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SPINNING RING ASSEMBLY

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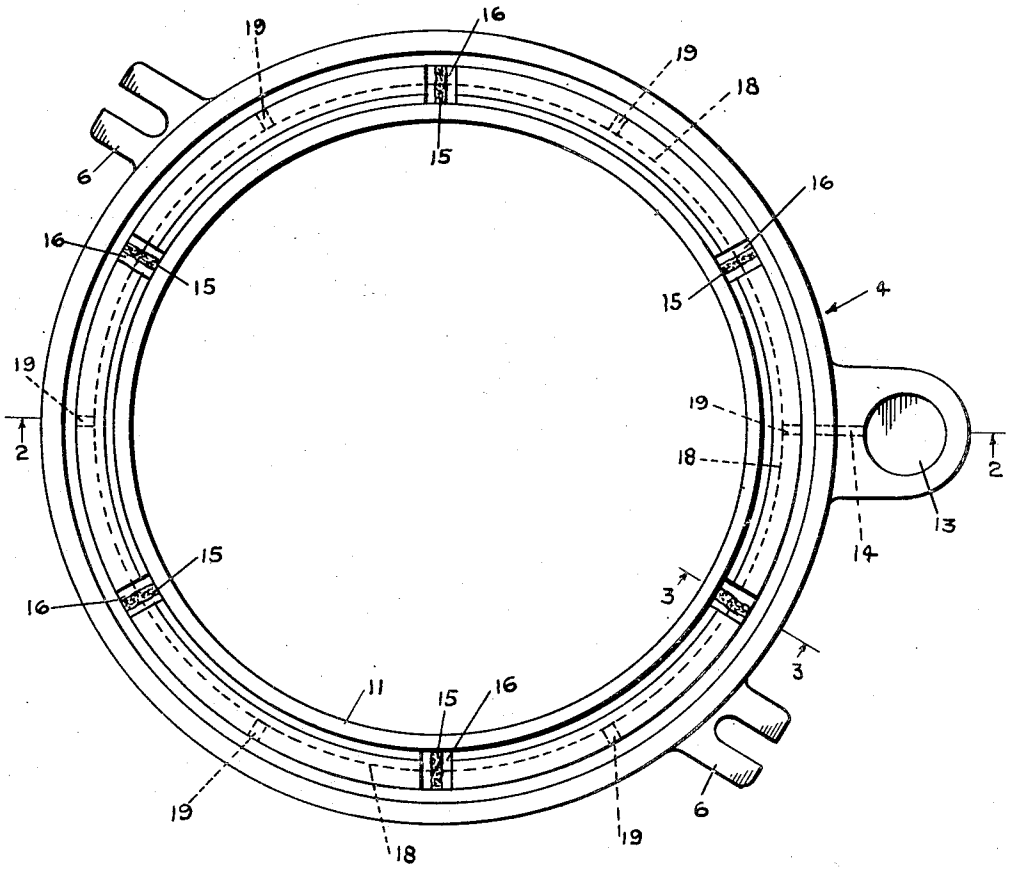


Fig. 1

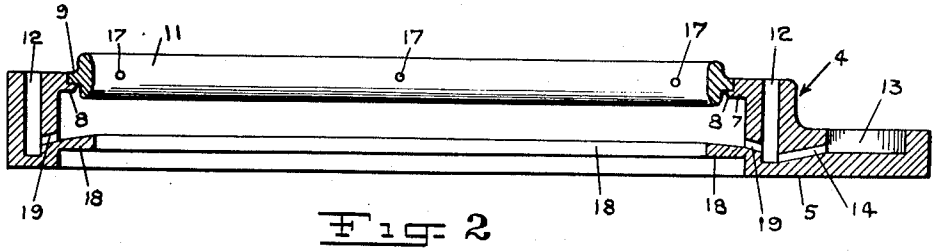


Fig. 2

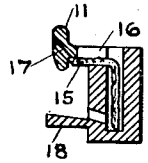


Fig. 3

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SPINNING RING ASSEMBLY

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3 Claims. (Cl. 57—120)

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This invention relates to a textile spinning mechanism, and relates more particularly to a spinning ring assembly having an improved holder for the spinning ring.

In textile spinning mechanism, as now commonly constructed, the traveller ring thereof is normally lubricated with a suitable lubricant supplied to the bearing surface of the traveller ring at a plurality of points. As the traveller moves around the ring, it causes the spreading of the lubricant over the entire bearing surface of the traveller ring. Traveller velocities have increased with the advance in ring diameters and package sizes, the standard traveller velocity used in present textile spinning practice being 150 feet per second. At this very high velocity, the movement of the air effected by the thread or the flange of the rotating bobbin creates a disturbance in the oil lubricant maintained as the supply in a reservoir or chamber normally positioned on the inside of the traveller ring holder. Heretofore, baffles were employed to cover substantially the open top of the reservoir not only to prevent disturbance of the oil but also to keep the oil from becoming contaminated by foreign substances.

