G. L. PIERCE.

SPINNING RING HOLDING APPARATUS.

APPLICATION FILED MAR. 17, 1906.

920,082. **Patented Apr. 27, 1909.**

Fig. 1.

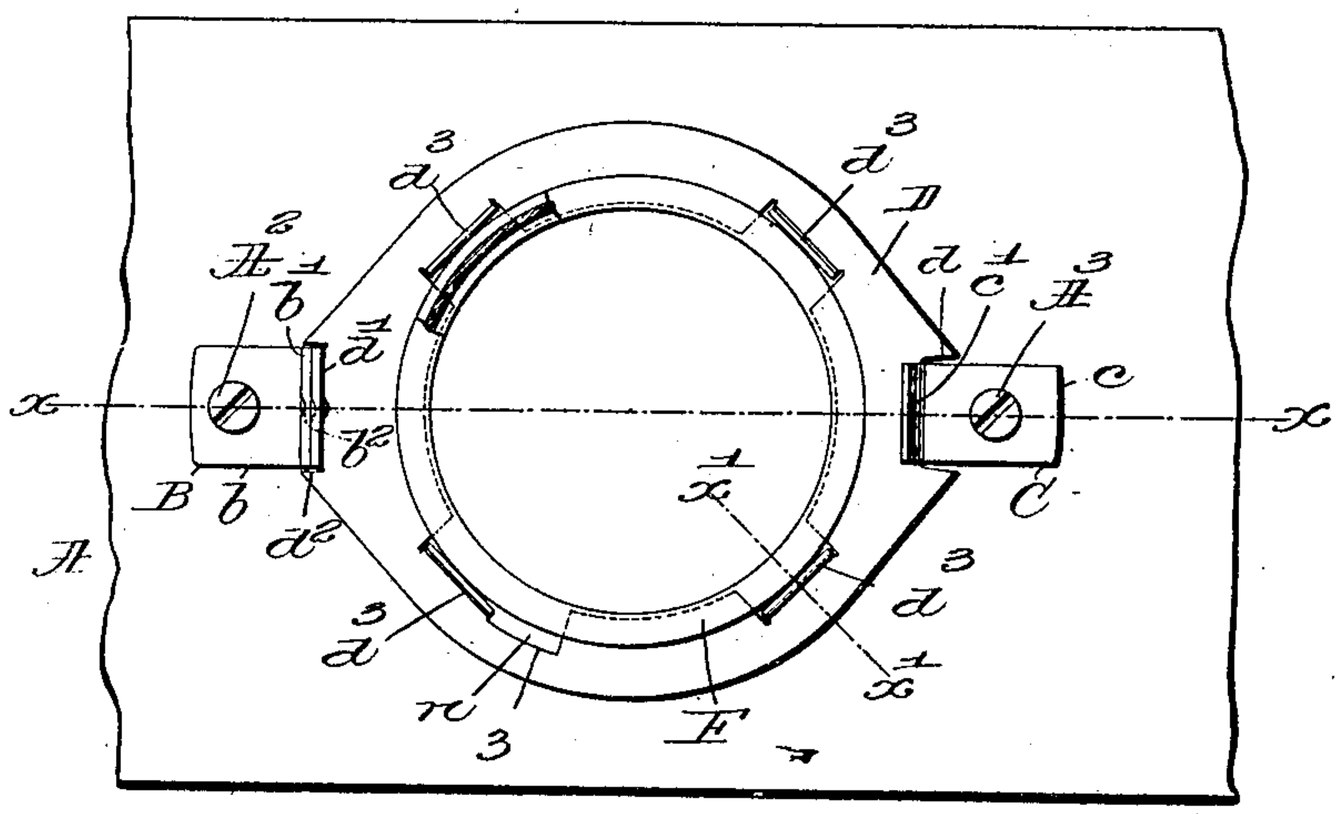


Fig. 2.

