

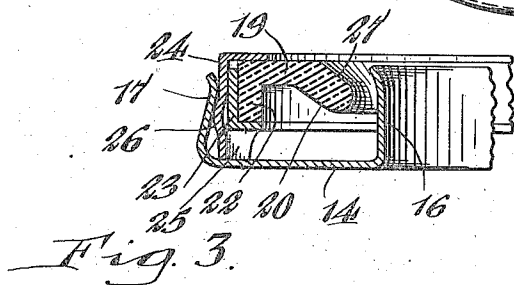
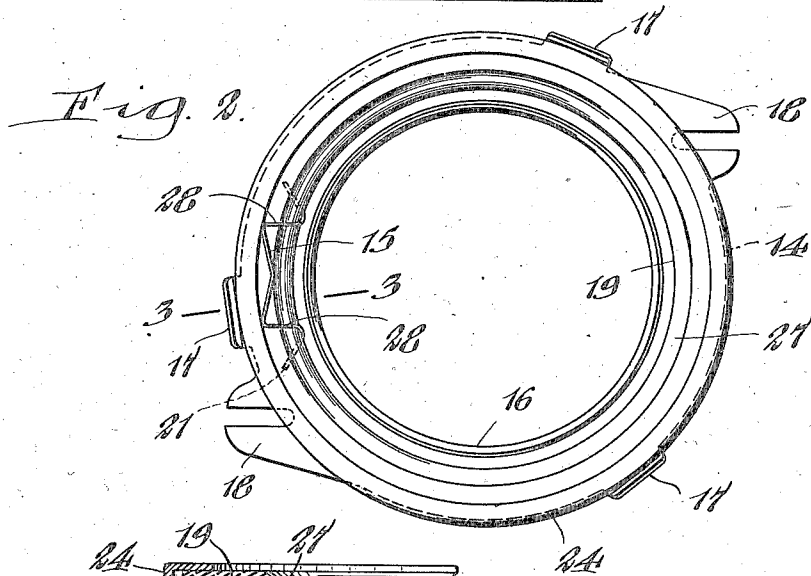
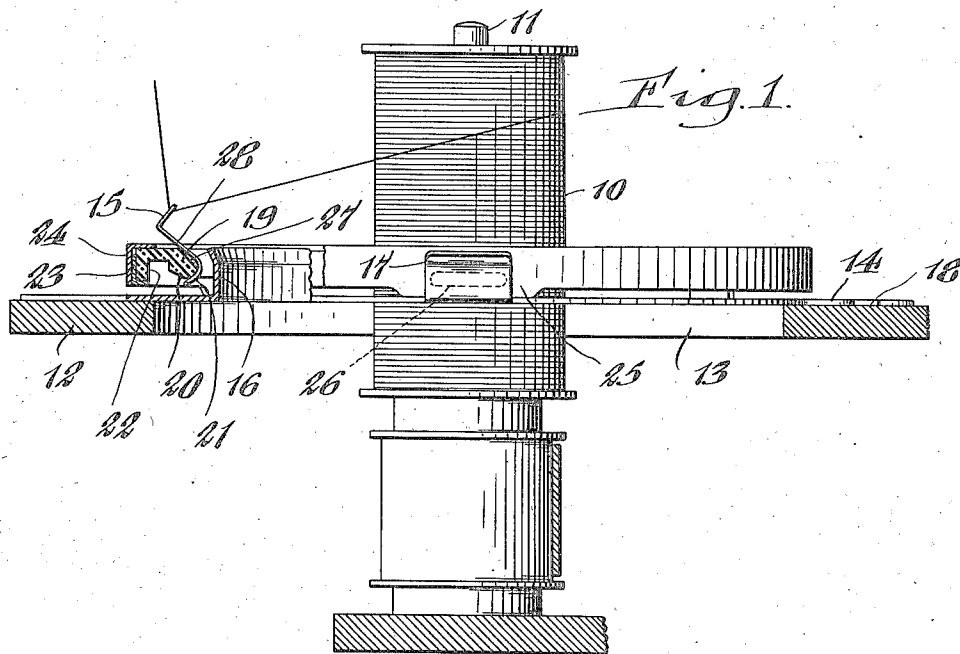
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SPINNING RING FOR BAR TRAVELERS

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SPINNING RING FOR BAR TRAVELERS

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1 Claim. (Cl. 118—59)

This invention relates to improvements in the spinning art and particularly to the spinning rings and bar travelers employed in connection with spinning machines.

5 Its chief object is to so construct the ring as to provide self-contained means for positively controlling the traveler when moving at a high speed around the ring and to arrest the centrifugal force on the traveler at a fixed angularity when in motion, whereby a constant and even tension is maintained on the thread and the thread is laid uniformly on the bobbin.

