

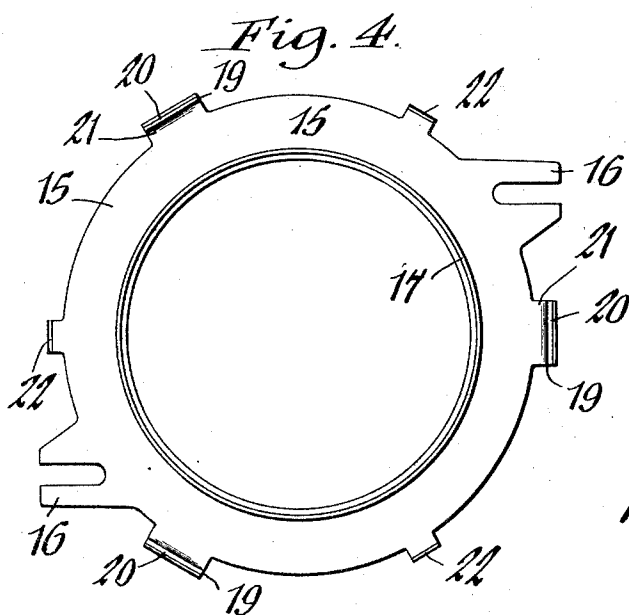
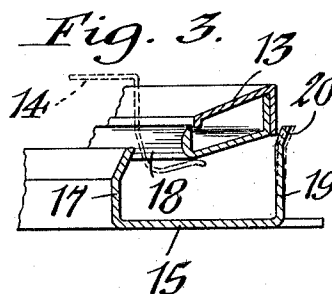
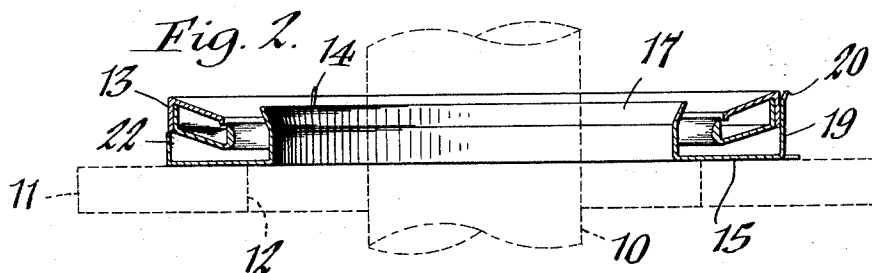
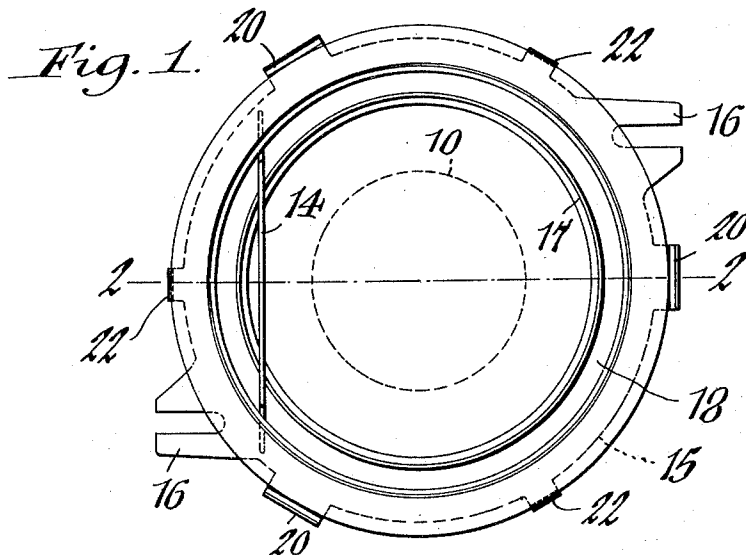
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HOLDER FOR SPINNER RINGS

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UNITED STATES PATENT OFFICE

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HOLDER FOR SPINNER RINGS

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This invention relates to improvements in the holders or mountings employed in connection with the spinner rings of spinning machines.

As now constructed, these spinning ring holders consist of a base member having upright brackets rising therefrom which are offset laterally at a point below their upper ends to provide seats or ledges upon which the spinner ring is adapted to seat, and be yieldingly held in place, the brackets being strained or flexed sidewise to effect the application and removal of the ring to and from the holder. This construction not only necessitates an extreme effort on the part of the attendant to apply and remove the spinner rings, but it is an awkward operation as well, especially on the lower frames of the spinning machine; furthermore, the side strains on the holder-brackets resulting from the effort required to insert and remove the rings causes the base of the holder to bend or warp out of shape, thereby throwing the ring out of true and producing an uneven bearing for the bar traveler which revolves thereon.

The chief objects of my invention are to provide a holder of this character which has been designed to permit the ready application and removal of the spinner ring conveniently and with a minimum of effort, and which is self-centering and provides a positive, true bearing for the traveler at all times.

