E. A. BRIGHAM.

SPINNING RING.

APPLICATION FILED JULY 22, 1909.

956,930. Patented May 3, 1910.

Fig. 1.

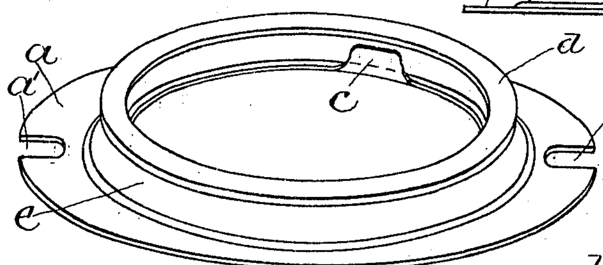


Fig. 2.

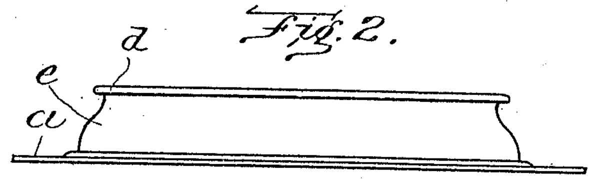


Fig. 3.

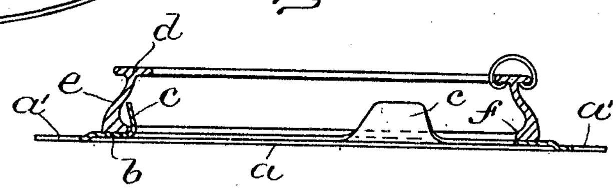


Fig. 4.

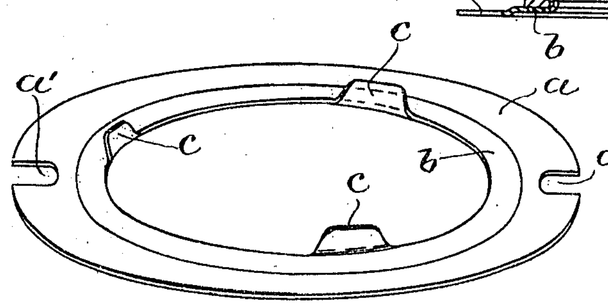


Fig. 5.

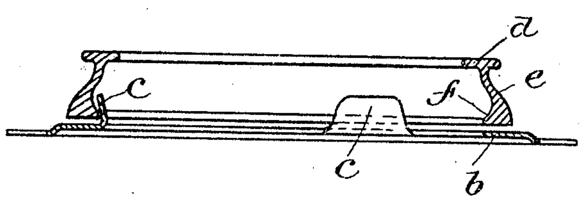
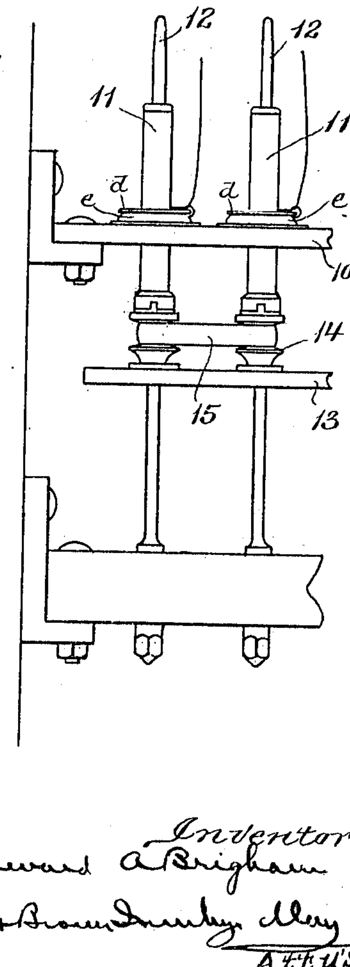


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD A. BRIGHAM, OF GRAFTON, MASSACHUSETTS, ASSIGNOR TO ROTARY RING SPINNING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF DELAWARE.

SPINNING-RING.

956,930. Specification of Letters Patent. Patented May 3, 1910.

Application filed July 22, 1909. Serial No. 508,931.

To all whom it may concern:

Be it known that I, EDWARD A. BRIGHAM, of Grafton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Spinning-Rings, of which the following is a specification.

