B. HALL.

HOLDER FOR ROTARY RINGS.

APPLICATION FILED JULY 22, 1909.

958,392. Patented May 17, 1910.

Fig. 1.

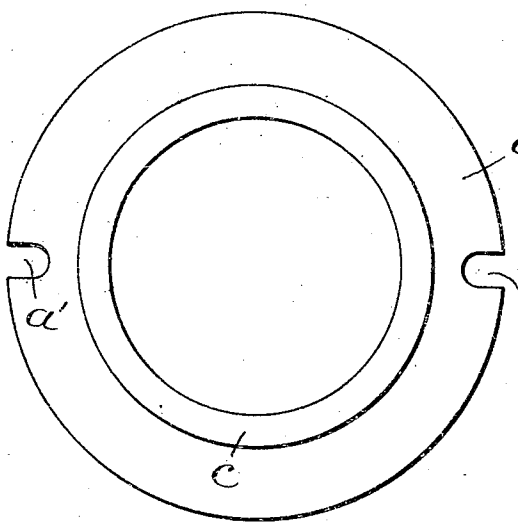


Fig. 2.

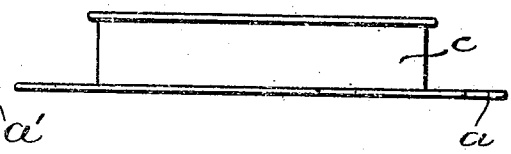


Fig. 3.

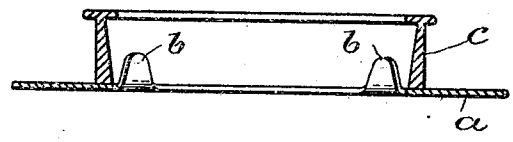


Fig. 4.

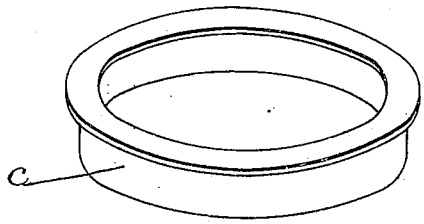


Fig. 6.

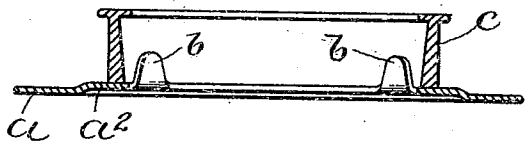


Fig. 5.

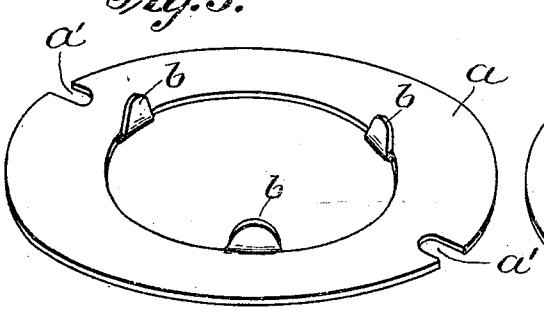
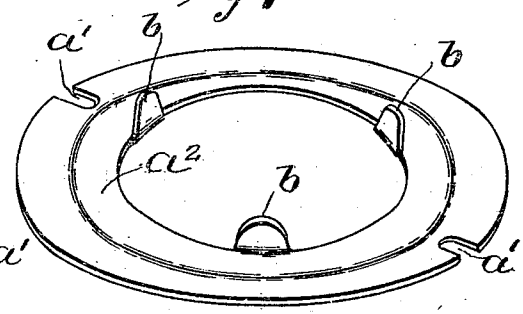


Fig. 7.



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UNITED STATES PATENT OFFICE.

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HOLDER FOR ROTARY RINGS.

958,392. Specification of Letters Patent. **Patented May 17, 1910.**

Application filed July 22, 1909. Serial No. 508,919.

