

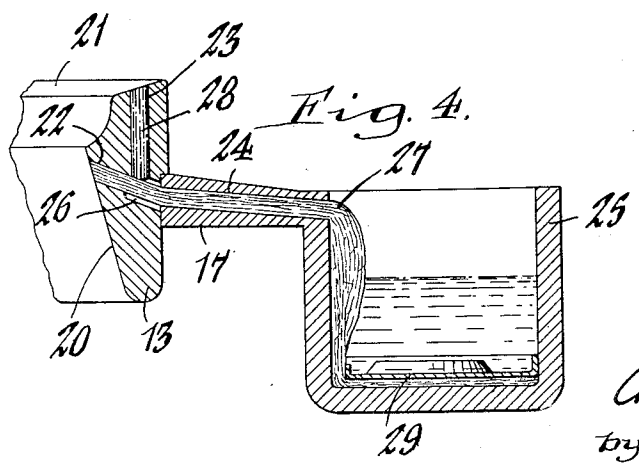
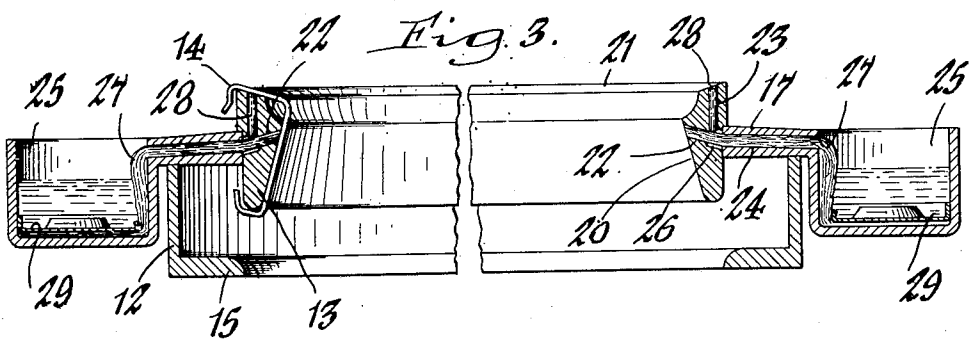
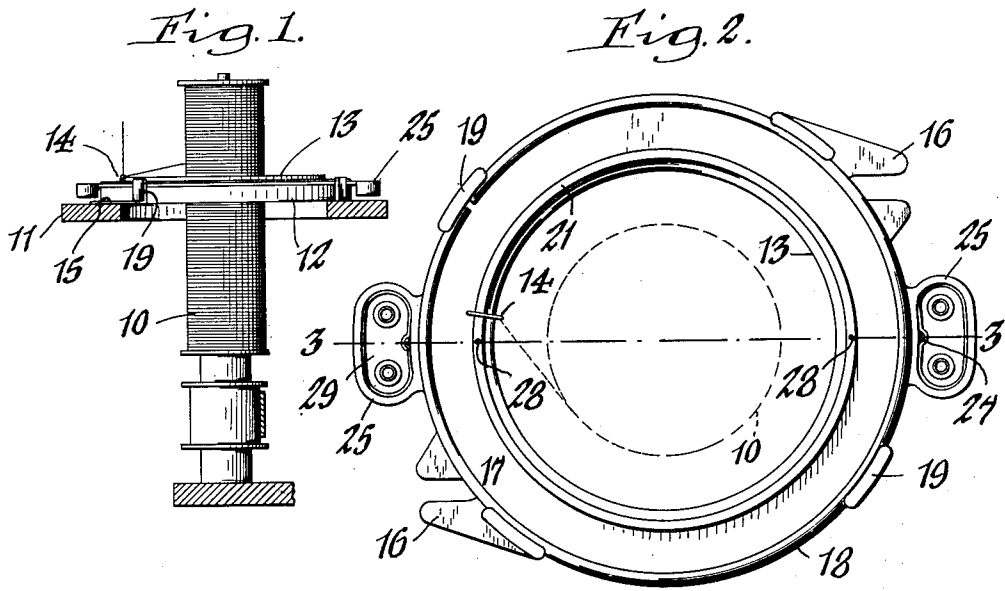
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SELF-LUBRICATING SPINNING RING

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SELF-LUBRICATING SPINNING RING

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4 Claims. (Cl. 57—120)

This invention relates generally to certain new and useful improvements in the spinning rings employed in connection with spinning machines, but more 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 portions of the ring to accomplish maximum lubrication with a minimum of oil consumption.

