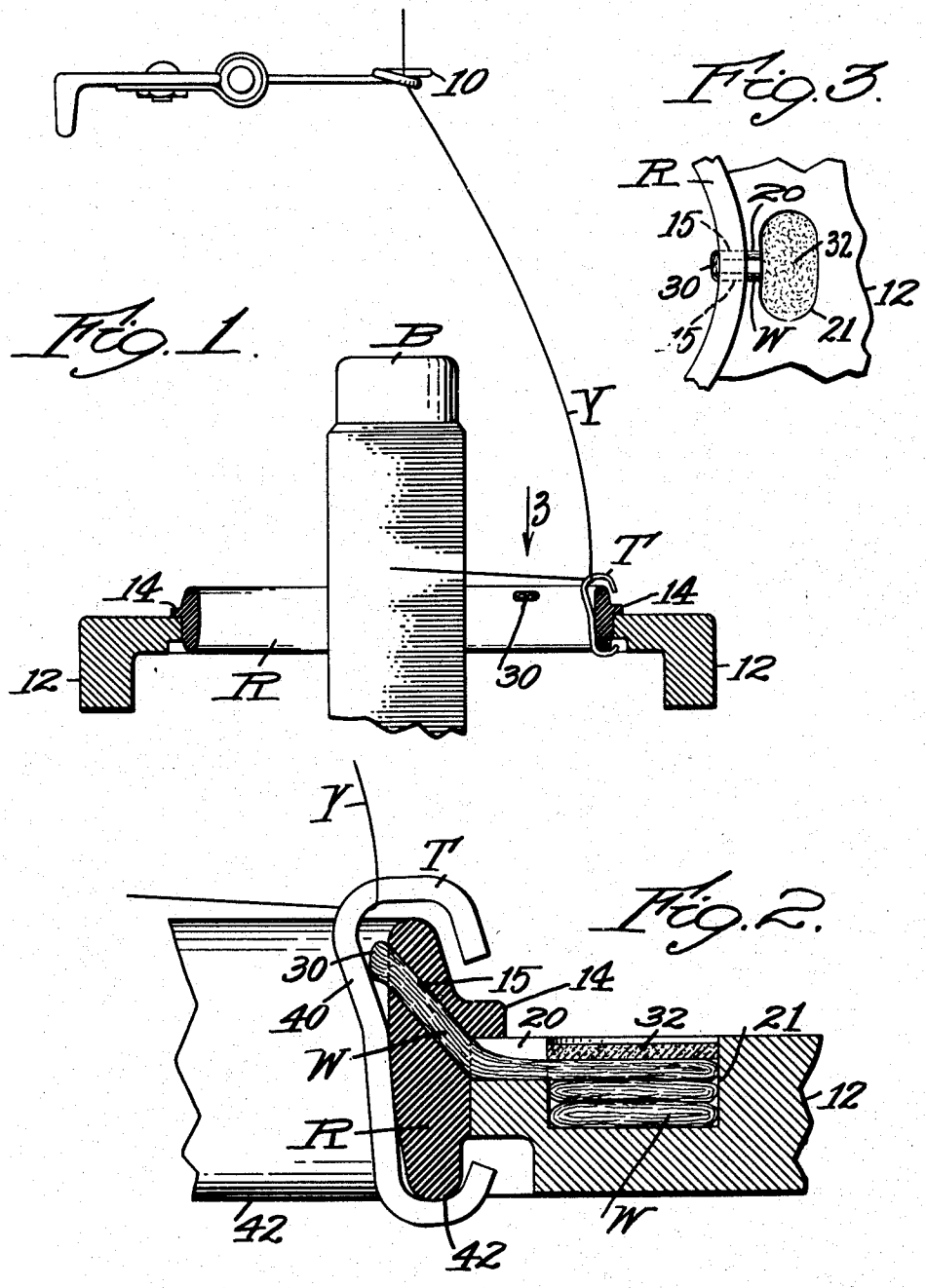
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LUBRICATED TWISTER RING

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LUBRICATED TWISTER RING

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1 Claim. (Cl. 118—59.5)

This invention relates to spinning and twisting frames used in the production of cotton, wool, silk, or rayon yarns, and relates more particularly to the rings and travelers used in such spinning and twisting frames. Rings of the vertical flange type are preferably used in twisting frames and in some cases in spinning frames, and unless satisfactory lubrication is provided the life of the traveler on these rings is considerably short.