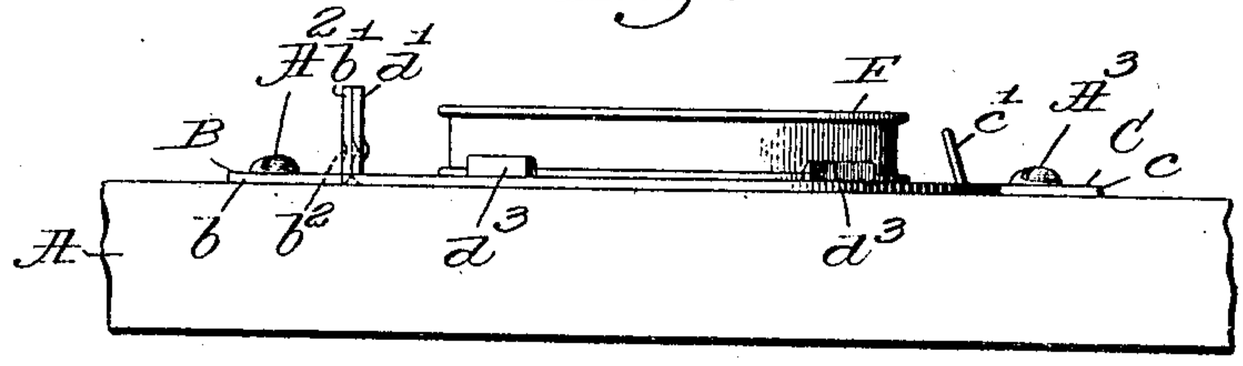


Fig. 3.

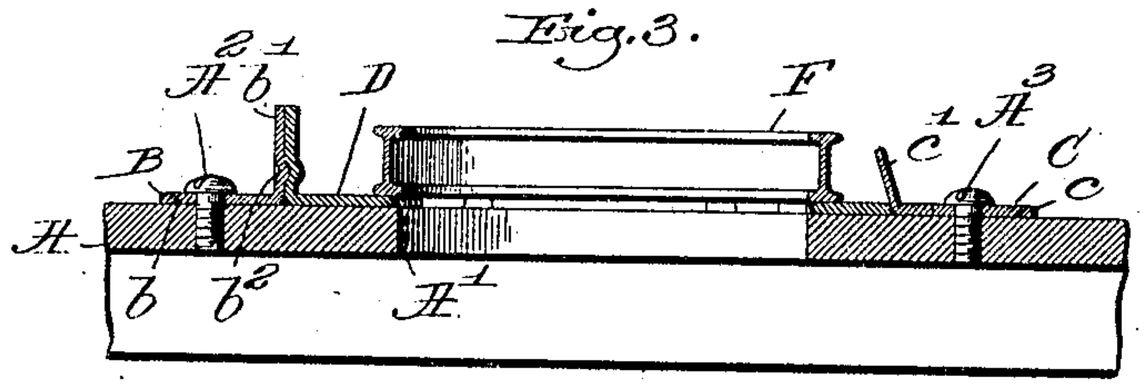


Fig. 4.

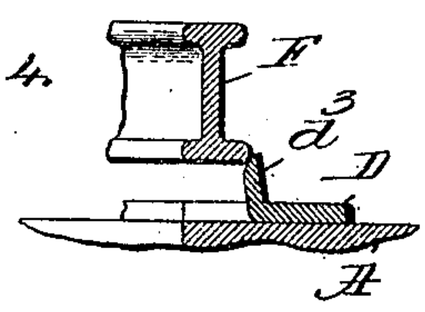
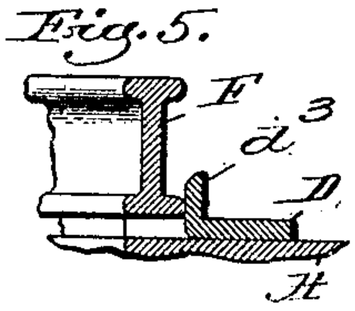


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE L. PIERCE, OF MANCHESTER, NEW HAMPSHIRE.

SPINNING-RING-HOLDING APPARATUS.

No. 920,082. Specification of Letters Patent. Patented April 27, 1909.

Application filed March 17, 1906. Serial No. 306,492.

To all whom it may concern:

Be it known that I, GEORGE L. PIERCE, a citizen of the United States, residing in Manchester, county of Hillsboro, and State of New Hampshire, have invented an Improvement in Spinning-Ring-Holding Apparatus, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawings representing like parts.

