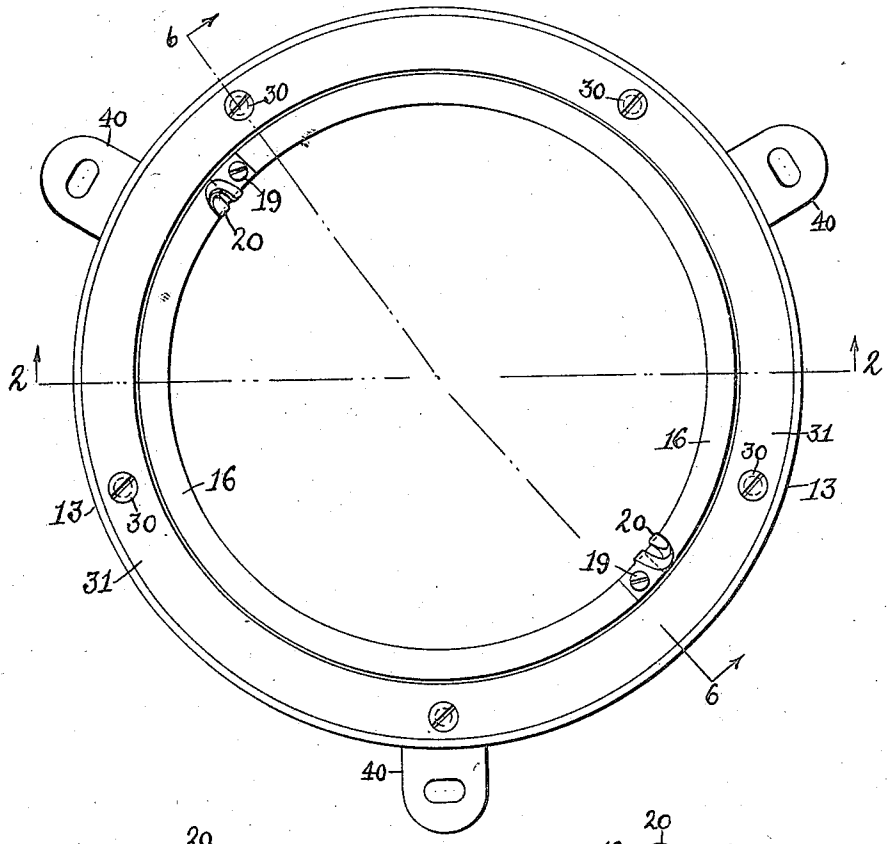
Nov. 20, 1923. 1,474,959

E. B. FEASTER

TWISTING RING

Filed Jan. 30, 1923 2 Sheets-Sheet 1

Fig. 1



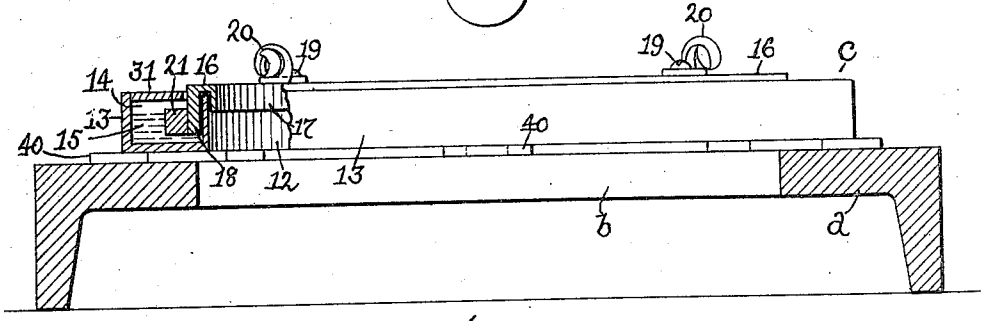


Fig. 2.

Inventor:
Edward B. Feaster
by Jas. H. Churchill
Atty

Nov. 20, 1923. 1,474,959

E. B. FEASTER

TWISTING RING

Filed Jan. 30, 1923 2 Sheets-Sheet 2

Fig. 3.

