Oct. 26, 1943. C. FILLINGER 2,333,069

SELF LUBRICATING SPINNING RING

Filed Nov. 12, 1942

Fig. 1.

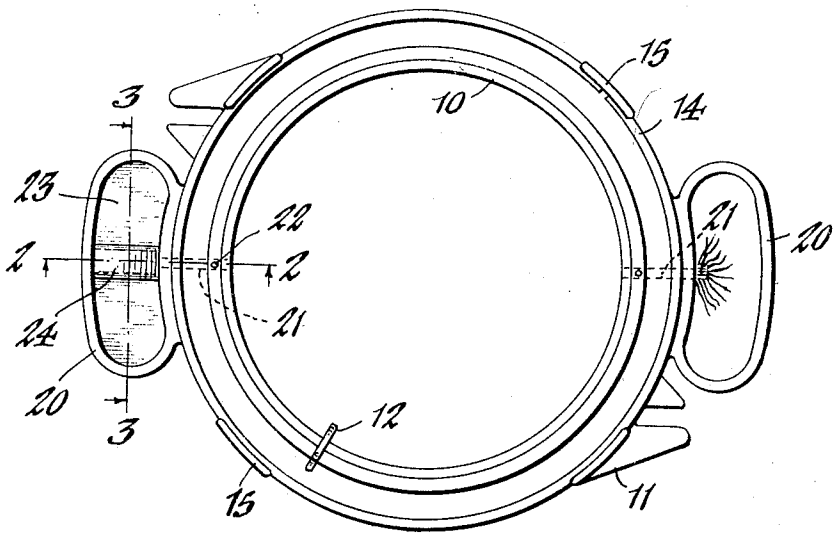



Fig. 2.

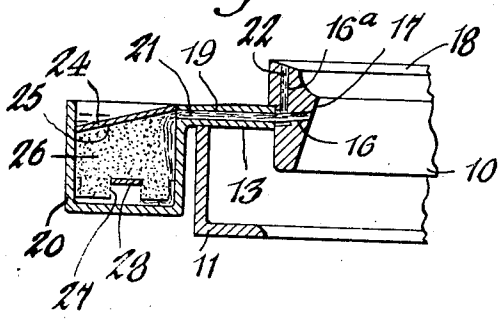



Fig. 3.

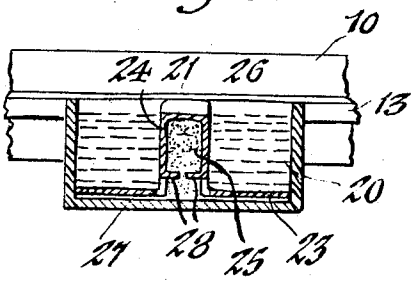
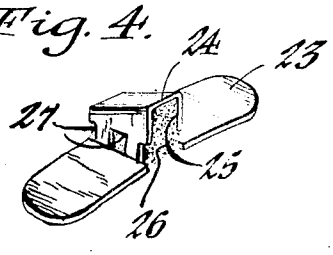



Fig. 4.




Inventor;
Charles Fillinger,
by Walter P. Sayer
Attorney.

Patented Oct. 26, 1943

2,333,069

# UNITED STATES PATENT OFFICE

2,333,069

## SELF-LUBRICATING SPINNING RING

Charles Fillinger, Buffalo, N. Y., assignor to Herr Manufacturing Company, Inc., Buffalo, N. Y., a corporation of New York

Application November 12, 1942, Serial No. 465,348

12 Claims. (Cl. 57—120)

This invention relates generally to the spinning art but more particularly to certain new and useful improvements in the lubrication of the rings employed in connection with spinning machines.

One of the objects of the invention is to provide a spinning ring which is so designed as to not only effectually lubricate the bearing faces of the ring but prevent as well the infiltration of dust, dirt, lint and other foreign matter into the lubricant-conducting line or stream and thereby eliminate plugging of the latter.

Another object is to provide a wick-feed, self-lubricating spinning ring having simple, reliable and inexpensive means constituting an enclosure for that portion of the wick immersed in the lubricant-receiving well to effectually conceal the same against dust and dirt settling thereon and at the same time provide for the capillary feed of the lubricant to the wick to insure proper lubrication of the ring.

