May 12, 1942. C. FILLINGER 2,282,468

SELF-LUBRICATING SPINNING RING

Filed May 23, 1941

Fig. 1.

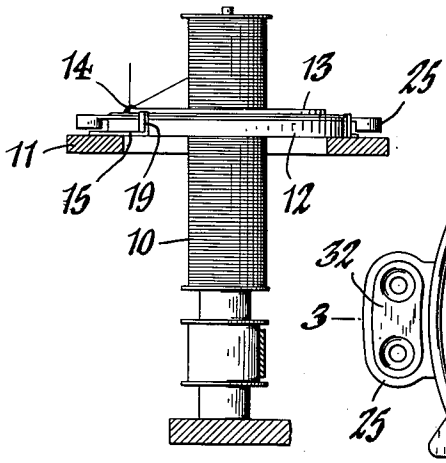


Fig. 2.

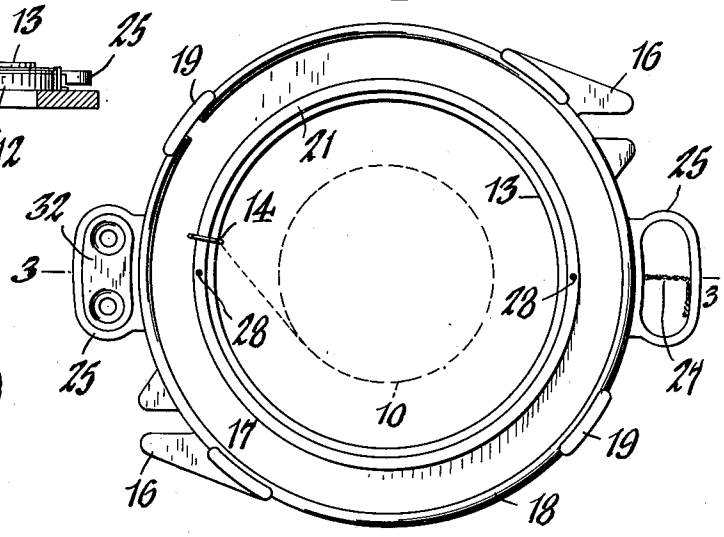


Fig. 3.

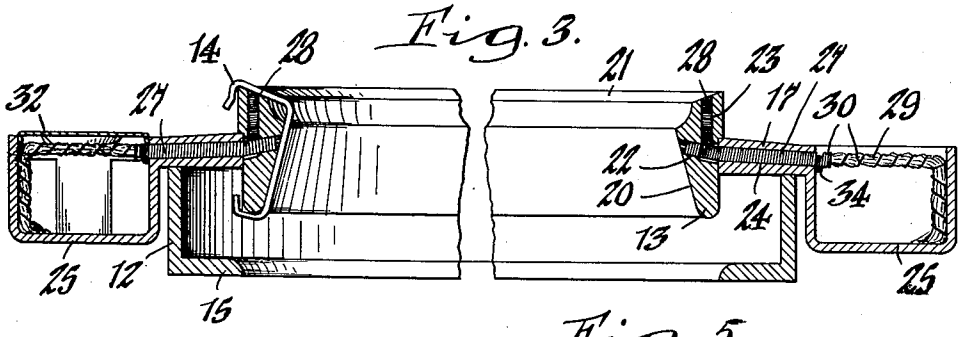


Fig. 5.



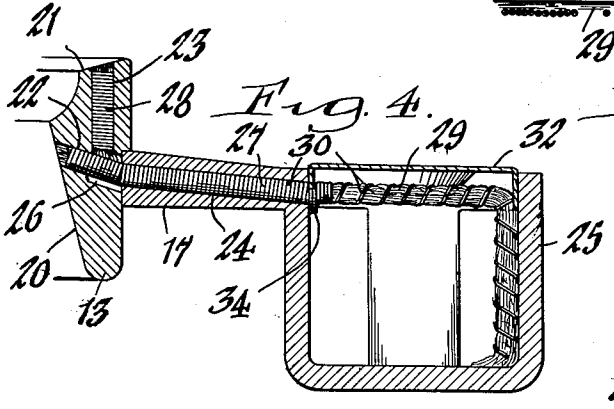
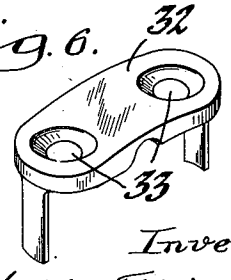


Fig. 4.

Fig. 6.



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SELF-LUBRICATING SPINNING RING

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Application May 23, 1941, Serial No. 394,810

1 Claim. (Cl. 57—120)

This invention relates to spinning rings and particularly to the lubrication of such rings.

It has for one of its objects to provide the ring with self-contained means for feeding at all times a constant flow of lubricant to the bearing faces of the ring to effect maximum lubrication with a minimum of oil consumption.

Another object of the invention is to provide a simple and efficient lubricating means for spinning means embodying a novel wick structure for delivering the lubricant to the bearing faces of the ring and wherein such wick is of a pre-set density to regulate the amount of lubricant fed to such bearing faces.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claim.

