

UNITED STATES PATENT OFFICE.

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YARN-CLEANER FOR SPOOLERS, SPINNING, AND SIMILAR MACHINES.

1,000,029.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JAMES R. MACCOLL and WILLIAM B. MACCOLL, citizens of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Yarn-Cleaners for Spoolers, Spinning, and Similar Machines, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention relates to improvements in yarn cleaners adapted to be attached to or form part of a spooler, spinning, or similar machine and through which thread or yarn may be drawn to effect the cleaning of the thread or yarn by the removal therefrom of slubs, beads or bundles of fiber.

One object of the invention is to simplify the construction of thread or yarn cleaners of this general description whereby the adjustment of its parts is facilitated.

Other objects of the invention will appear from the following description.

The invention consists in certain peculiar features of construction and combination of parts as shall hereinafter be more fully described and pointed out in the claims.

Figure 1, represents a side view of the improved yarn cleaner mounted, in operative position, on the traverse rod or similar supporting member, shown in section, of a spooler; the yarn being shown in position as passing through the cleaner. Fig. 2, represents a top plan view of the yarn cleaner, the yarn being shown in its normal position in full lines and the position of the yarn in threading the cleaner being indicated in dotted lines. Fig. 3, represents a back view of the improved cleaner. Fig. 4, represents an end view thereof showing a modified construction.

Similar numbers of reference designate corresponding parts throughout.

As shown herein in its preferred form the improved yarn cleaner is mounted on the traverse rod of a spooler or similar machine and, for that purpose, is furnished with the complemental jaw members 5 and 6 secured together by the clamping screw 7. From said jaw member extends, upwardly, the arm 8 and in said member are secured the cylindrical guide rod 9 having the flat upper face 10 and the conical end 11, and at a distance laterally from said guide rod, the guard wire 12 having the curved end 13. Pivally

mounted on the arm 8, to swing about an axis parallel to the guide rod 9, is the comb support 14 having the outer curved edge 15 and the lower bevel edge 16. On this support 14 is vertically adjustable the comb plate 17, which is secured by the screw 18, having the upper bent lip 19 and the lower inclined edge 20 to which is secured the series of teeth 21 which extend approximately in line with the lip 20 and at an acute inclination to the face 10 of the yarn guide rod 9.

In the modification shown in Fig. 4 of the drawings, which is particularly adapted for cotton spinning or spooling machines, the guide wire 12 is omitted and the periphery of the guide rod 9 is completely cylindrical.

The adjustment of this device is extremely simple; the screw 18 is loosened and the comb plate 17 is moved upward sufficiently to permit a thin gage plate to be placed between the guide rod 9 and the ends of the teeth 21; plate 17 is allowed to move downward until the ends of the teeth 21 rest on said gage plate, when the screw 18 is tightened to secure comb plate 17. A yarn or thread *b--b*, extending transversely of the plate 14, is now pressed downward, being guided outward by the curved edge of said plate and by the curved end 13 of the guide wire 12, and is brought between the ends of the comb teeth 21 and the guide rod 9 as shown in Figs. 1 and 4 of the drawings. As the yarn passes along, to be wound on a spool, any slubs, beads or accumulation of fluff on the yarn will be engaged by the ends of the inclined comb teeth 21 and will be thus removed, and held, without action of said comb teeth directly on the yarn. As the diameter of the spool is gradually increased by the winding thereon of yarn the path of the yarn across the guide rod 9 will gradually vary and thus the yarn will be progressively subjected to the action of the clean comb teeth.

The plate 15 or comb support may be swung upward from time to time for the examination of the comb teeth or for the removal from said teeth of slubs, beads, etc., and said plate may then be dropped back into its adjusted position.

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

1. A yarn cleaner comprising a frame having a standard, a guide rod extending

laterally from said frame, a comb support
 plate pivotally mounted on said standard
 and for which said standard forms a stop,
 and a comb mounted on said comb support
 5 and having teeth cooperating with said guide
 rod, substantially as described.

2. A yarn cleaner comprising a frame hav-
 ing a standard and a guide rod extending
 laterally from said frame below and in front
 10 of said standard, a comb support plate piv-

otally mounted on said standard and nor-
 mally bearing against said standard, and a
 comb mounted on said comb support and
 having inclined teeth cooperating with said
 guide rod, substantially as described.

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