Jan. 6, 1931. G. H. GILLIGAN 1,788,052

SELF LUBRICATING TRAVELER

Filed Nov. 21, 1929

Fig. 1.

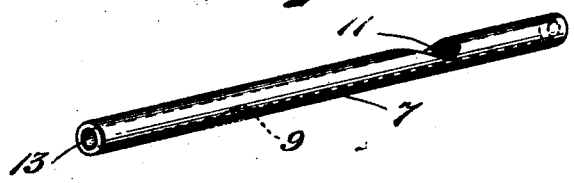


Fig. 2.

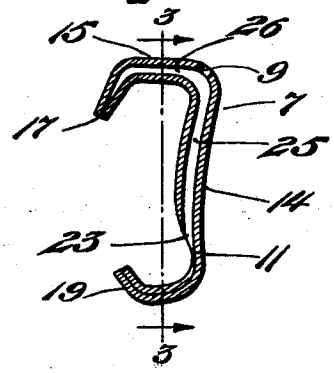


Fig. 3.

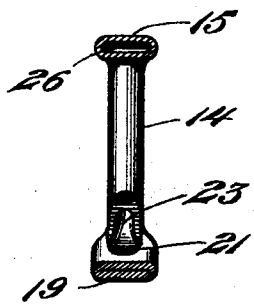


Fig. 4.

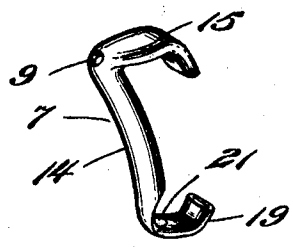
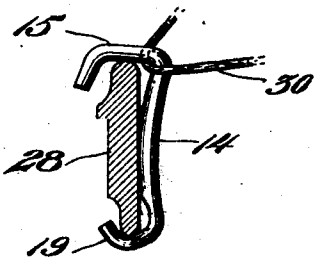


Fig. 5.



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Patented Jan. 6, 1931 1,788,052

UNITED STATES PATENT OFFICE

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SELF-LUBRICATING TRAVELER

Application filed November 21, 1929. Serial No. 408,778.

My invention relates to self lubricating travelers for use upon the vertical type of rings for spinning and twisting machines.

The essential objects of my invention are to provide a reservoir for the lubricating grease capable of being supplied elsewhere than from the surface of the ring where the lubricant is most needed; to insure at all times a constant and uniform supply of lubricant to the ring; and to attain these objects in an inexpensive structure, and by a simple method of construction. Other objects and advantages will be apparent to those skilled in the art.

My invention consists in the structural features and in the method of construction defined in the appended claims.

In the accompanying drawings which disclose a characteristic embodiment of my invention,

Figure 1 is an isometric view of the original blank from which my traveler is formed,

Figure 2, a vertical central section of the complete traveler,

Figure 3, a section taken on line 3—3 of Figure 2,

Figure 4, a perspective view of the same, and

Figure 5, a front elevation of my traveler shown in running position upon a spinning or twisting ring of the vertical type.

Similar reference characters indicate similar parts throughout the views.

My traveler is formed from a blank 7 cut from a length of cylindrical hollow wire. The blank has cut in its wall near one end an orifice 9, and diametrically opposed to the latter near the other end of the blank is an angular transverse incision 11 of substantial depth intersecting the bore 13 of the blank.

The described blank, shown in Figure 1 is next by suitable tools bent and compressed into a traveler of the form shown in Figures 2 to 5 inclusive. In detail the traveler 7 comprises a vertical cylindrical body or shank 14 provided in its upper end with an orifice 9. Integral with the upper end of the shank is a laterally extending hollow longitudinally angular horn 15 formed by compressing one end of the blank so that the horn is flattened and laterally extended. The free end of the horn is preferably closed by excessively compressing the material at that point, as at 17. Integral with the lower end of the shank is a substantially solid, laterally directed, lower horn 19. The horn is laterally expanded by the complete compression of the end of the original blank into a substantially solid, nontubular form. This compression extends from the apex of the incision 11 of the blank outwardly whereby the lower half of the incision forms a resultant recess 21 in the lower horn, and the upper half of the incision forms a downwardly inclined boundary for the opening 23 at the lower end of the shank. The latter opening forms the end of the enclosed lubricant reservoir comprising a portion 25 extending substantially the length of the shank, and a portion 26 continuous therewith in the upper horn 15. The lubricant supply orifice 9 communicates with both portions of the lubricant chamber.

In Figure 5 is shown my traveler in running position upon a vertical ring 28 and engaged by the thread 30 running from the rolls to the bobbin.

The grease is interjected through the orifice 9 until it fills or substantially fills the reservoir constituted by the portions 25 and 26. The frictional heat generated by the movement of the traveler on the ring liquefies the grease which emerges from the mouth 23 of the reservoir or chamber and lubricates the side of the ring, and its lower edge which affords a bearing for the horn 19.

It will be observed that by the introduction of the grease into the reservoir of the chamber through the orifice 9 the necessity of initially smearing the ring with grease to be fed to the traveler and subsequently returning the liquefied grease to the ring is avoided. It will be further noted that both the traveler construction which enables the use of tubular wire, and the method of construction herein described, contribute to facile and inexpensive construction.

I claim:—

1. A traveler for a spinning or twisting ring comprising a tubular shank provided in

its upper outer portion with an orifice for the reception of a lubricant, and in its lower inner portion with a discharge opening for the lubricant and horns upon the ends of the shank.

2. A traveler for spinning or twisting rings comprising a shank provided in its upper outer portion with an orifice for the admission of a lubricant, and in its lower inner portion with a discharge opening, a horn integral with the upper end of the shank, and a horn integral with the lower end of the shank, the shank and the first mentioned horn being provided with an enclosed chamber communicating with the orifice and openings.

3. A traveler for spinning or twisting rings comprising a cylidrical tubular shank provided with an orifice in its upper portion, and in its lower portion with a discharge opening, a horn of greater breadth than the diameter of the shank integral with the upper end of the shank, and a horn of greater width than the diameter of the shank integral with the lower end of the shank.

In testimony whereof I have affixed my signature.

GEORGE H. GILLIGAN.