June 26, 1923.

1,460,144

L. G. SABBAG

TRAVELER STOP FOR SPINNING RINGS

Filed June 10, 1922

2 Sheets-Sheet 1

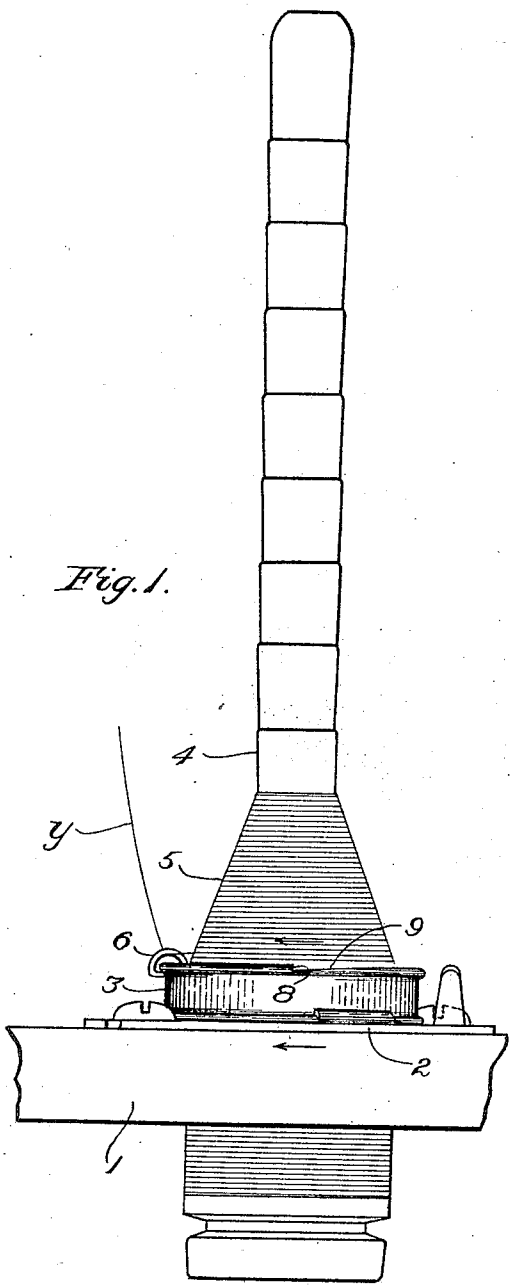


Fig. 1.

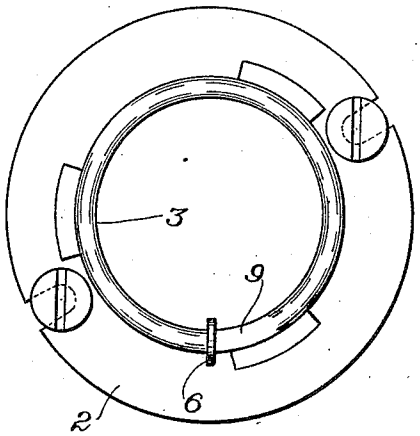


Fig. 3.

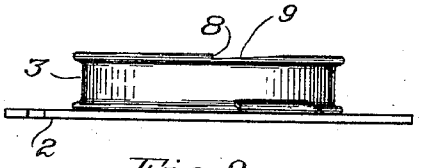


Fig. 2.

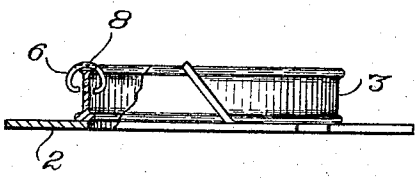


Fig. 4.

Witness:
Oscar F. Hill

Inventor:
Litfallah G. Sabbag
by Chas. J. Randall
Attorney.