A further object of the invention is to provide, for ready application to the lubricant-receiving well of the wick-feed type of spinning ring, a wick-concealing, cap-like device which is designed to maintain the wick clean and free of objectionable foreign matter and which also includes a self-contained, lubricant-absorbing element which serves to lubricate the ring for a predetermined time period after the lubricant-well is empty.

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 top plan view of the self-lubricating spinning ring embodying my invention, the wick-enclosing cap of one of the lubricant-receiving wells being removed. Figure 2 is an enlarged fragmentary cross section thereof taken on line 2—2, Figure 1. Figure 3 is a vertical section taken in the plane of line 3—3 Figure 1. Figure 4 is a detached perspective view of the wick-enclosing cap.

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

By way of example, my invention has been shown in connection with a spinning ring 10 detachably mounted on an annular holder 11 which is adapted to be secured to the traverse bar of a spinning machine in the usual manner. Revolvably mounted on this ring is the customary traveler 12. For the purpose of securely anchoring it to the holder, the ring has an annular flange 13 projecting therefrom for engagement at its marginal bottom side on the top edge of the holder and a split ring 14 is engageable with the top side of this ring-flange and is detachably retained in grooved lugs 15 rising from the holder.

Formed in the ring are one or more transverse holes or ports 16 through which lubricant is conveyed for lubricating the inner traveler-engaging bearing face 17 of the ring, and one or more substantially upright holes or ports 16a which intersect said transverse ports and through which lubricant is conveyed for lubricating the top bearing face 18 of the ring. In the example shown in the drawing, two sets of such lubricant feed ports have been shown at diametrically opposite sides of the ring and the transverse ports 17 communicate with alining passages 19 formed in the ring-flange 13. Depending from the latter outwardly of the holder and in communicating relation with these passages are companion lubricant-receiving cups or wells 20. Wick elements 21 of wool or other textile material are fitted in the ring-ports 16, their inner or discharge ends terminating at the inner bearing face 17 of the ring, while their outer or feed ends extend into and are immersed in the lubricant in the well. Fitted in the upright ports 16a are similar wick elements 22 whose upper ends terminate at the top bearing face 18 of the ring, while their lower ends are disposed in contiguous lubricant-conducting relation with the adjoining portions of the companion wick elements 21. As the traveler revolves about the ring and over the ends of the wick elements, the lubricant is distributed thereby over the bearing faces to provide for a maximum lubrication of the ring with a minimum consumption of oil.

For the purpose of preventing dust, dirt, lint and other foreign matter settling upon and finding its way into the immersed wick element 21 and plugging the same and stopping the flow of oil to the bearing faces of the ring, I provide a simple and effective means for concealing or enclosing the exposed portion of this wick element. By preference, this means is in the form of a cap or plate 23 shaped in plan to substantially the contour of the lubricant-receiving well 20 and adapted to be pressed into the same to occupy a position in the bottom of the well in overlying relation to any frayed end portions of the wick 21, as shown in Figure 2. Formed integrally with this plate substantially centrally between its ends and extending transversely of the well is an upright, loop-like portion 24 forming a chamber or pocket 25 which is transversely alined with the lubricant-passage 19 in the ring-flange 13. Fitted in this pocket is a plug 26 of wool, felt or like material whose inner end is disposed in contiguous lubricant-conducting relation to the adjoining extended portion of the immersed wick element 21. Adjacent their bottom, the side walls of the resulting pocket-forming portion 24 of the cap-plate are provided with one or more openings 27 therein through which the oil in the well is adapted to flow for saturating the plug 26. If desired, these open-

ings may be formed by slitting the companion plate-walls and pressing the resulting tongues **28** inwardly therefrom, such tongues serving as clips which embrace the bottom side of the plug for detachably retaining it in place in the pocket. The opposite edges of this loop-shaped pocket fit snugly and tightly against the opposing side walls of the lubricant-receiving well so that there is no leakage of oil between such parts and no possibility of dust, dirt or other foreign matter entering the pocket **25** and interfering with the flow of oil through the plug **26** and to the feed wicks **21**, **22**. The only path provided for the flow of oil from the well to the plug is through the pocket-openings **27** and these are located below the normal level of the oil in the well and thereby sealed against access of dirt and dust thereto.

