Sept. 18, 1923. 1,468,489

J. O. McKEAN

YARN TENSION DEVICE

Filed Nov. 10, 1922

Fig. 1.

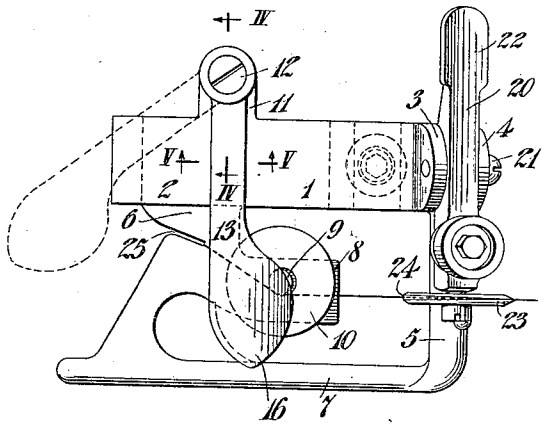


Fig. 2.

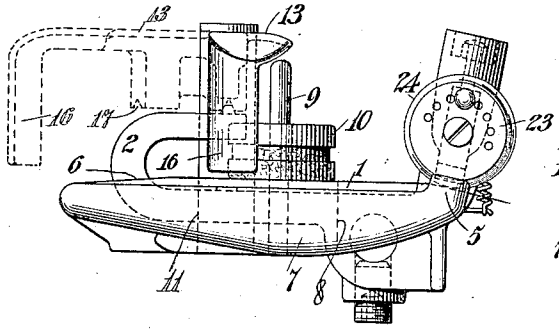


Fig. 3.

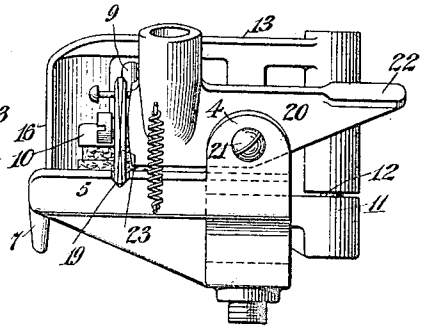


Fig. 4.

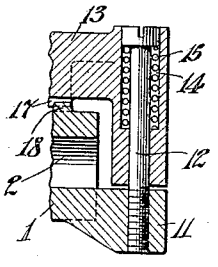
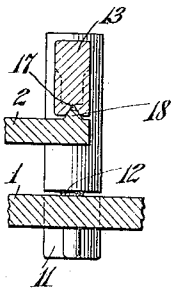


Fig. 5.



INVENTOR

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Patented Sept. 18, 1923. 1,468,489

UNITED STATES PATENT OFFICE.

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YARN TENSION DEVICE.

Application filed November 10, 1922. Serial No. 600,093.

To all whom it may concern:

Be it known that I, JOHN O. McKEAN, a citizen of the United States, and resident of Westfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Yarn Tension Devices, of which the following is a specification.

My invention is directed to yarn tension devices of that class in which a pin uprises from the yarn support, on which pin there is loosely mounted a gravity operated weighted tension washer normally resting on the yarn support.

My invention comprises a novel guard for preventing the unintentional removal of the washer, which guard is mounted to yield vertically and to swing laterally into and out of its operative position over the top of the pin, means being provided for yieldingly holding the guard in its operative position; the guard when swung into its inoperative position, permitting the removal and replacement of the tension washer.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Fig. 1 represents in top plan a device for guiding, tensioning and clearing yarn, with my invention applied thereto.

Fig. 2 represents a side view of the same.

Fig. 3 represents a front view.

Fig. 4 represents a detail section taken in the plane of the line IV—IV of Fig. 1.

Fig. 5 represents a detail section taken in the plane of the line V—V of Fig. 1.

The bracket as herein constructed comprises the longitudinal portion 1 terminating at one end in a turned-back portion 2 and at its other end in upwardly and outwardly inclined ears 3 and 4.

A loop is formed at one side of the portion 1 of the bracket, which loop comprises the lateral branches 5 and 6 connected by the longitudinal branch 7. An arm 8 projects forwardly from the lateral branch 6 to form a suitable yarn support in the tension device.

