

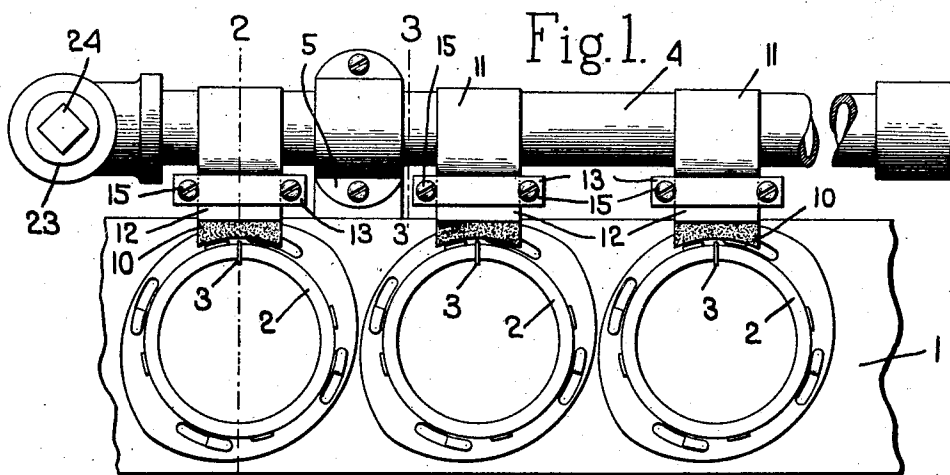
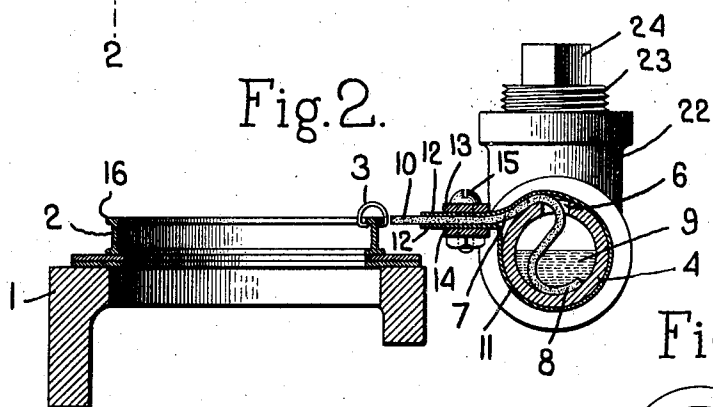
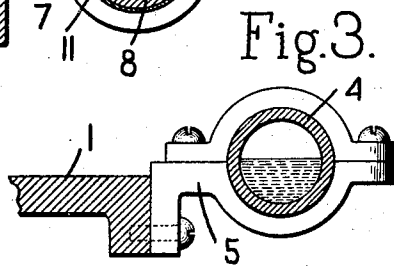
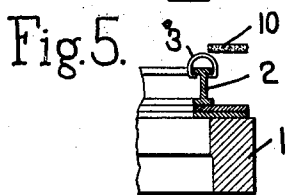
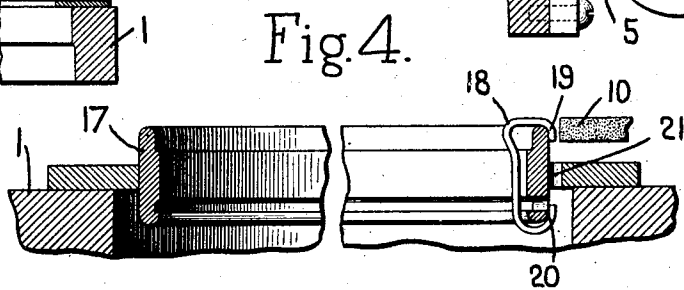
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OILING TRAVELER OF SPINNING FRAMES

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UNITED STATES PATENT OFFICE.

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OILING TRAVELER OF SPINNING FRAMES.

Application filed September 18, 1926. Serial No. 136,207.