As shown in Figure 2, it will be noted that the inner end of the sloping top wall of the plug-receiving pocket **25** is substantially flush with the top edge of the well **20** and adjoining ring-flange **13**, while the outer end thereof is disposed somewhat below the top edge of the well to enable the oil to overflow from that portion of the well on one side of such pocket to the portion on the opposite side thereof. Even after the well is emptied of its lubricant, the plug **26** is sufficiently saturated with lubricant to effect lubrication of the ring for some hours.

While manifestly simple, compact and inexpensive in construction, this wick-concealing cap structure effectually guards against dust and dirt seeping into the wick elements and plugging the flow of lubricant to the bearing faces of the ring, and assures a constant flow of clean oil thereto at all times.

I claim as my invention:

1. The combination with a spinning ring having a lubricant-receiving well and wick means for conducting the lubricant from the well to the bearing faces of the ring, of means fitted in said well constituting an enclosure for that portion of said wick means extending into the well and including a chambered portion disposed in communicating relation with the lubricant in the well and the wick means.

2. The combination with a spinning ring having a lubricant-receiving well and wick means for conducting the lubricant from the well to the bearing faces of the ring, of a cap-like member fitted in said well in concealing relation to the wick means extending therein and including a chamber containing an independent, lubricant-absorbing plug in communicating relation with the lubricant in the well and in contiguous lubricant-conducting relation to said wick means.

3. The combination with a spinning ring having a lubricant-receiving well and wick means for conducting the lubricant from the well to the bearing faces of the ring, of a cap-like member fitted in said well and including a chambered portion in the plane of the wick for receiving and concealing that portion thereof extending into the well and having an opening therein for the flow of oil from the well into such chambered portion.

4. The combination with a spinning ring having a lubricant-receiving well and wick means for conducting the lubricant from the well to the bearing faces of the ring, of a cap-like member fitted in said well and including a chambered portion in the plane of the wick for receiving and concealing that portion thereof extending into the well and having an oil inlet therein establishing communication between the well and such chambered portion, and a lubricant-absorbing plug fitted in the latter and in lubricant-conducting relation to said wick means.

5. The combination with a spinning ring having a lubricant-receiving well and wick means for conducting the lubricant from the well to the bearing faces of the ring, of a cap-like member fitted in said well and having an integrally-formed pocket therein disposed in alining relation to the wick means for concealing the exposed end thereof, the ends of said pocket being in dust-sealing engagement with the opposing walls of said well.

6. The combination with a spinning ring having a lubricant-receiving well and wick means for conducting the lubricant from the well to the bearing faces of the ring, of a cap-like member fitted in said well and having an integrally-formed pocket therein disposed transversely of the well and in alining relation to the wick means for concealing the exposed end thereof, said pocket having an oil inlet in the lower portion thereof and below the normal level of the lubricant in the well, and a plug of absorbent material fitted in said pocket and in lubricant-conducting relation to said wick means.

7. A wick-enclosure cap for the lubricant wells of spinning rings, comprising a plate adapted for engagement with the well and having a chamber formed therein in alining relation to the wick for concealing that portion of the wick extending into the well.

8. A wick-enclosure cap for the lubricant wells of spinning rings, comprising a plate adapted for for engagement with the well and having a chamber formed therein in alining relation to the wick for concealing that portion of the wick extending into the well, and a lubricant-absorbing plug fitted in said chamber.

9. A dust-proof cap for the lubricant-feed well of a spinning ring having a lubricant-conducting port therein, comprising a plate adapted for engagement in the well below the plane of the lubricant-feed port in the ring and having a chamber rising therefrom in communicating relation with such port and the lubricant in the well, said chamber extending transversely of the well in alinement with the ring-port and having its opposite ends in abutting engagement with the companion side walls of the well.

10. A device of the character described, comprising a plate having a loop-like portion formed therein and extending transversely thereof to provide a pocket closed at its top and sides and having an opening therein adjacent its junction with said plate.

11. A device of the character described, comprising a plate having a loop-like portion formed therein and extending transversely thereof to provide a pocket closed at its top and sides and having an opening therein adjacent its junction with said plate, and a plug of absorbent material fitted in said pocket.

12. A device of the character described, comprising a plate having a loop-like portion formed therein and extending transversely thereof to provide a pocket having side walls and a sloping top wall, one of the side walls having an opening therein adjacent its junction with the plate, and a plug of absorbent material detachably seated in said pocket.

CHARLES FILLINGER.