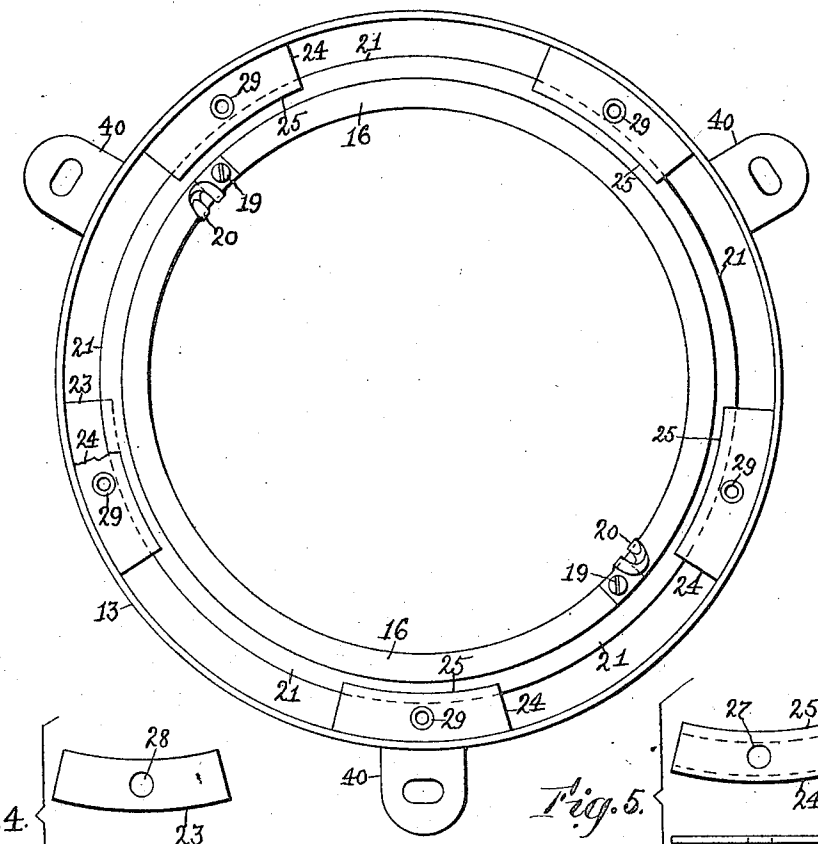
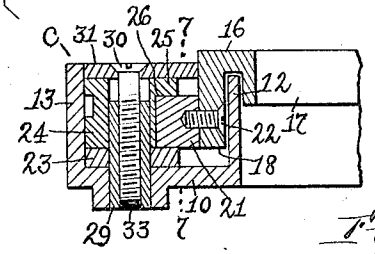


Fig. 4.

Fig. 5.



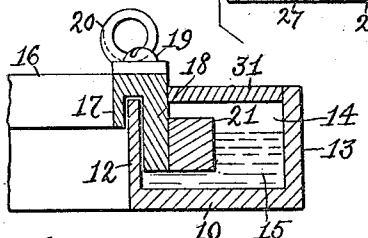


Fig. 6.

Fig. 7.

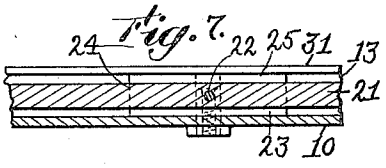
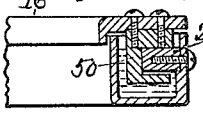


Fig. 8.



Inventor:
Edward B. Feaster
by Jas. A. Churchill
atty.

Patented Nov. 20, 1923. 1,474,959

UNITED STATES PATENT OFFICE.

EDWARD B. FEASTER, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO SACO-LOWELL SHOPS, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

TWISTING RING.

Application filed January 30, 1923. Serial No. 615,940.

To all whom it may concern:

Be it known that I, EDWARD B. FEASTER, a citizen of the United States, residing in Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Twisting Rings, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to twisting and spinning rings employed in twisting and spinning frames or machines, and has for its object to provide a superior ring for use on such machines and particularly for use on twisting machines.