This invention has relation to rotary spinning rings, and has for its object to provide certain improvements therein by which a bobbin may be filled to its maximum capacity.

In the development of the rotary ring, a holder has been produced which meets all of the various requirements save that when used with a ring of the usual construction, but it limits the amount of yarn that should be put on the bobbin by a ring of the size or diameter employed. This holder, which is set forth and claimed in the co-pending application of Bicknell Hall, Serial No. 508,919 filed July 22, 1909, is provided with a plurality of upwardly projecting, outwardly flaring tongues or lips to extend into the ring so as to limit its lateral and axial movements. Such a holder, when used in conjunction with the usual ring, takes up some of the space between the bobbin and the inner edge of the lower end of the ring, and, unless the bobbins be completely filled, larger rings than should be necessary must be used.

The present invention consists of a ring capable of rotation, having a traveler race at its upper end, and having an interior flange at its lower end, the internal diameter of which is greater than the internal diameter of the traveler race, so that the difference in said diameters is adequate to provide for the employment of the flaring tongues or lips on the holder.

On the accompanying drawings,—Figure 1 illustrates perspectively a holder and a ring which embody the invention. Fig. 2 represents the same in edge view. Fig. 3 represents a vertical section through the ring and its holder. Fig. 4 is a perspective view of the holder. Fig. 5 represents a section similar to Fig. 3, except that the shape of the internal flange of the ring is somewhat different. Fig. 6 illustrates a portion of a worsted spinning machine equipped with the rings.

The holder for the ring is illustrated as being stamped and formed of sheet metal and it has a flat annular base *a* which rests upon the ring rail 10, and which has diametrically opposite slots *a'* to receive the securing screws. Encircled by the base is a raised annular flange *b* which is continuous and on which the lower end of the ring may rest. Equidistant from each other are lips or tongues *c* which are bent upward from the flange *b* and which flare outwardly so as to project into the ring as will be described. These tongues are preferably resilient to permit the attachment or detachment of the ring.

The ring has the traveler race *d* at its upper end, consisting of the internal and external flanges lying in the same plane as usual. The body *e* of the ring flares outwardly, and at its lower end it is formed with a flange *f*, the internal diameter of which is considerably greater than the internal diameter of the race *d*, as shown in Figs. 3 and 5, so that the distance between the inner edge of the flange *f* and the periphery of the bobbin is materially longer than the distance between the inner edge of the traveler race and the periphery of the bobbin. It is quite immaterial how the flange is formed, provided there be an upper surface thereon, whether inclined or horizontal, over which the flaring lips or tongues *c* may project to limit the upward movement of the ring. In Fig. 3, the upper surface of the flange is flatter than that shown in Fig. 5.

In Fig. 6, a portion of a worsted spinning frame is shown, in which the rings are mounted on an immovable ring rail 10, and the bobbins 11, which are on dead spindles 12, are supported by a lifter rail 13 and are driven by wheels 14 and bands 15, but such a machine does not form any part of this invention, and is illustrated as indicating one use for the rings which are hereinafter claimed.

Having thus explained the nature of my said invention, and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim is:

1. A rotary spinning ring, having at its upper end a traveler race, the body of said ring flaring outwardly and downwardly from said race and having an internal flange greater in internal diameter than said race,

over which surface may project the retaining lips or tongues of a ring holder.

2. A rotary spinning ring comprising a body, and a traveler race at the upper end of the body, the internal diameter of said ring being greatest between the upper and lower ends, and least at the traveler race, in combination with retaining tongues arranged outside a circle commensurate with the interior of said race, said tongues extending upwardly and outwardly and adapted to loosely engage the interior of the ring between the lower end and said part of greatest diameter of the ring.

3. A rotary spinning ring comprising a body, and a traveler race at the upper end of the body, the internal diameter of said ring being least at the traveler race, greater at the lower end, and greatest between its upper and lower ends, in combination with retaining tongues arranged outside a circle commensurate with the interior of said race, said tongues extending upwardly and outwardly and adapted to loosely engage the interior of the ring between the lower end and said part of greatest diameter of the ring.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD A. BRIGHAM.

Witnesses:
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