It is an important object of this invention to provide an improved holder for the traveller ring of a spinning ring assembly which is free from the foregoing and other disadvantages and which will be especially simple in construction and efficient in operation.

Another object of this invention is to provide an improved holder for a traveller ring of a spinning ring assembly having an annular groove for the reception of a wick supplying lubricant to the traveller ring bearing surface.

Other objects of this invention, together with certain details of construction and combinations of parts, will appear from the following description and the appended claims.

In the drawing wherein a preferred embodiment of this invention is shown,

Fig. 1 is a top plan view of a traveller ring assembly embodying the traveller ring holder of this invention,

Fig. 2 is a cross-sectional view of the traveller ring assembly taken on line 2—2 of Fig. 1, and

Fig. 3 is a cross-sectional view of the traveller ring assembly taken on line 3—3 of Fig. 1.

Like reference numerals indicate like parts throughout the several views of the drawing.

Referring now to the drawing for a detailed description of this invention, the reference numeral 4 indicates generally a traveller ring assembly comprising a traveller ring holder 5 having integral bifurcated brackets 6 which are adapted to be attached to the ring rail, as is well understood in the art.

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The traveller ring holder 4 is provided with an annular projection 7 extending inwardly thereof. The projection 7 is recessed to form a shoulder 8 on which is adapted to rest the circumferential projection 9 of traveller ring 11. The traveller ring may be of any suitable type capable of being lubricated. It is preferred, however, to employ traveller rings having no groove in the ring face, or bearing surface. As is well known, the traveller ring supports a traveller (not shown) which is adapted to be rotated relative thereto.

The holder 4 is also provided with an annular groove 12 which communicates with a reservoir 13, which holds the main lubricant oil supply, through an opening 14. The annular groove 12 is adapted to receive wicks 15 which extend through a plurality of recesses 16 spaced circumferentially about the top of projection 7 of the holder 4. The wicks feed the lubricant oil to slots 17 formed in the traveller ring, which slots lead the lubricant oil to the bearing surface of the traveller ring.

The inner periphery of the holder 4 has integral therewith a shelf 18 which is inclined toward the body of the holder and which is adapted to catch any lubricant oil dripping from the lower edge of the traveller ring 11. The lubricant oil caught by said shelf is passed into groove 12 through a number of slots 19.

In operation, reservoir 13 is supplied with lubricant oil which is led into annular groove 12 through opening 14. The lubricant oil is wicked to the slots 17 in the traveller ring and is carried from the slots 17 over the bearing surface of said traveller ring by the revolving traveller. The lubricant oil which flows to the bottom edge of the traveller ring is thrown off by the traveller and is caught on shelf 18 and returned to annular groove 12 and is again wicked-up by wicks 15.

By the use of the traveller ring assembly above described, the lubricant oil consumption has been reduced by approximately 90% over the amount heretofore consumed by other similar devices. Moreover, saving in oil labor was also effected.

It is to be understood that the foregoing detailed description is given merely by way of illustration and that many variations may be made therein without departing from the spirit of my invention.

Having described my invention, what I desire to secure by Letters Patent is:

1. In a traveller ring assembly wherein a traveller ring carrying a traveller for rotation relative thereto is supported, a holder for said traveller ring, said holder having an annular groove, means for supplying lubricant to said annular groove, means for conducting the lubricant from said annular groove to the bearing surface of said traveller ring, an annular shelf integral with said holder disposed below said traveller ring for catching lubricant dropped from said traveller ring, and means comprising a slot connecting said shelf and said annular groove for conducting to said annular groove the lubricant caught on said shelf.

2. In a traveller ring assembly wherein a traveller ring carrying a traveller for rotation relative thereto is supported, a holder for said traveller ring, said holder having an annular groove, a reservoir on the outer periphery of said holder for supplying lubricant to said annular groove, means for conducting the lubricant from said annular groove to the bearing surface of said traveller ring, an annular shelf integral with said holder disposed below said traveller ring for catching lubricant dropped from said traveller ring, and means comprising a slot connecting said shelf and said annular groove for conducting to said annular groove the lubricant caught on said shelf.

3. In a traveller ring assembly wherein a traveller ring carrying a traveller for rotation relative thereto is supported, a circular holder having an annular projection internally thereof forming a shoulder for the reception of said traveller ring, said holder having an annular groove, a reservoir on the outer periphery of said holder for supplying lubricant to said annular groove, means for conducting the lubricant from said annular groove to the bearing surface of said traveller ring, an annular shelf integral with said holder disposed below said traveller ring for catching lubricant dropped from said traveller ring, and means comprising a slot connecting said shelf and said annular groove for conducting to said annular groove the lubricant caught on said shelf.

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