This invention relates to oiling devices for oiling travelers of spinning rings and it has for its object to provide a novel device for this purpose which is effective in operation, inexpensive to manufacture and which can be readily applied to any spinning frame or twisting frame.

In order to give an understanding of the invention, I have illustrated in the drawings some selected embodiments thereof which will now be described after which the novel features will be pointed out in the appended claims.

In the drawings:

Fig. 1 is a fragmentary plan view of a portion of the ring rail having my improvements supplied therewith.

Fig. 2 is a section on the line 2—2 Fig. 1.

Fig. 3 is a section on the line 3—3 Fig. 1.

Fig. 4 is a fragmentary sectional view showing the invention as applied to a different form of traveler from that shown in Figs. 1 and 2.

Fig. 5 is a fragmentary sectional view showing a different arrangement of wick from that shown in Fig. 2.

Inasmuch as the invention relates simply to the means for oiling the traveler in a spinning or twisting frame, I have not thought it necessary to illustrate the entire spinning frame herein but have simply shown a sufficient portion thereof to enable the invention to be understood.

In the drawings, 1 indicates a portion of a ring rail of a spinning frame on which the spinning rings 2 are supported, each spinning ring having a traveler 3 associated therewith. These parts are or may be all as usual in spinning frames and form no part of the present invention which relates to a novel means for keeping the travelers properly lubricated. This is accomplished in accordance with the invention by providing an oil reservoir which extends longitudinally of the ring rail 1 and by providing a plurality of wicks, one for each spinning ring, one end of each wick dipping into the oil in the reservoir and the other end being located adjacent the path of the traveler. With one end of the wick immersed in the oil there will be a capillary flow of oil along the wick and the end of the wick adjacent the traveler will be moist with oil, and as the traveler is carried past said end of the wick the suction created by the movement of the traveler will draw sufficient lubricant from the wick to proper-

ly lubricate the traveler. Means are also provided for regulating the capillary flow of oil along the wick thereby to insure the delivery of the proper amount of oil to the traveler to effect proper lubrication. The oil reservoir may be made in various ways without departing from the invention.

In the drawings, the reservoir is indicated at 4 and it is in the form of a tube or pipe which extends lengthwise of the ring rail and is secured thereto by suitable supporting brackets 5. This reservoir is provided with a plurality of wick-receiving openings 6, one for each spinning ring 2, and a wick 7 extends through each opening 6, one end 8 of each wick being immersed in the oil 9 in the reservoir 4 and the other end 10 of the wick being situated closely adjacent the path of a traveler 3.

The end 10 of the wick may be retained in this position by various means. I have herein shown a wick-holder for this purpose which comprises a metal strap 11 that encircles the reservoir 4, the ends 12 of the strap extending laterally from the reservoir and having received between them the end 10 of the wick. Means are provided for clamping the wick between the ends 12 of the strap thereby to control the capillary flow of the oil along the wick. While any suitable means for this purpose may be employed, that illustrated comprises two clamping bars 13, 14 which are situated above and below the end of the laterally extending ends of the wick-holder and are clamped together at their ends by clamping screws 15.

The oil will be carried to the end 10 of the wick by capillary attraction and as the traveler 3 moves past the end of the wick the suction created will draw a slight amount of oil from the wick, the amount thus transferred to the traveler being sufficient to lubricate it. The amount of oil which is delivered to the end of the wick 10 will depend on the adjustment of the clamping plates 13, 14, and if it is found that the oil is being fed to the end of the wick faster than is necessary to properly lubricate the traveler, the clamping screws 15 may be tightened thus choking the capillary flow of oil somewhat. On the other hand, if it is found that the capillary flow of oil is insufficient to provide proper lubrication, then the clamping screws 15 will be loosened so as to allow a freer flow of oil along the wick. It is not necessary that the traveler should actually

touch the wick as a sufficient amount of oil will be delivered to the traveler by the suction created by the movement of the traveler even though the wick is spaced slightly from the traveler as shown in Fig. 2.