A further object of the invention is to so construct the holder that the ring is forced into gripping position by a direct downward movement.

A still further object is to provide the holder with stops separate from the ring-gripping elements thereof which serve to limit and gage the correct operative position of the ring in the holder.

In the accompanying drawings:—

Figure 1 is a top plan view of my improved holder showing the spinner ring in position thereon. Figure 2 is an enlarged transverse section taken on line 2—2, Figure 1. Figure 3 is an enlarged fragmentary transverse section taken in the plane of line 2—2, Figure 1 and showing the spinner ring about to be forced downwardly between the clamping

posts or brackets. Figure 4 is a top plan view of the holder with the spinner ring removed.

Similar characters of reference indicate corresponding parts throughout the several views.

In spinning machines of the character to which my invention is particularly applicable, the threads to be twisted are delivered by feed rolls (not shown) to a take-up spool 10 and traversing the same is a vertically reciprocating bar 11, the spool extending through an opening 12 in the bar.

Mounted on the reciprocating bar 11 and surrounding the take-up spool is the supporting member or holder for the spinner or traverse ring 13 upon which the customary bar traveler 14 is adapted to revolve. During the operation of the machine, the bar traveler assumes a substantially upright position and revolves with and about the take-up spool, the thread passing under the traveler before being wound upon the spool and the traverse bar being reciprocated so that the threads are uniformly wound upon the spool in layers.

The improved holder is preferably stamped or otherwise formed from sheet metal and consists of an annular attaching base 15 from the outer edge of which projects a pair of oppositely facing slotted ears 16 for securely fastening the holder to the bar 11 in any approved manner. Rising from the inner edge of the attaching base is a neck 17 which is spaced from the opposing inner edge of the spinner ring 13 to provide an annular channel 18 for receiving the depending legs of the bar traveler, the underside of said ring forming a bearing face for the legs of the traveler.

The spinner ring 13 is detachably mounted within the holder and is adapted to be sprung into place therein by a direct downward thrust. For this purpose a plurality of expansible or yieldable brackets or posts 19, three being shown in the drawings, project upwardly in a substantially vertical position, although it is desirable that these brackets normally deflect inwardly at a slight angle to the vertical to insure a positive grip on the sides of the spinner ring. The upper ends

of the brackets are flared outwardly, as indicated at 20, so that when applying the spinner ring to the holder it is adapted to nest itself in a self-centering, horizontal position between the inner flared portions of the brackets 19 in the manner shown in Figure 3, preparatory to forcing the ring downwardly into its operative gripping position. As shown in Figure 4, the brackets are, by preference, disposed outwardly beyond the periphery of the holder-base 15 and to this end they may be bent upwardly from radial lugs or projections 21 formed integral with said base. The purpose of this construction is to bring the brackets out of the path of movement of the traveler-legs.

Means are provided separate and independent from the brackets 19 for supporting the spinner ring firmly in the holder and for predetermining the positioning of the same in its proper spaced relation above the holder-base 15. These means are positioned radially between the brackets or at the highest points of flexure to which the base is subjected when the spinner ring is engaged with said brackets, and preferably consist of upwardly facing stop-lugs or flanges 22 formed integral with the base and located at substantially the same radial distance from the center of the holder as are the brackets 19. As shown in Figure 2, the outer lower edge of the spinner ring is adapted to rest on the top edges of the lugs 22 and the latter are of a uniform height to insure a true and even bearing for the ring and to maintain it in the required spaced relation to the base of the holder. By arranging the stop-lugs or seats for the spinner ring in this manner, a true and positive three-point bearing is provided for the spinner ring and the tendency of the base of the holder to warp or bend out of shape is counteracted by these stop-lugs, which positively maintain the ring in uniform spaced relation to the holder and afford a free movement of the bar traveler at all times.

This improved holder is manifestly simple and inexpensive in construction; it enables the spinner ring to be applied to it with a minimum of effort; and it insures a self-centering of the ring relative to the holder and affords a true and even bearing for the bar traveler at all times.

I claim as my invention:—

A device of the character described, comprising an annular base, circumferentially-spaced, outwardly expansible brackets rising from the outer edge thereof, the upper ends of said brackets being flared outwardly, stop-lugs rising from the outer edge of said base and disposed between and terminating below the upper ends of the brackets, and a detachable guide ring for a bar traveler adapted to be fitted to said base by a direct downward thrust, the circumference de-

scribed by the flared upper ends of the brackets being of a size to initially receive the ring preparatory to its being forced into clamping engagement with the inner sides of said brackets, the top edges of the stop-lugs constituting seats on which the bottom face of the ring rests in its clamped operative position, and said lugs acting to resist upward displacement of those portions of the base between its brackets as the ring is forced into place, whereby such portions are maintained in proper horizontal spaced relation to the ring to freely receive the legs of the bar traveler between them.

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