To all whom it may concern:

Be it known that I, BICKNELL HALL, of Taunton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Holders for Rotary Rings, of which the following is a specification.

This invention has relation to the art of spinning, and more particularly to holders for rotary spinning rings. In order that such holders may be practically made and used, they should be capable of being machine-made in large quantities without variation, and at a low cost of production; they should be so formed that the rings may be easily placed in them and removed without the necessity of loosening or removing screws or moving the holders; they should permit the yielding of the ring and its rotation according to the strain of the yarn; they should be so constructed as not to afford lodgment for floating lint and fiber and they should be formed in such manner as not to permit the accumulation of tiny rolls or balls of lint between them and the ring as would impede the proper rotation of the ring. With these requirements in view, I have produced a holder which experience has shown possesses none of the objections inherent to such holders as have already been suggested or produced, and which possesses the desirable features which I have pointed out as being more or less ideal.

I have illustrated upon the drawing ring holders embodying the invention,—Figure 1 representing a plan view of a ring and its holder, Fig. 2 representing a side elevation thereof, Fig. 3 representing a vertical cross-section therethrough, Figs. 4 and 5 being perspective views of the ring and the holder, Fig. 6 representing a cross-section through a ring and the preferred form of holder, and Fig. 7 being a perspective view of the holder shown in Fig. 6.

The ring holder is formed of thin sheet metal such as iron or steel, and it is stamped out and formed by suitable automatic machinery and then subjected to a hardening process. It is provided with an annular flat base a which may rest upon the ring rail, and it has the usual diametrically opposite slots a' through which the securing screws are passed into the ring rail. Projecting upwardly from the inner edge of the annulus are lips or tongues b which flare outwardly, and which are more or less resilient so as to permit a ring as at c to be sprung over them or removed as circumstances may require.

Instead of the base being all in a single plane, as shown in Figs. 1 to 5, it preferably has a raised inner annular portion a^2, as shown in Figs. 6 and 7, on which the lower end of the ring may rest, and on the inner edge of which the lips or tongues b are formed.

In each of the forms of holders shown on the drawings, there is a flat base having a continuous flat annulus (which is raised in Figs. 6 and 7) on which the lower end of the ring rests; and the tongues or lips project upwardly and outwardly from the inner edge of said ring-supporting annulus. By the provision of the raised annulus a^2, the base is stiffened and is prevented from springing or warping in the hardening process.

Any suitable form of rotary ring may be used with the holder provided it is formed below the traveler race with an inner surface or flange over which the lips or tongues b may project to prevent the ring from undue axial or lateral movement. Any desired number of lips or tongues may be used, though I find that three serve their purpose very well.

The reason for forming the retaining tongues b so that they may extend inside the spinning ring and engage the interior of the ring, is to subject the coacting faces of the tongue and ring to the current of air set up within the ring by the rapidly rotating bobbin. The effect of the air current is to carry out all loose particles of lint which become separated from the yarn, and the interior of the ring and the retaining tongues are therefore kept clean and an accumulation of lint which would otherwise be present between the tongues and the ring and which would retard the rotation of the ring is precluded. The wide space between the several tongues permits the current of air to enter between each of the tongues, and the ring and the full effect of the current of air is thus afforded.

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 holder for a rotary spinning ring, consisting of a stationary base having a flat ring-supporting annulus, and a plurality of tongues projecting upwardly and outwardly from the inner edge of said annulus.

2. A holder for a rotary ring, the same being made of sheet metal having a base with an inner flat continuous ring-supporting annulus, and a plurality of lips or tongues bent upwardly and outwardly from the inner edge of said annulus so as to extend into the interior of the ring.

3. A holder for a rotary spinning ring, comprising a flat circular base, having an inner continuous ring-supporting annulus raised above the plane of the outer portion of the base, and lips or tongues formed on said annulus and projecting upwardly and outwardly so as to extend into the interior of a rotary ring.

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

BICKNELL HALL.

Witnesses:

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