To this end, the ring is provided with an annular hollow housing or base member, preferably substantially U-shaped in cross section, open at its top and adapted to contain grease, oil or other lubricant. The annular base member, which constitutes a lubricant-containing chamber, has cooperating with its open top a revoluble cover member, which may partially or wholly close the open top of the lubricant chamber and has attached to it one or more guides or eyes for the yarn, thread or the like. The cover member provided with the yarn guide or guides is revolved by the yarn or thread as the latter is wound upon the usual bobbin, and constitutes a revolving traveler for the twisting ring.

Provision is made for supporting and guiding the revoluble traveler within the lubricant chamber, and to this end said chamber has located in it overlapping members in sliding engagement with each other, one of which is connected with the hollow base and the other of which is connected with the traveler to revolve therewith.

The cooperating members may and preferably will be made as a plurality of slotted guides and a ring extended into the slots of said guides.

In the preferred construction, the ring is movable, being secured to the revoluble traveler, and the slotted guides are stationary, being secured to the hollow base or housing.

The slotted guides may and preferably will be made in two pieces, for a purpose as will be described.

These and other features of this invention will be pointed out in the claims at the end of this specification.

Fig. 1 is a plan view of a twisting and spinning ring embodying this invention;

Fig. 2, a partial section and elevation of the twisting ring shown in Fig. 1;

Fig. 3, a plan of the twisting ring with the stationary cover member removed;

Figs. 4 and 5, details of the guides shown in Fig. 2;

Fig. 6, an enlarged sectional view on the line 6—6, Fig. 1;

Fig. 7, a section on the line 7—7, Fig. 6; and

Fig. 8, a modification to be referred to.

Referring to the drawing, *a* represents the ring rail of a twisting or spinning frame or machine of known construction, said rail having the opening *b* through which the usual spindle, not shown, is reciprocated in the operation of the machine in a known manner.

Mounted on the ring rail *a* is a twisting or spinning ring embodying this invention and identified as a unit by the letter *c*.

The ring *c* is provided with an annular substantially U-shaped base member, preferably of metal and comprising the bottom 10 and inner and outer upright annular side walls 12, 13, which form with the bottom 10 an annular chamber 14 for containing grease, oil or other lubricant, represented by the broken lines 15 in Figs. 2 and 6.

The lubricant chamber 14 is normally open at its top and has cooperating with it an annular cover member 16, which in the present instance partially closes the said chamber at its top and is provided with inner and outer annular flanges 17, 18 located on opposite sides of the inner upright wall 12 of the hollow base member. The cover member 16 has attached to it by screws 19 or otherwise one or more yarn or thread guides 20. It may be preferred to use two yarn guides 20 located substantially diametrically opposite, as shown in Fig. 1.

The cover member 16 and its attached yarn guide or guides 20 constitute a traveler ring, which is revolved by the yarn or thread, not shown, but which is passed through the guide or guides 20 before being wound upon the usual bobbin, not shown, but as now practiced with frames or machines of this class.

The revolving traveler ring is maintained in operative relation to the base member by overlapping members located within the

lubricant chamber and in sliding engagement with each other. One of said overlapping members is connected with the traveler ring, and the other of said members is connected with the hollow base.

In the present instance, the overlapping member connected with the traveler ring is shown as a ring 21, preferably of bronze, which is secured by screws 22 to the outer flange 18 of the traveler ring. The overlapping member cooperating with the ring 21 is preferably made in sections, each section comprising a curved lower plate 23, and a curved upper block 24 provided with an inner flange 25. The block 24 is made narrower than the plate 23 so that when resting thereon, the flange 25 on the block will form with the plate 23 a slot 26 into which the ring 21 is extended, as represented in Fig. 6. The block 24 and plate 23 are provided with suitable openings 27, 28, which permit them to be fitted over hollow posts or studs 29 extended upwardly from the bottom wall 10 of the hollow base. The hollow posts 29 are internally threaded to be engaged by screws 30, which in the present instance are extended through a stationary cover member 31, and serve to secure the block 24 in fixed relation to the plate 23 and to the bottom 10 of the hollow base member, and thus form of the flanged block and plate a slotted guide for the ring 21.