In the accompanying drawing:

Figure 1 is a side elevation of a traverse bar and bobbin showing my improved ring associated therewith. Figure 2 is an enlarged top plan view of the ring in place on the ring holder. Figure 3 is an enlarged fragmentary cross section taken on line 3—3, Figure 2. Figure 4 is a fragmentary cross section on a still larger scale of the lubricating elements of the ring. Figure 5 is an enlarged fragmentary sectional elevation of the wick element. Figure 6 is a perspective view of the wick-retaining and well cover plate.

Similar characters of reference indicate corresponding parts throughout the several views.

Referring now to the drawing, 10 indicates the take-up spool of a spinning machine and traversing the same for reciprocation axially thereof is the usual traverse bar 11 upon which a holder 12 is mounted for detachably receiving a spinning ring 13 upon which the traveler 14 revolves, this ring embodying the novel means hereinafter described for effectually lubricating it.

The holder 12 is substantially annular in shape, being provided with a base flange 15 adapted to rest flatwise on the traverse bar and having slotted flanges 16 projecting therefrom for detachably securing the holder to such bar. The spinning ring 13 is detachably mounted on the holder and for this purpose has an annular flange 17 projecting therefrom for engagement at its marginal bottom side on the top edge of the holder, as shown in Figure 3. A split ring 18 is engageable with the marginal top side of the ring-flange 17 and is detachably anchored in grooved lugs 19 rising from the holder for detachably clamping the ring in place.

In the preferred embodiment of the ring shown in the drawing, the same is provided with an inner bearing face 20 which is oblique to the vertical and is flared downwardly and outwardly from a point adjacent the top side of the ring, while the top side of the latter is provided with a downwardly and inwardly sloping bearing face 21, and with which faces the traveler is adapted to engage. Formed in this ring are one or more substantially transverse holes or ports 22 of small diameter through which lubricant is adapted to be conveyed for lubricating the inner ring-bearing face, and one or more substantially upright holes or ports 23 of like diameter through which lubricant is adapted to be conveyed for lubricating the top ring-bearing face. By way of example, two sets of such ports have been shown at diametrically opposite sides of the ring and the transverse ports 22 communicate with alining passages 24 formed in the ring-flange 17. Depending from the latter outwardly of the holder, and adjacent each of such passages, is a lubricant-receiving well 25. The ports 22 are slightly inclined to the horizontal preferably sloping downwardly and outwardly from the inner bearing face of the ring and their outer ends are preferably counter-bored as indicated at 26. The lower ends of the upright ports 23 intersect these transverse ports in the plane of their counterbored portions whereby they are in communicating relation with each other.

Wick elements 27 and 28 are fitted in the respective ports 22 and 23, the wick 27 being immersed at one end in the lubricating well 25 and extending through the companion passage 24 and the alining port 22, while the element 28, which is fitted in the port 23, extends at its lower end into the counterbored portion of said port 22. Both wick elements are preferably composed of a lubricant-conducting core 29 of wool or other textile material extending from end to end thereof and a wire sheath 30 coiled about the same in the manner shown in Figures 4 and 5. That core portion of the wick 27 which extends through the ports 22, 24 is more or less densely or compactly formed by closely coiling the wire 30 about the same to thereby regulate the desired constant flow of lubricant to the bearing faces of the ring, while the remaining portion thereof is in a more or less loose state for ready absorption of the lubricant in the well, this latter condition being accomplished by a spacing of the wire coils about the core. The companion wick 28 has its core closely coiled by the wire sheath while its opposite feed and discharge ends are uncoiled or exposed to freely absorb and dis-

charge the lubricant. The discharge end of the wick **27** is similarly formed for a like reason. In constructing these wicks they are preferably formed about a temporary stem **31**, as shown in Figure 6, which is removed after the wire **30** is coiled about the conducting core **29**, leaving the center of the wick with a small lubricant-conducting channel. The wire sheath also serves to give a certain amount of rigidity to the wicks to facilitate their insertion into the ring-ports.

A cover plate **32** is applied to the open top side of the well **25** and has openings **33** therein for the introduction of lubricant when necessary.

To limit and properly govern the insertion of the wick **27** in the alining port **22** and passage **24** so that its discharge end is substantially flush with the inner bearing face of the ring, I provide such wick with a shoulder **34** adapted to abut against the adjoining wall of the well **25**, as shown in Figure 4. By way of example, this shoulder may be formed by displacing or offsetting one or two coils of the wick.

I claim as my invention:

A device of the character described, comprising a spinning ring having a traveler-engaging bearing face thereon and a lubricant-conducting port opening onto such face, a lubricant-receiving well applied to the ring having a passage leading therefrom and communicating with said ring-port, and a wick threaded through said port and said passage and in lubricant-conducting relation at one end with said well, said wick including a core of textile material and a wire coiled about that portion thereof extending from the well to said port to regulate the constant flow of lubricant to the ring-bearing face, said wick having a stop thereon for limiting its threading operation through said passage and ring-port.

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