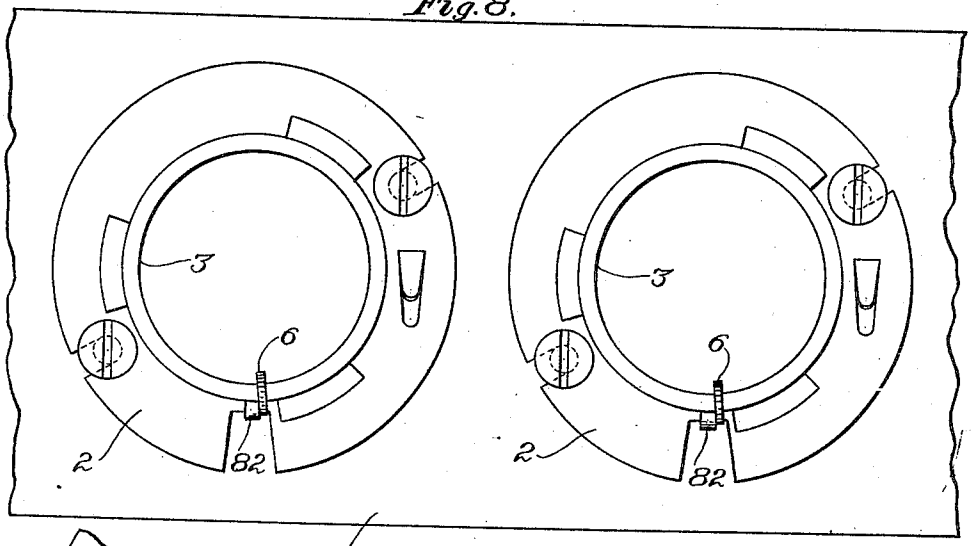
June 26, 1923. 1,460,144

L. G. SABBAG

TRAVELER STOP FOR SPINNING RINGS

Filed June 10, 1922 2 Sheets-Sheet 2

Fig. 8.



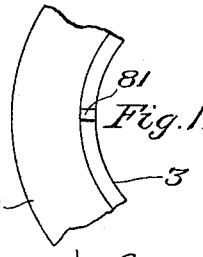
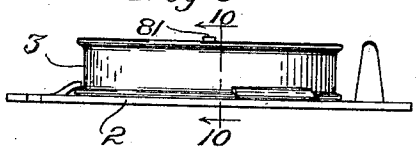


Fig. 11.

Fig. 9



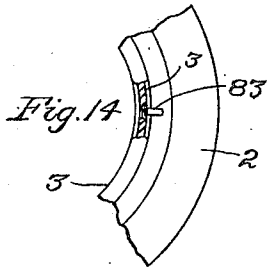


Fig. 14.

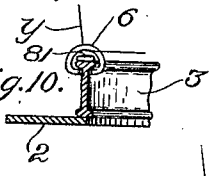
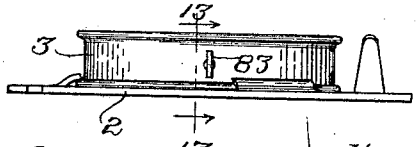


Fig. 10.

Fig. 12.



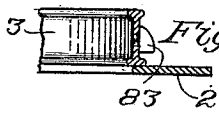


Fig. 13.

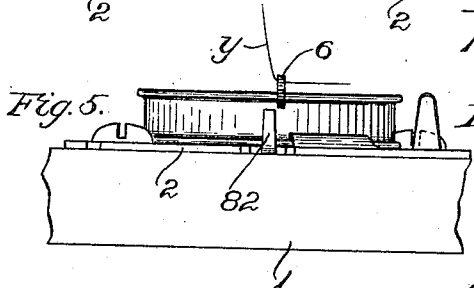


Fig. 5.

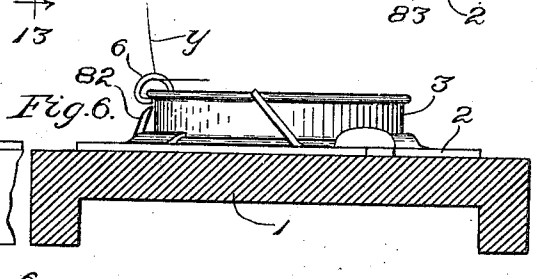


Fig. 6.

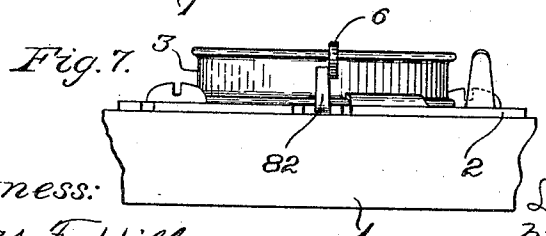


Fig. 7.