Another object of the invention is the provision of a lubricating system of this character by which the flow of lubricant can be easily controlled or regulated to suit various conditions and whereby more or less oil may be delivered to the bearing portions of the ring.

A still further object is to provide a simple yet efficient wick-feed lubricating means for spinning rings which is so designed as to enable relatively small wick-receiving holes to be employed in the bearing faces of the ring and thereby prevent carbonizing of the wicks.

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

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 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.

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 engage-

able 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 drawings, 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 counter-bored 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 element 27 being preferably composed of wool or other textile material and immersed at one end in the lubricating well 25 and threaded through the companion passages 24 and the alining ports 22, while the element 28 is in the form of a plug of rattan or like fibrous material whose lower end extends into the counter-bored portion 26 of the port 22 and is in contiguous lubricant-conducting relation with the adjoining portions of the wick element 27. The latter is compacted more or less in the port 22 and passage 24 to a degree to regulate a given constant flow of lubricant to the ring, and the counter-bored port portion 26 serves as an auxiliary sump or well for the plug wick 28. These wick elements terminate at their discharge ends at the companion bearing faces 20 and 21 of the ring and as the traveler passes over them the lubricant is distributed over the bear-

ing faces to provide for a maximum lubrication of the ring with a minimum consumption of oil.

A retainer plate 29 is detachably fitted in the bottom of the well 25 to hold the free end of the wick 27 properly immersed therein.

By this wick-feed of lubricant to the bearing faces of the ring, there is a constant feed of oil to the ring at all times with no flooding or waste, and by compressing the main wick 27 more or less in the port 22 and passage 24, the desired amount of oil to the ring may be effectually regulated and thereby control the degree of lubrication required for given spinning conditions. Furthermore, this construction enables small lubricant ports to be used to afford the constant regulated supply of lubricant for efficient operation and it consumes but a minimum of oil, requiring less frequent oilings at the charging wells. Inasmuch as only a small area of the wicks are exposed on the bearing faces of the ring, any tendency to carbonization is reduced to a minimum.

I claim as my invention:

1. A device of the character described, comprising a spinning ring for a traveler having traveler-engaging bearing faces at its inner and top sides and having intersecting transverse and upright holes therein opening onto such faces, respectively, said transverse hole including a counter-bored portion extending from the exterior side of the ring to the intersecting plane of the upright hole, a lubricant well applied to the ring including a passage communicating with the counter-bored portion of said transverse hole, and means fitted in said holes and in lubricant-conducting relation with said well for delivering the lubricant to the top and inside bearing faces of the ring, said counter-bored portion permitting a free circulation of the lubricant at the intersection of the holes.
2. A device of the character described, comprising a spinning ring for a traveler having traveler-engaging bearing faces at its inner and top sides and having intersecting transverse and upright holes therein opening onto such faces, respectively, said transverse hole including a counter-bored portion extending from the exterior side of the ring to the intersecting plane of the upright hole, a lubricant well applied to the ring including a passage communicating with the

counter-bored portion of said transverse hole, a wool wick leading from said well and extending through said passage and said transverse hole and terminating at the inner bearing face of the ring, and a plug of porous material fitted in said vertical hole exposed at its inner end to the counter-bored portion of said transverse hole and the contiguous portion of said wool wick and terminating at its outer end at the top bearing face of the ring.

3. A device of the character described, comprising a spinning ring for a traveler having a traveler-engaging face extending outwardly and downwardly from adjacent the upper end thereof and a bearing face at its top side, said ring having a transverse hole therein opening onto said first-named bearing face adjacent the upper portion thereof and an upright hole opening at its lower end into said transverse hole and at its upper end onto said top bearing face, and wick means in said holes for conducting a lubricant to said ring-bearing faces, the intersecting portions of said holes being enlarged to provide a clearance space about the adjoining portions of the wicks.

4. A device of the character described, comprising a spinning ring for a traveler having a traveler-engaging face extending outwardly and downwardly from adjacent the upper end thereof and a bearing face at its top side, said ring having a transverse hole therein inclined downwardly and outwardly and opening at its upper end onto said first-named bearing face adjacent the upper portion thereof and an upright hole opening at its lower end adjacent the outer portion of said transverse hole and at its upper end onto said top bearing face, a lubricant well applied to the ring and including a passage in communication with said inclined ring-hole, and wicks fitted in said holes, one of the wicks extending through said passage into the well and the other wick being in contiguous relation at its inner end with such companion wick, the wick-receiving holes being enlarged where the wicks are in contiguous relation to provide an auxiliary well through which one of the wicks passes and into which the lower end of the companion wick extends.

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