C. E. TROWBRIDGE.

Adjusting Device for Spinning Rings and their Holders.

No. 207,693. Patented Sept. 3, 1878.

Fig:1.

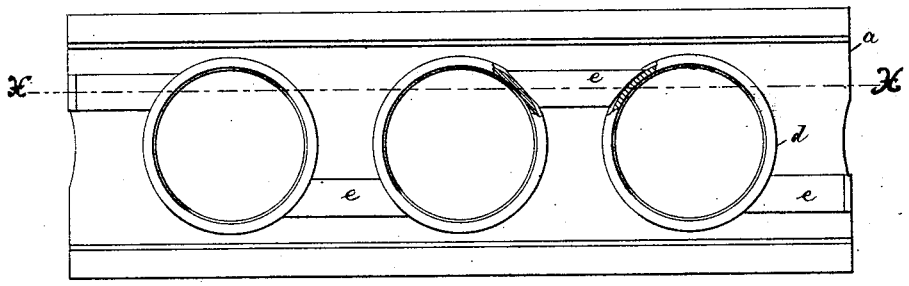


Fig:2.

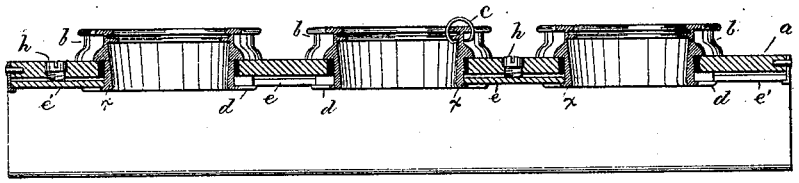
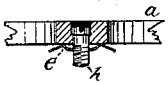


Fig:3.

Fig:4.



Witnesses.

L. F. Connor

N. E. Whitney.

Inventor.

Charles E Trowbridge

by Crosby Gregory Attys

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UNITED STATES PATENT OFFICE.

CHARLES E. TROWBRIDGE, OF WHITINSVILLE, MASSACHUSETTS.

IMPROVEMENT IN ADJUSTING DEVICES FOR SPINNING-RINGS AND THEIR HOLDERS.

Specification forming part of Letters Patent No. **207,693**, dated September 3, 1878; application filed June 22, 1878.

To all whom it may concern:

Be it known that I, CHAS. E. TROWBRIDGE, of Whitinsville, county of Worcester, State of Massachusetts, have invented an Improvement in Adjusting Devices for Spinning-Rings and their Holders, of which the following is a specification:

This invention relates to improvements in ring-spinning frames, and has special reference to means for holding the ring or its holder in adjusted position within the ring-rail opening, and concentric with the spindle.

In this my invention I provide the lower end of the ring or holder shank with a holding-down projection, with which engages an adjustable cramping device, located at the under side of the ring-rail, said cramping device being acted upon by a set-screw passed through the top of the ring-rail, which forces the end or ends of the cramping device against the holding-down projection, to keep the ring or its holder down firmly upon the ring-rail.

The ends of the cramping device are inclined, so that by moving the said device laterally or toward either side of the ring-rail, the ring may be adjusted by hand, and in such position the cramping device, acted upon by the set-screw, may be made to hold it.

Figure 1 represents an under-side view of a portion of a ring-rail with my improvements added; Fig. 2, a longitudinal section thereof on the line X X, Fig. 1; Fig. 3, a section of a holder provided with my holding-down projection; and Fig. 4, a modified form of cramping device.

In the drawing, *a* represents the ring-rail, *b* the rings, and *c* the travelers.

In Figs. 1 and 2, the shanks of the rings *b*, which extend down through the openings in the ring-rails, are grooved or scored to form at or near their lower ends holding-down projections *d*, with which co-operate the ends of the cramping device *e*, those *e* between adjacent rings having both their ends concaved or beveled, or suitably shaped to overlap the holding-down projection, while those *e'*, at the outer sides of the rings at the ends of the rail, are so shaped at but one end.

The shank of the holder *f*, (shown in Fig. 3,) as are the rings, is provided with a holding-down projection at its lower end, and the holder at its upper end is shown as grasping a double-raced ring.

Into the top of the rail, between the adjacent rings, are bored holes to receive the set-screws *h*, the ends of which project through the rail and impinge against the top of the cramping devices to force them down upon the holding-projections, (see Fig. 2,) they, by friction exerted between them, acting to hold the ring in adjusted position upon the rail.

The rings or rings and holders are first adjusted by hand; then the ends of the cramping devices are placed so as to rest upon the projections, and the screws are turned to force the parts together.

In this way the screws in the side flanges of the rail, always heretofore used with shanked rings or shanked holders, are dispensed with, and the number of screws to hold the rings in place is lessened.

In the modification shown in Fig. 4, the cramping device is so shaped and acted upon by the set-screw that, as the depressed central portion of the cramping device is lifted, its outer ends are forced downward to engage the holding-down projections of either the shank of the ring or of the holder.

I claim—

The combination, with the ring-rail and shanks, of two rings or holders, provided each with holding-down projections located below the under surface of the ring-rail, of a cramping device shaped at its ends to operate upon the projections of two shanks, and a screw to press the cramping device to hold the said shanks in adjusted position, substantially as described.

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

CHARLES E. TROWBRIDGE.

Witnesses:

WILLIAM H. WHITIN,

EDW. WHITIN.