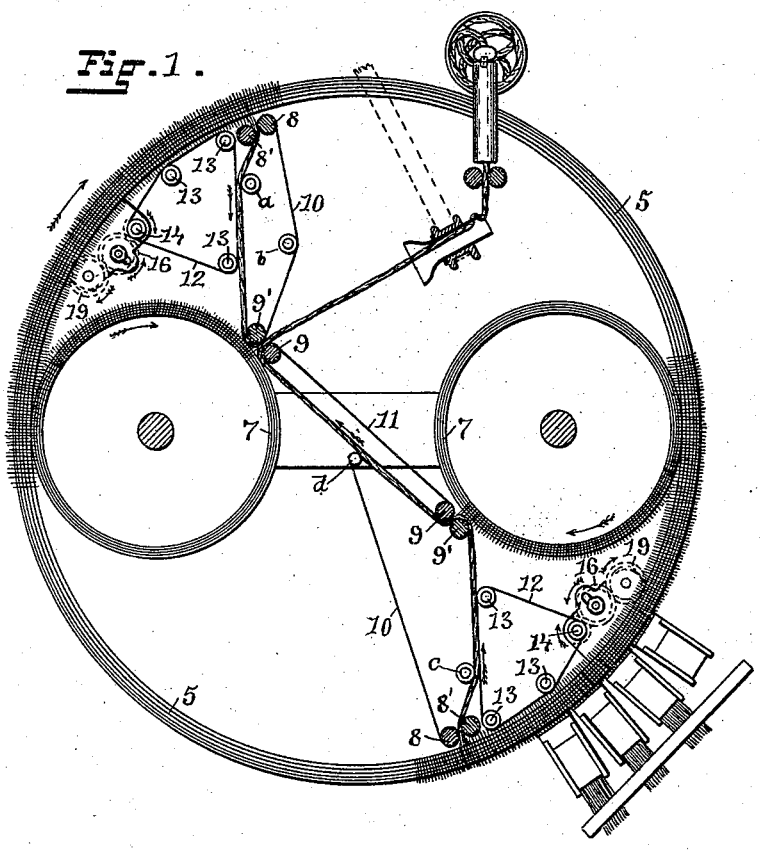


Fig. 2.

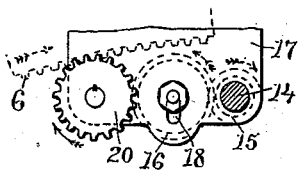


Fig. 3.

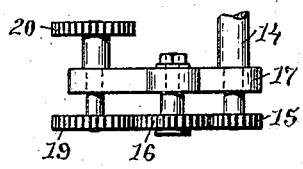
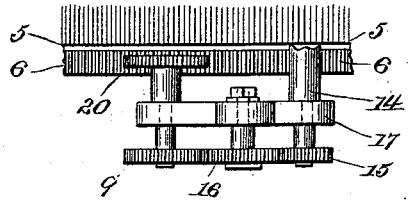


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN SHARPE AND THOMAS SHARPE, OF THORNTON, RHODE ISLAND.

WOOL-COMBING MACHINE.

SPECIFICATION forming part of Letters Patent No. 492,169, dated February 21, 1893.

Application filed December 22, 1891. Serial No. 415,851. (No model.)

To all whom it may concern:

Be it known that we, JOHN SHARPE and THOMAS SHARPE, of Thornton, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Wool-Combing Machines; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in the aprons by which the sliver is carried from the circles.

The object of the invention is to produce a wool-comb in which the wear on the sliver-aprons will be greatly reduced.

The further object of the invention is to produce a new and improved wool comb, in which the speed of the guide-aprons can be adjusted.

The invention consists in certain peculiar features of construction and novel combination of parts, which will hereinafter be more fully described and pointed out in the claim.

Figure 1 represents a top view of a wool-comb, showing the improved arrangement of the aprons, and indicating the means for driving the guide-aprons. Fig. 2 represents a top view of the guide-apron driving-mechanism, and indicates its engagement with the rack of the comb-circle. Fig. 3 represents an elevation of this driving-mechanism, consisting of a train of gears, and the bracket in which the shafts of said gears are journaled. Fig. 4 represents an elevation of the guide-apron driving-mechanism and a portion of the circumferential rack or gear with which the comb-circle is provided, to more fully indicate the location of such driving mechanism with relation thereto.

Similar numbers and letters of reference designate corresponding parts throughout.

In the drawings 5 indicates the large comb-circle which is provided with an inner circumferential gear 6, traveling with this circle.

7—7 are the two smaller comb-circles which rotate within the large circle.

8 and 8′ are the usual drawing-off rolls, for drawing the sliver from the large circle,—and 9 and 9′ indicate the usual rolls by which the sliver is drawn from the smaller circles. These rolls 8 and 8′ and 9 and 9′ are fluted longitudinally and are vertically journaled in suitable bearings.

The delivery aprons 10—10 are formed of any suitable material, and are carried by the drawing-off rolls 8 and 9′, and pass between these rolls and those marked 8′ and 9,—an intermediate apron 11 being carried on the rolls 9—9. These aprons 10 are guided in the proper direction by the vertically journaled guide-rolls *a*—*b* and *c*—*d* which also serve to distend said aprons.

The guide aprons 12—12 are supported on the vertical guide rolls 13—13, one of which is located near the fluted roll 8′,—these aprons being driven in the direction of the travel of the delivery aprons by the vertical shafts 14—14 journaled in suitable bearings and provided at their lower ends with the gears 15—15, which are engaged by the idle gears 16—16 carried by a shaft journaled in a slotted bearing 18 in the bracket 17, intermeshing therewith, and with the gears 19—19, to which motion is imparted by the gears 20—20 secured to the shafts of the gears 19 also journaled in said bracket and engaging with the rack 6 extending around the inner circumference of the large comb circle.

A number of the gears 16 of various sizes are supplied to the operator of this machine,—and by substituting one size for another, the speed of the gears 15—15 and the drive-shaft 14—14 can be varied at will.

By the construction and combination thus described, the guide-aprons 12—12 not being subjected to the wear of the fluted drawing-off rolls 8′ on which these aprons have usually been carried, are not worn to any great extent, thus saving the cost of replacing the same; while in practice, it is found that with this construction the aprons 10—10 wear longer than heretofore, as they do not appear to be subjected to the same strain; also by the changing of the gears 19 the speed of the guide-aprons can be varied to drive the sliver over the delivery aprons at the speed desired. Much delay and damage have been caused by a lap of the sliver being taken around the drawing-off rolls 8—8, which, in ordinary combs, are not covered by the delivery-aprons; and to overcome this objection is an addi-

tional reason for driving the guide-aprons. As these aprons are supported near the drawing-off rolls 8′—8′, and move in the same direction as the aprons 10—10, they will carry forward any sliver which is drawn partially around said rolls, and prevent the lapping of the same.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination with the small circles 7—7, the larger circle 5, a circular rack 6 carried by said larger circle, the draw-off rolls 8—8′ and 9′—9′ and aprons 10—10 carried thereby, of the aprons 12—12, the rolls 13—13 and 14 supporting the same, a gear 15 on the lower journaled end of the roll 14, the bracket 17, a shaft adjustably secured in a slot 18 thereof, a gear 16 carried by said shaft, a vertical shaft journaled in a bearing in the bracket 17, a drive-gear 19 mounted on the lower end of said last-mentioned shaft, and a gear 20 secured to the upper end of said shaft and intermeshing with the circular rack of the wool-comb circle.

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