Feb. 14, 1933. G. R. FASSETT 1,897,895

YARN CLEANER

Original Filed Dec. 5, 1929

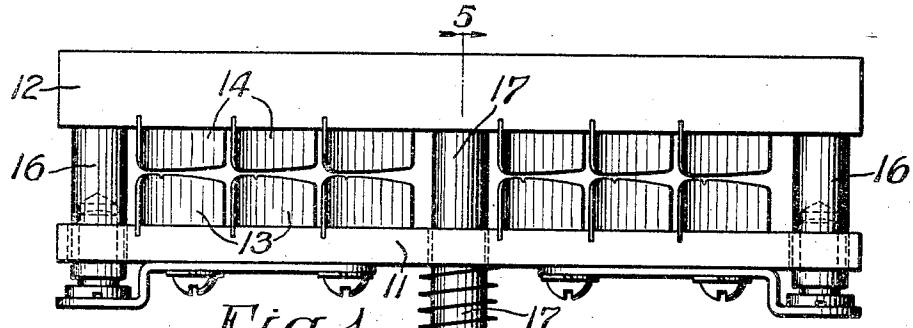


Fig. 1

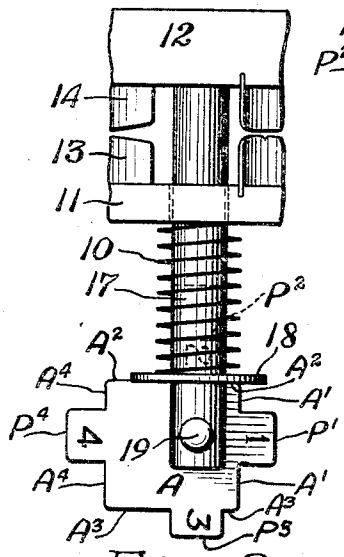
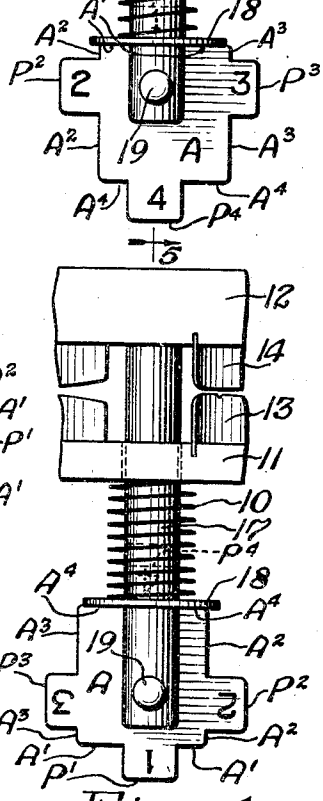


Fig. 2



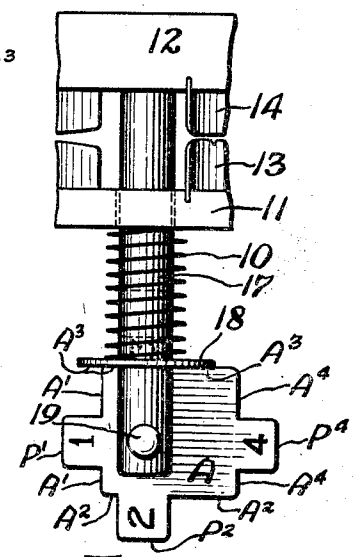


Fig. 3

Fig. 4

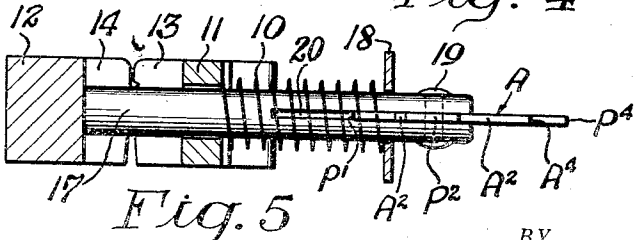


Fig. 5

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Patented Feb. 14, 1933 1,897,895

UNITED STATES PATENT OFFICE

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YARN CLEANER

Original application filed December 5, 1929, Serial No. 411,804. Divided and this application filed February 5, 1931. Serial No. 513,493.

This invention relates to yarn cleaners of the type in which a cleaning member is yieldably urged against the yarn.

This application is a division of my copending application, Serial No. 411,804, filed December 5, 1929.