In ring spinning machines when the count of the yarn is to be changed, it is customary to remove from the ring-rail all the holders and their rings and supply the rail with other holders having rings of the particular diameter required. The removal of a set of ring holders and rings and supplying another set of holders and rings requires very considerable time and the work is usually done by a man who has to centralize the rings with relation to the spindles.

U. S. Patent No. 830,452, dated September 4, 1906, shows a rail-plate having a positioning device and a locking member, and a ring-plate notched to engage the positioning device and provided with a locking member co-acting with the locking member of the rail-plate, and the ring-plate is provided with a series of lugs that embrace the lower member of the ring to hold the same on the ring-plate.

In the invention herein shown and to be described, I dispense with the rail-plate shown in said patent, and instead employ two separate L-shaped plates one of which serves the purpose of the positioning member, and the other of the locking member of said rail-plate, each of said L-shaped plates being attached to the ring-rail by a separate screw; and I have made novel provision for readily detaching the ring from between the lips of the holder which retain the ring, when in operation, very snugly that it cannot be detached in use.

Figure 1 in plan view shows part of a ring-rail with a ring held thereon in accordance with my present invention; Fig. 2 is a side elevation thereof; Fig. 3 is a section in the line x, Fig. 1; Fig. 4 shows in section part of the lower end of a ring in contact with the beveled upper ends of one of the lips of the ring-plate, the section being in the line x, Fig. 1, and Fig. 5 shows the ring pushed down or seated on the ring-plate.

In the drawings, A represents part of a ring-rail having a spindle opening A′ and having tapped holes for the reception of screws A^2 A^3. The screw A^2 is employed to confine on the rail the independent resilient fastening member B comprising a base portion b having a hole for the reception of said screw and an upright portion b' having at its face a projection or teat b^2. The screw A^3 is employed to connect to the rail the independent positioning plate C comprising a base c and an upwardly and inwardly inclined portion c'.

The ring plate D is shown as notched at d to embrace the positioning member C and opposite said member the exterior of the ring-plate D has an upwardly extended ear that constitutes a locking member d' that has a recess with which engages the projection b^2 of the co-acting locking member secured to the ring rail when in the position shown in the drawing. The exterior edge of the ring-plate has a notch d^2 that spans the upright portion b' of the locking member B.

The ring plate D has, as shown, four lips d^3 beveled as shown in Fig. 4 at the inner sides of their upper ends so that said lips yield a little as the lower end of the ring F is forced into position between said lips from the position, Fig. 4, into its operative position, Figs. 1 and 5.

The members B and C when once applied to the top of a ring-rail, need not be thereafter adjusted or removed to effect a change of ring holding plates and rings, as it will be understood that the exteriors of all the ring holding plates will be of the same size, but they will be provided with suitable central openings, that depending upon the diameter of the rings to be employed, and any ring-holding plate whatever the diameter of its ring, may be readily applied to the positioning device or member, and the locking member, thus connecting the ring holder with the ring-rail. To apply the ring-holding plate, the notched part d thereof will be applied to the inclined portion c' of the positioning member C, and the notched portion d^2 of said ring-holding plate will then be applied to the upright portion b' of the locking member B and will be pushed down, causing the engagement of the locking member of the ring-holding plate with the locking member connected with the ring-rail, and said locking members co-acting one with the other will retain the ring holder and its ring in operative position until the same is to be changed.

To enable a defective ring F to be removed from between the lips d^3 of the ring-holding

plate, I have provided said plate with a tool-receiving notch n which extends from the inner edge of the plate toward the outer edge thereof to a point considerably beyond the outer edge of the spinning ring, as best seen in Fig. 1, the portion of the notch which is situated outside of the spinning ring being sufficiently large to insert a screw driver or other tool so that the ring can be removed from the holder or plate by prying on the lower edge of the ring with said tool. The notch n is preferably situated adjacent one of the lips d^3 although this is not essential to the invention.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A ring plate having lugs and an external notch, and an up-turned locking member, combined with a locking member and a separate positioning member, each adapted to be connected with a ring-rail at points opposite one the other.

2. A ring plate having lugs and an external notch, and an up-turned locking member, said plate presenting a notch outside said locking member, combined with an independent locking member, and an independent positioning member, each being adapted to be attached separately to the top of a ring-rail.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE L. PIERCE.

Witnesses:

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