Much difficulty has been encountered in providing effective lubrication, as too much oil is as bad as too little and will produce stained yarn and generally untidy mill conditions.

It is the general object of my invention to provide an improved lubricated twister ring of the vertical flange type, which is simple in construction but extremely effective in use, and by which just the right amount of oil will be supplied to the ring and traveler.

I have shown my improved ring mounted in a ring rail or holder of the general construction shown in my prior Patent No. 1,998,973, issued April 23, 1935.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claim.

A preferred form of the invention is shown in the drawing, in which—

Fig. 1 is a sectional side elevation of a vertical flange twister ring embodying my invention, together with certain associated parts;

Fig. 2 is an enlarged sectional side elevation of portions of the ring and ring support; and

Fig. 3 is a partial plan view, looking in the direction of the arrow 3 in Fig. 1.

Referring to the drawing, I have shown a bobbin B mounted for rotation within a ring R which is provided with a traveler T through which the twisted yarn Y is guided to the bobbin. The yarn Y is drawn downward through a yarn guide 10 which is substantially in axial alignment with the bobbin B.

The ring R is of the vertical flange type and is shown mounted in a circular opening in a ring rail 12, the ring being provided with an outwardly extending flange 14 which rests on top of the rail 12 and vertically positions the ring.

At one or more points in its circumference, the ring R is provided with a pair of spaced passages 15 which extend obliquely through the upper part of the vertical flange of the ring R and which are outwardly and downwardly inclined as clearly shown in Fig. 2.

At their lower outer ends, the passages 15 communicate through a short passage 20 with an oil pocket 21 formed in the upper surface of the rail 12. A supply of suitable oil is placed in the pocket 21 and a wick W is threaded through the passages 15, with the connecting portion 30 of the wick extending between the inner ends of the passages 15 and lying snugly against the inner face of the upper part of the ring R. The ends of the wick W extend outward through the passage 20 to the oil pocket 21, in which they are received and packed.

The pocket 21 is preferably of the elongated and substantially eliptical outline shown in Fig. 3, and a washer 32 of felt or other suitable material is preferably fitted into the top of the oil pocket 21 to exclude dirt therefrom.

It will be seen from Fig. 2 that the inwardly slanting portion 40 of the traveler T lightly engages the portion 30 of the wick W at each rotation of the traveler. The amount of oil drawn upward through the wick W by capillary attraction and thus transferred to the traveler is not sufficient to stain the yarn Y (which is being drawn down through the upper loop of the traveler) but is sufficient to work gradually downward along the traveler and to lubricate the traveler at those points where it engages the ring R, and particularly at the lower edge 42 of the vertical flange where the traveler pull is greatest.

While the ring R is shown in the drawing as being mounted directly in the ring rail 12, it will be understood that any other usual manner of mounting the ring may be substituted therefor, provided a conveniently adjacent oil pocket (as 21) and connecting passage (as 20) are provided.

Furthermore, while a single traveler-engaging wick portion 30 is shown in the drawing, it will be understood that two or more such wick portions may be provided, spaced around the ring and according to the demand for lubrication under particular conditions.

Whenever the portion 30 of the wick becomes hardened by the repeated wiping action of the traveler T or by long exposure to the atmosphere, the wick can be pulled along through the passages 15 to provide a fresh traveler-engaging portion, and a new wick can be very easily and cheaply provided whenever necessary.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claim, but what I claim is:—

In the combination of a twisting ring having

a vertical flange with a smooth continuous inner face and a traveler having bearing engagement with the lower part of said inner face of said ring but having its upper part disposed at an angle to said lower part and inclined inwardly and upwardly and spaced from the upper part of said inner face, that improvement which consists in providing a pair of adjacent but circumferentially spaced passages in said ring extending upward and inward through the upper part thereof to said inner face, an oil wick threaded in said spaced passages and having an intermediate connecting portion thereof extending between the inner ends of said spaced passages and lying against the upper portion of said continuous inner face of said ring and positioned to be lightly engaged by the inclined and spaced portion of said traveler as said traveler rotates on said ring, and means to supply oil to said wick.

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