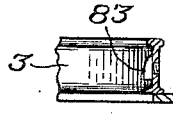


Fig. 15.

Witness:
Oscar F. Hill

Inventor:
Lafallah G. Sabbag
By Chas. J. Randall
Attorney.

Patented June 26, 1923. 1,460,144

UNITED STATES PATENT OFFICE.

LITFALLAH G. SABBAG, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WILLIAM W. MILLER, OF MARTINSVILLE, VIRGINIA.

TRAVELER STOP FOR SPINNING RINGS.

Application filed June 10, 1922. Serial No. 567,331.

To all whom it may concern:

Be it known that I, LITFALLAH G. SABBAG, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Traveler Stops for Spinning Rings, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention is applicable in connection with ring spinning frames.

It has relation more particularly to the rings and travelers which are employed in ring spinning frames.

It consists in a spinning ring having in connection therewith a stop-device by means of which the traveler mounted upon the race of such ring will be arrested at a predetermined point in the circuit of the ring, when the yarn being spun breaks or slackens, or when the operation of the spinning frame is stopped.

One special object in view is to enable the spinning frame attendant to find the traveler at once for the purpose of piecing up a yarn which has broken between the front drawing-rolls and the spinning spindle. Another special object is to render it possible to stop the traveler in such a position as to facilitate the operation of doffing.

The invention is capable of being embodied in a variety of ways. Certain of these are illustrated in the drawings, in which latter,—

Fig. 1 shows in elevation a portion of the ring-rail of a ring-spinning frame, a ring-holder and ring with traveler mounted on the race of the ring, and a spinning bobbin, and shows also one illustrative embodiment of the invention.

Fig. 2 shows in elevation, detached, the ring-holder and ring of Fig. 1, with the traveler removed.

Fig. 3 shows in plan the parts which are shown in Fig. 2, with a traveler added thereto and engaged with the traveler-stop.

Fig. 4 is a view looking from the right-hand side in Fig. 3, with the ring partly broken away adjacent the traveler-stop, and with a traveler mounted on the ring and in engagement with the traveler-stop.

Fig. 5 is an elevation of a portion of a ring-rail, a ring-holder, ring, and traveler, showing a second illustrative embodiment of the invention, with the traveler held clear of the traveler-stop by the yarn which is engaged with the traveler.

Fig. 6 is a view looking from the right-hand side in Fig. 5, the ring-rail being shown in cross-section.

Fig. 7 is a view corresponding with Fig. 5, but showing the traveler dropped and in engagement with the traveler-stop.

Fig. 8 is a top or plan view showing two rings with the travelers thereof engaged with the traveler-stops as in the case of the traveler shown in Fig. 7.

Fig. 9 is an elevation similar to Fig. 5, showing a further embodiment of the invention, without a traveler.

Fig. 10 is a view of the parts of Fig. 9 in vertical section on line 10, 10, of Fig. 9, with a traveler mounted on the ring and in the relation to the traveler-stop which it assumes during normal spinning.

Fig. 11 is a top view of portions of the ring-holder and ring of Figs. 9 and 10, with the traveler omitted.

Fig. 12 is an elevation similar to Fig. 9, showing another embodiment of the invention.

Fig. 13 is a view in vertical section on line 13, 13, of Fig. 12.

Fig. 14 is a plan view, partly broken away, of the embodiment of the invention that is shown in Figs. 12 and 13.

Fig. 15 is a view similar to Fig. 13, showing a further modification of my invention.

The portions of ring-rails which are shown in Figs. 1, 5, 6, 7, and 8 of the drawings, are marked 1. A spinning-ring holder 2 and spinning-ring 3 are shown in each of the views of the drawings. The said holder and ring may be as heretofore, or as preferred, except as indicated hereinafter in explaining the invention. Fig. 1 shows a spinning-bobbin 4 extending up through the spinning-ring 3 of such view, with a partial load 5 of spun yarn wound upon the lower portion of such bobbin. The traveler is marked 6 in each view in which it is shown.

