A. H. SAWTELL.

TENSION DEVICE.

APPLICATION FILED JAN. 24, 1922.

1,437,997. Patented Dec. 5, 1922.

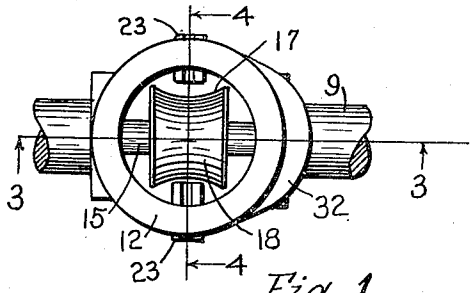


Fig. 1

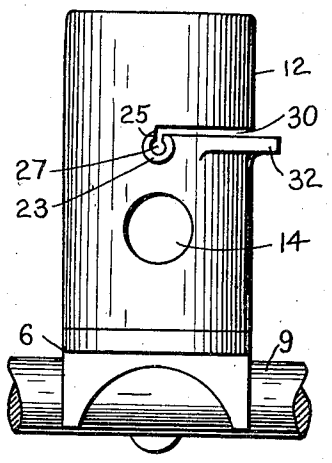


Fig. 2

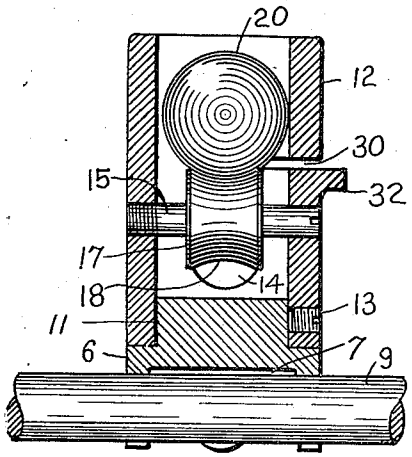


Fig. 3

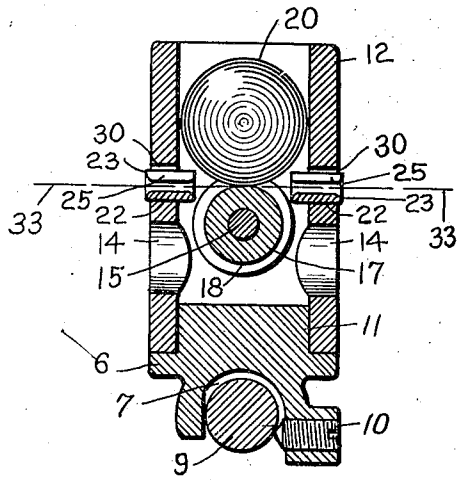


Fig. 4

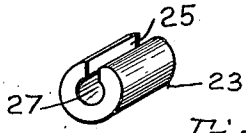


Fig. 5

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UNITED STATES PATENT OFFICE.

ALBERT H. SAWTELL, OF WINTHROP, MASSACHUSETTS.

TENSION DEVICE.

Application filed January 24, 1922. Serial No. 531,499.

To all whom it may concern:

Be it known that I, ALBERT H. SAWTELL, a citizen of the United States, residing at Winthrop, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Tension Devices, of which the following is a specification.

My invention relates to tensioning devices and is particularly adapted to devices of the type set forth in my prior United States Patent No. 1,402,894 issued Jan. 10, 1922.

In such devices the eyelets through which the filaments passed transversely of the body were so located that only an end of a filament could be threaded therethrough, and even then some hook or auxiliary implement was required to be inserted through the eyelets to engage the filament end and perform the threading operation.

The essential objects of my present invention are to facilitate and increase the speed of the threading operation; to enable the insertion of a filament or thread into the eyes even after the thread has been engaged at its ends on spools, bobbins, or a warp beam; and to make the use of auxiliary threading implements unnecessary.

To the above ends primarily my invention consists in such parts and in such combinations of parts as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification,

Figure 1 is a plan of the device with the ball omitted,

Figure 2, a front elevation of the same,

Figures 3 and 4, sections respectively on lines 3—3 and 4—4 of Figure 1 with the addition of the ball, and

Figure 5, a detail view of one of the eyelets.

Like reference characters indicate like parts throughout the views.

In the drawings 6 is the base having an opening 7 for a supporting rod 9 engaged by the set screw 10. Embracing a reduced portion 11 of the base is a vertical tubular wall 12 attached thereto by a screw 13, and having clearing openings 14. A diametrical shaft 15, fast in the wall, has rotatably mounted and longitudinally slidable thereon a roller or rotary seat 17 provided with a concave periphery 18 upon which rests a ball 20 having an arcuate line of contact longitudinally of the seat, and is a sliding fit in the body wall.

The body wall 12 is provided, at diametrically opposite points in the plane of the lowest point in the seat periphery, with thread openings consisting of holes 22 in which are fast eyelets 23 of porcelain or other hard material, each provided with a vertical longitudinally disposed slot 25 extending to its central bore or opening 27. An arcuate slot 30 in the wall 12 extends to the tops of the slots 25 of the eyelets. Integral with the exterior of the body is an arcuate laterally projecting shelf or shoulder 32 extending to the eyelets, and whose upper face is in the horizontal plane of the lower edge of the slot. In Figure 4 a strand or thread 33 is indicated by a broken line in its threaded position between the ball 20 and its rotary seat 17.

The operation of the device is as follows. The thread or strand to be inserted is manually brought in a horizontal position downwardly along the exterior surface of the body 12 until it reaches the slot 20 or contacts with the upper face of the guide shoulder 32, and is then released or pushed towards the eyelets until it reaches the slots 25, and is thereupon depressed therethrough into the openings 27 thereof. While the member 32 is not essential, it increases the speed of the threading operation by automatically locating the slot 30 and guiding the strand to the latter.

I claim:—

1. In a tension device, a tubular body provided with a transversely disposed slot in an intermediate portion thereof, eyelets for a filament in the body provided with guide slots communicating with the first slot, a rotary seat in the body engageable with the filament, and a ball in the body engageable with the seat.

2. In a tension device, a tubular body provided with a transversely disposed slot in an intermediate portion thereof, a laterally extending projection upon the exterior of the body flush with the lower margin of the slot, eyelets for a filament in opposite portions of the body provided with guide slots registering with the first slot, a seat interposed in the body between the eyelets, and a ball in the body upon the seat.

In testimony whereof I have affixed my signature.

ALBERT H. SAWTELL.