A pin 9 uprises from the arm 8, upon which pin is loosely mounted the weighted tension washer 10, between which washer and the top surface of the arm 8 the yarn is passed on its way to any desired point, as for instance a slub catcher.

A lug 11 projects laterally from the portion 1 of the bracket in the opposite direction from the branch 6 of the loop, into which lug is screwed the pivot pin 12 on which a vertically yielding laterally swinging guard 13 is pivoted. The vertically yielding movement of this guard is provided for in the present instance by a recess 14, within which there is located a coil spring 15 interposed between the bottom of the recess and the head of the pin 12. The outer end of this guard is provided with a portion 16 which projects over the top of the pin 9 when the guard is swung into its operative position. A space is left between the top of the pin and the guard so that lint which gathers on the pin will have an opportunity to readily free itself off the top of the pin.

Means are provided for yieldingly holding the guard in its operative position over and spaced from the top of the pin, which means is herein shown as a notch and projection connection between the guard and the turned-back portion 2 of the bracket; the notch 17 being formed in the guard and the projection 18 being formed on the said turned-back portion.

When the guard is swung back out of its operative position it will be seen that the weighted washer 10 may be readily removed from or replaced on the pin 9. When the guard is swung into its operative position, the washer is held against unintentional removal.

The slub catcher shown herein forms no part of the present invention. It is shown as comprising two coacting members, one having a slot with walls forming a portion of the yarn clearing hole and the other with a graduated surface forming the remaining portion of the said yarn clearing hole. In the present instance the fixed member is the branch 5 of the loop hereinbefore described, which branch is shown as provided with an outwardly and downwardly inclined slot 19 across its upper face, the divergent walls of which slot form two sides of a triangular yarn clearing hole. The other member of the slub catcher is herein shown as comprising a two-armed lever 20 pivoted between the upwardly and outwardly inclined ears 3 and 4 of the bracket on an outwardly and downwardly inclined pivot screw 21. One arm of this lever may be provided with a handle 22 for manipulating the lever. The

other arm of the lever is provided with a rotatively adjustable disc 23 having its circumferentially graduated or tapered peripheral surface 24 lo ted normally in the outwardly and downwardly inclined slot of the other member with the side edges of the disc in contact with the divergent walls of the said slot, to form the third side of a triangular yarn clearing hole.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention, hence I do not wish to be limited to the particular embodiment herein shown and described, but

What I claim is:—

1. In a device for tensioning yarn, a suitable yarn support, a pin uprising therefrom, a weighted tension washer loosely mounted on said pin, a washer guard pivoted on the support to swing laterally into and out of its operative position, and additional means for yieldingly holding the guard in its operative position.

2. In a device for tensioning yarn, a suitable support, a pin uprising therefrom, a weighted tension washer loosely mounted on said pin, a washer guard pivoted on the support to swing laterally into and out of its operative position, and additional coacting means on the guard and support for yieldingly holding the guard in its operative position.

3. In a device for tensioning yarn, a suitable yarn support, a pin uprising therefrom, a weighted tension washer loosely mounted on said pin, and a vertically yielding washer guard pivoted on the support to swing laterally into and out of its operative position.

4. In a device for tensioning yarn, a suitable yarn support, a pin uprising therefrom, a weighted tension washer loosely mounted on said pin, a vertically yielding washer guard pivoted on the support to swing laterally into and out of its operative position, and means for yieldingly holding the guard in its operative position.

5. In a device for tensioning yarn, a suitable yarn support, a pin uprising therefrom, a weighted tension washer loosely mounted on said pin, a vertically yielding washer guard pivoted on the support to swing laterally into and out of its operative position, and coacting means on the guard and support for yieldingly holding the guard in its operative position.

6. In a device for tensioning yarn, a suitable yarn support, a pin uprising therefrom, a weighted tension washer loosely mounted on said pin, a vertically yielding washer guard pivoted on the support to swing laterally into and out of its operative position, and a notch and projection connection between the guard and support to hold the guard in its operative position.

In testimony, that I claim the foregoing as my invention, I have signed my name this eighth day of November, 1922.

JOHN O. McKEAN.