The invention utilizes the principle that the upward pull of the yarn *y*, Figs. 1, 5, 6 and 10, in process of being spun in a ring-spinning frame, will hold the traveler up as in such views, with its hooked extremities in contact with the under sides of the top flanges of the ring, so long as the yarn continues unbroken and is maintained taut between the front drawing-rolls and the

bobbin on which the yarn is wound as fast as it is spun; and that when the yarn breaks, or when the yarn is slackened in case of stoppage of the spinning-frame, the traveler will drop downward into a position like that indicated in Figs. 4 and 7.

Having regard to the principle just mentioned, the invention provides in connection with a spinning-ring a traveler-stop which is so located, relative to the path in which the traveler moves around the ring under normal conditions, that so long as the yarn continues unbroken and remains taut the traveler will pass clear of the traveler-stop, in a path above the latter, but when the yarn breaks or slackens the traveler will drop into a path intersecting the traveler-stop, so that in the continued movement of the traveler (due to acquired momentum in case of yarn-breakage or stopping of the ring-frame) it will encounter the traveler-stop and be arrested thereby.

The traveler-stop of Figs. 1 to 4 is constituted by a shoulder 8 at the top of the ring produced by the removal of some of the material of the ring-top. Preferably the portion of the ring-top immediately in advance of the said shoulder is so formed as to slope or incline downward, as at 9, toward the shoulder 8. With this construction of the top of the ring itself, the yarn *y* will normally hold the traveler up, as in Fig. 1, so that it will travel around the ring-race with its bent body-portion elevated at a height which will avoid engagement of the traveler with the shoulder. In case of breakage of the yarn, however, or of slackening of the yarn as in case of stoppage of the ring-frame, the traveler will drop until its bent body-portion rests upon the ring-top, and the traveler will slide around upon the ring-top under the momentum it has acquired, until it encounters the shoulder 8, as indicated in Figs. 3 and 4, and is stopped thereby. The sloping top surface at 9 just in advance of the shoulder 8 facilitates the movement of the traveler around to the stop and tends to cause the traveler to remain alongside the stop.

Figs. 9, 10 and 11 illustrate a traveler-stop 81 that is constituted by a slight upward projection upon the ring-top. Fig. 10 shows how the traveler 6 clears such projection so long as the yarn *y* remains unbroken and taut. The manner in which the moving traveler will engage with the projection in case of yarn-breakage or stopping of the ring-frame will be evident.

Figs. 5, 6, 7 and 8 illustrate a traveler-stop 82 which is constituted by a tongue or spur struck up from the sheet-metal ring-holder 2, and extends up alongside the body of ring 3 to a point just below the normal path of the traveler 6. Figs. 5 and 6 show how the traveler 6 clears the traveler-stop 82 so long as the yarn continues unbroken and the ring-frame is in operation. Figs. 7 and 8 illustrate the engagement of the traveler with the traveler-stop 82 in case of yarn-breakage or of stopping of the ring-frame.

Figs. 12, 13 and 14 illustrate a traveler-stop 83, made as a separate piece, with a screw-threaded shank, and attached to the body of the ring 2, at the exterior of said body, at a point sufficiently below the traveler-race, by screwing said shank into a screw-threaded hole in the said body.

Fig. 15 shows a traveler-stop, 84, on the same order as that of Figs. 12, 13 and 14, but applied at the interior of the ring.

Still further modifications are permissible.

What is claimed as the invention is,—

1. A spinning-ring having in connection therewith a traveler-stop permitting the traveler to move undisturbed around the ring during normal spinning but engaging therewith to stop the traveler in a predetermined position in case of yarn-breakage or stoppage of the spinning-frame.

2. A spinning-ring having in connection therewith a fixed traveler-stop located clear of the path in which the traveler moves normally during the spinning operation but adapting it to arrest the traveler in a predetermined position in case the traveler is freed by yarn-breakage or the yarn is slackened, as by stopping of the spinning-frame.

In testimony whereof I affix my signature in presence of two witnesses.

LITFALLAH G. SABBAG.

Witnesses:
CHAS. F. RANDALL,
ELLEN O. SPRING.