The flange 25 on the block 24 and the portion of the bottom plate 23 which projects beyond the block 24, form the upper and lower walls of the slot 26 into which the ring 21 extends, and serve to guide the latter as it is revolved with the traveler ring. The contacting surfaces of the ring 21 and its cooperating slotted guides are covered with the lubricant 15 which enables the traveler ring to be moved with a minimum of power.

It is preferred to make the slotted guiding members in sections and distribute them about the hollow base member within the lubricant containing chamber, and further to make each guide in two pieces, so that in case of wear on the bearing ring 21, the upper piece or block 24 may be removed and its lower surface ground off to compensate for the wear on the bearing ring 21, and thereby maintain the desired relation between the bearing ring and its guides.

So also it is preferred to have the ring 21 movable and the guides therefor stationary, but it is not desired to limit the invention in this respect, as the relations of these parts with respect to the traveler ring may be reversed as shown in Fig. 8, wherein the slotted guides are represented as one piece blocks or arms 50 which are secured to the traveler ring 16, which in this case is shown as wholly covering the open top of the hollow base, and the bearing ring 21 is secured to the outer wall 13 of the hollow base. The traveler ring 16 shown in Figs. 1 to 6 forms a movable cover member for a part of the open top of the base member and cooperates with the stationary cover member 31 to cover the whole of the open top of the hollow base, but it is not desired to limit the invention in this respect, as the cover member 31 may, if desired, be attached to the traveler ring 16, in which case the screws 30 would engage the block 24.

The hollow posts 29 may and preferably will be closed at their lower ends by solder 33 or otherwise. The base member may be provided with ears 40 for attachment to the ring rail *a*.

Claims—

1. In a ring of the character described, in combination, a hollow base member open at its top, a traveler ring forming a cover member for a portion of said open top and provided with a guide for the yarn by which the traveler ring is revolved, and overlapping cooperating members for guiding and supporting said traveler ring within said hollow base, one of said overlapping members being stationary and connected with said base and the other being connected with said traveler ring to move therewith in sliding engagement with the said stationary member.

2. In a ring of the character described, in combination, a hollow base member open at its top, a traveler ring forming a cover member for a portion of said open top and provided with a guide for the yarn by which the traveler ring is revolved, and overlapping cooperating members for guiding and supporting said traveler ring within said hollow base, comprising a bearing ring and guides provided with slots into which said bearing ring is extended.

3. In a ring of the character described, in combination, a hollow base member, a traveler ring having a flange extended into the hollow base member, a bearing ring attached to said flange, internally threaded hollow posts erected upon the bottom of said hollow base, plates fitted upon the hollow posts, flanged blocks fitted upon the hollow posts and cooperating with the said plates to form slots into which the bearing ring is extended, a cover ring, and screws extended through said cover ring into said hollow posts to secure said cover ring, blocks and plates in fixed relation to said hollow base member.

4. In a ring of the character described, in combination, a hollow base member open at its top, a traveler ring having a flange extended into the hollow base member, a bearing ring attached to said flange, a guide for said bearing ring attached to said hollow base within the latter and provided with a slot into which said bearing ring is extended.

5. In a ring of the character described, in combination, a hollow base member, a traveler ring revoluble outside of said hollow base member and having a portion extended into the latter to revolve therein, and guiding and supporting members for said traveler ring located within said hollow base and comprising a guide provided with a slot and a ring extended into said slot, one of said guiding and supporting members being movable with said traveler ring.

6. In a ring of the character described, in combination, a hollow base, a traveler ring having a flange extending into the hollow base, a bearing ring attached to one of said members, and a guide for said bearing ring attached to the other of said members and consisting of separable parts located within said hollow base.

7. In a ring of the character described, in combination, a hollow base member, a traveler ring having a flange extending into the hollow base member, a bearing ring attached to said flange, and a guide for said bearing ring consisting of separable parts located within and attached to said hollow base member.

8. In a ring of the character described, in combination, a hollow base member open at its top, a traveler ring having a flange extended into the hollow base member, a bearing ring attached to said flange, a plurality of guides for said bearing ring located within said hollow base, spaced apart and comprising separable parts constructed and arranged to form a slot into which the bearing ring is extended, and a cover for the open top of said hollow base member.

In testimony whereof, I have signed my name to this specification.

EDWARD B. FEASTER.