In order that the invention may be clearly understood, I will describe a specific yarn cleaner embodying it, which is shown in the accompanying drawing in which:

Fig. 1 is a plan view of a yarn cleaner with my spring adjustment applied thereto;

Figs. 2, 3 and 4 are fragmentary plan views showing different adjustments of the spring shown in Fig. 1; and

Fig. 5 is a transverse section on the line 5—5 of Fig. 1.

In the application of my invention shown in the drawing, a fine wire helical compression spring 10 is utilized to urge towards each other the side members 11, 12 of a yarn cleaner, so as to urge the cleaning blades 13, 14 carried by these side members towards each other and against a yarn which may be passed between them. In the form shown, the side member 11 is slidably mounted on two rods 16 projecting from the side member 12 near its ends. The side member 11 is also slidable on a tension rod 17, which projects from the middle of the side member 12 and carries the spring 10. One end of the spring abuts against the side member 11, while its other end has an abutment 18 slidably mounted on the tension rod 17. The abutment 18 may conveniently take the form of a perforated washer as shown.

An adjustment element A is provided for varying the position of the abutment 18, and thus varying the pressure exerted by the spring 10 against the movable side bar 11 of the yarn cleaner. The element A is pivotally mounted on the tension rod 17 by means of a pivot 19. In the form shown, the element A is a flat plate entering a transverse slot 20 in the outer part of the tension rod 17 across which the pivot 19 passes.

The adjustment element A is provided with a plurality of engaging surfaces or edges A1, A2, A3, A4, located at progressively increasing distances from its axis. Each of these engagement surfaces extends at both sides of the radius of the element A which is perpendicular to it. Projections P1, P2, P3, P4, project from intermediate parts of the engagement surfaces. Each projection is symmetrically located with respect to the radius of the element A which is perpendicular to the engagement surface from which that projection projects. The width of each projection is no greater than the diameter of the hole in the abutment 18 and is preferably equal to the diameter of the tension rod 17.

When the smallest pressure is required on the side member 11 of the yarn cleaner, the adjustment element A is turned as shown in Fig. 1 with its engagement surface A1 against the outer side of the abutment washer 18 and with its projection P1 extending through the hole in the washer. The adjustment element is, therefore, held firmly in this position. When a slightly greater spring pressure is required, the abutment washer 18 is pushed inward beyond the end of the projection P1 and the adjustment element is turned to direct its engagement edge A2 inward. The abutment washer 18 is then released, and is forced outwardly by the spring around the projection P2 and into engagement with the edge A2, as shown in Fig. 2. Further increases of the spring pressure may be obtained by turning the adjustment member into the positions shown in Figs. 3 and 4. In each case, the abutment washer must be pushed in against the spring before the adjustment element is turned, and, in each adjusted position, the adjustment element is securely held against accidental displacement by the engagement of one of its projections with the abutment washer.

What I claim is:

1. The combination with a yarn cleaner having a fixed side bar carrying cleaning elements, posts projecting from said side bar near its ends and a second side bar carrying cleaning elements slidably mounted on said posts, of a tension rod extending from the middle of the fixed side bar and passing through the movable side bar, a movable abutment on said rod, an adjustable element pivoted to said rod on an axis transverse to

the axis of the rod and provided with a plurality of surfaces located at different distances from its axis and each adapted to engage said abutment, and a compression spring mounted on said rod between the movable side bar and said movable abutment.

2. The combination with a yarn cleaner having a fixed side bar carrying cleaning elements, posts projecting from said side bar near its ends and a second side bar carrying cleaning elements slidably mounted on said posts, of a tension rod extending from the middle of the fixed side bar and passing through the movable side bar, an abutment on said rod near its outer end, a compression spring mounted on said rod between the movable side bar and said abutment, and means whereby the spring may be set in any one of a plurality of pre-selected adjustments.

3. The combination with a yarn cleaner having a fixed side bar carrying cleaning elements, posts projecting from said side bar near its ends and a second side bar carrying cleaning elements slidably mounted on said posts, of a tension rod extending from the middle of the fixed side bar and passing through the movable side bar, an adjustable abutment on said rod near its outer end, a compression spring mounted on said rod between the movable side bar and said abutment, and means whereby said abutment may be locked in any one of a plurality of pre-selected positions to correspondingly adjust the pressure of said spring.

In testimony whereof I have hereunto set my hand.

GEORGE R. FASSETT.