Another object of the invention is the provision of a traveler bearing ring which will impart a constant force on the traveler to resist the variable tension of the thread in passing through the traveler and thereby hold the traveler in a plane substantially parallel with the top face of the ring and the traverse bar and maintain the distance between the thread-contact point of the traveler and the traverse bar constant when the traveler is in motion.

In the accompanying drawing:—

Figure 1 is a sectional elevation of a spinning ring embodying my invention, it being shown associated with the traverse bar and bobbin. Figure 2 is a top plan view of the ring and traveler. Figure 3 is an enlarged cross section taken on line 3—3, Figure 2.

30 In spinning machines of the character to which my invention is applicable, the threads to be twisted are delivered by feed rolls (not shown) to a take-up spool or bobbin 10 mounted on the usual revolving spindle 11. Traversing this bobbin is a vertically-reciprocating bar 12 having an opening 13 therein through which the bobbin extends.

40 Mounted on the reciprocating bar 12 and surrounding the spool 10 is the usual supporting base or holder 14 for detachably receiving the spinning or traverse ring upon which the bar traveler 15 is adapted to revolve. During the operation of the spinning machine, the bar traveler revolves at a high speed with and about the take-up spool, the thread passing under the traveler before being wound upon the spool and the bar 12 being reciprocated axially of the spindle 11 so that the threads are uniformly wound on the spool.

50 The spinning ring holder 14 may be stamped or otherwise formed from sheet metal, the same being in the form of a flat ring-like base having a neck 16 rising from its inner periphery and having yieldable clamping posts or brackets 17 rising from its outer periphery for detachably re-

ceiving and holding the spinning ring in place on the traverse bar 12. This holder is provided at its outer edge with the customary slotted ears 18 for securely fastening it to the traverse bar.

By preference, the spinning ring for guiding the bar traveler about the take-up spool consists of an annular body 19 made of a fiber composition or like material and having an outwardly and upwardly inclined bearing face 20 on its underside with which the traveler arms 21 are adapted to engage, when the traveler is running at slow speeds. At high speeds or under normal running conditions, these bearing arms engage in hook-like fashion about the inner periphery of the ring as shown in Figure 1. Depending from its outer edge the ring-body 19 has a rim or flange 22 and applied to such edge is a holding means for the fiber body consisting of inner and outer telescopically-fitted rings or collars 23, 24, respectively, which form a unitary structure with the ring-body to not only protect it but to also enable it to be fitted to the holder-base 14. The lower edge of the outer retaining collar 24 has depending portions or extensions 25 which rest at their bottom edges on the top side of the holder-base 13 in the manner shown in Figures 1 and 3 to provide sufficient traveler-clearance between this base and the overhanging bearing face 20 of the ring-body.

The depending extensions 25 of the spinning ring are preferably so spaced as to be positioned in adjoining relation to the holder-brackets 17 and are provided with ribs or beads 26 which may be formed by forcing the metal outwardly from such extensions, as seen in Figure 3, and over which the holder-brackets are adapted to extend to effectually retain and clamp the ring to the base and prevent it from creeping upwardly from the same and becoming displaced relatively to the bobbin-axis.

The top face of the ring-body 19 adjoining its inner periphery is preferably so shaped or constructed as to effectually and positively control the traveler when revolving at high speed about the ring and to arrest the centrifugal force on the traveler at a fixed angularity, whereby the distance between the thread-contact point on the cross-bar of the traveler and the traverse bar 12 is held constant when the traveler is in motion. For this purpose, the ring-body has an upwardly and outwardly inclined bearing face or track 27 with which the depending legs 28 of the traveler are adapted to engage, such face constituting a positive stop element in controlling the angularity of the traveler relative to the

ring. In other words, this inclined bearing face limits and arrests, at a predetermined point as depicted in Figure 1, the outward movement imparted to the traveler by centrifugal force when revolving at high or operating speeds. This angularity is such that the thread-engaging bar 15 of the traveler will assume a position within the ring-zone and also such that the traveler will not become unhooked from the ring. In 10 arresting the movement of the traveler in this manner, there is imparted thereto an opposite and constant force which resists the variable tension of the thread in passing through the traveler and thereby holds the traveler in a plane 15 parallel with the top face of the ring 19 and the traverse bar 12. Furthermore, the controlling bearing face 27 maintains constant and non-variable the distance between the thread-con-

tact point of the traveler and the traverse bar, enabling the latter to control the thread in laying it evenly on the bobbin.

I claim as my invention:—

In a device of the character described, the 5 combination of a spinning ring having an upwardly and outwardly inclined bearing face on its top side adjoining the inner periphery thereof, and a bar traveler mounted on said ring having depending legs engageable with said top 10 bearing face for limiting the centrifugal force on the traveler at a fixed angularity relatively to said body at high traveler-speeds, said legs terminating in bearing arms engageable in hook-like fashion about the inner periphery of said 15 ring.

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