The form of wick-holder illustrated has the further advantage of providing means whereby the end 10 of the wick may be adjusted into different vertical positions. By loosening the clamping screws 15, the wick-holder 11 may be turned about the tube 4 thereby to elevate or lower the ends 12. The traveler shown in Fig. 2 is the ordinary spinning ring traveler which is arranged to embrace the upper flange 16 of the spinning ring 2. In Fig. 4 I have shown a different form of ring and traveler, this being a form which may be used on twistors. In this embodiment, the ring is shown at 17 and the traveler at 18, said traveler being shaped to embrace the top and bottom edges of the ring and being situated on the inner side thereof. In this embodiment the traveler has a bearing on the ring both at the top as indicated at 19 and at the bottom as indicated at 20. In order to provide lubrication for the lower bearing surface 20, the ring holder is shown as having one or more apertures 21 therein so that oil which accumulates on the outside of the ring 17 may find its way through the apertures and provide lubrication for the lower bearing surface 20. It is within the invention to so adjust the wick-holder that the end 10 of the wick will be in any desired position relative to the path of travel of the traveler. In Figs. 2 and 4, the wick is shown as situated just outside of said path in a horizontal direction. If desired, the wick may be located slightly upon the path of travel as shown in Fig. 5, it simply being necessary that the end of the wick should be close to the traveler but in such a position that it will not interfere with the spinning or twisting operation.

The reservoir 4 is preferably provided with means whereby oil may be delivered to it in order to keep a proper supply of oil 9 in the reservoir. In the construction shown the reservoir has at one end an upstanding portion or neck 22 which is provided with a filling opening 23, the latter being closed by a removable plug 24.

The invention is applicable to oiling the travelers of either a spinning frame or a twisting frame or any similar textile machinery and I intend the appended claims to apply to any machine whether a spinning frame or twisting frame which has a ring and traveler construction. The expression "spinning ring" is, therefore, used as generally descriptive of a ring such as herein shown which has a traveler associated therewith.

I claim.

1. In an oiler for spinning ring travelers,

the combination with a ring rail, of a plurality of spinning rings thereon, each having a traveler, an oil reservoir extending longitudinally of the ring rail, and a plurality of wicks each having one end immersed in the oil in the reservoir and the other end adjacent the path of a traveler.

2. In an oiler for spinning ring travelers, the combination with a ring rail, of a plurality of spinning rings thereon, each having a traveler, an oil reservoir extending longitudinally of the ring rail, and a plurality of wicks each having one end immersed in the oil in the reservoir and means to control the capillary flow of oil along each wick.

3. In an oiler for spinning ring travelers, the combination with a ring rail, of a plurality of spinning rings thereon, each having a traveler, an oil reservoir extending longitudinally of the ring rail, and a plurality of wicks each having one end immersed in the oil in the reservoir, a clamping device applied to each wick for controlling the capillary flow of oil therealong.

4. In a device of the class described, the combination with a ring rail and a plurality of spinning rings thereon each having a traveler, of an oil reservoir extending longitudinally of the ring rail, said reservoir having a plurality of wick-receiving openings, a wick extending through each opening having one end immersed in the oil in the reservoir and means for maintaining the other end of each wick adjacent the path of a traveler.

5. In a device of the class described, the combination with a ring rail and a plurality of spinning rings thereon, each having a traveler, of an oil reservoir extending longitudinally of the ring rail, said reservoir having a plurality of wick-receiving openings, a wick extending through each opening having one end immersed in the oil in the reservoir and wick-holders for maintaining the wicks with other ends adjacent the paths of the travelers.

6. In an oiler for spinning ring travelers, the combination with a ring rail having spinning rings thereon and a traveler for each ring, of a tubular oil reservoir extending longitudinally of the ring rail, said reservoir having wick-receiving openings at its top, a wick extending through each opening and having one end immersed in the oil in the reservoir, a wick-holder for each wick, said wick-holder comprising a strap encircling the reservoir and having its ends extending laterally with the wick between them and a clamp applied to said ends by which the capillary flow of oil along the wick is controlled.

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

CLARENCE A. PIERCE.