(No Model.)

E. & S. TWEEDALE & J. SMALLEY.

RING AND TRAVELER CLEARER.

No. 564,124. Patented July 14, 1896.

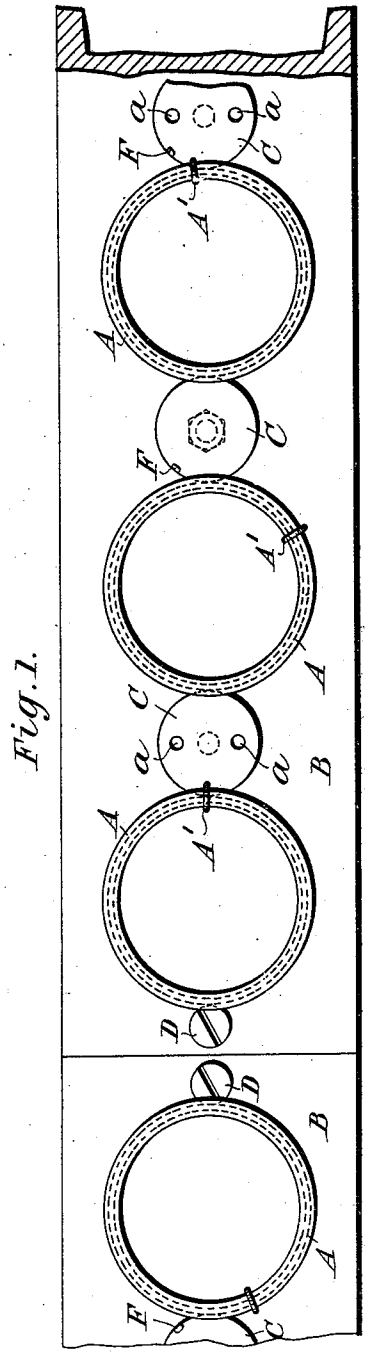

Fig. 1.

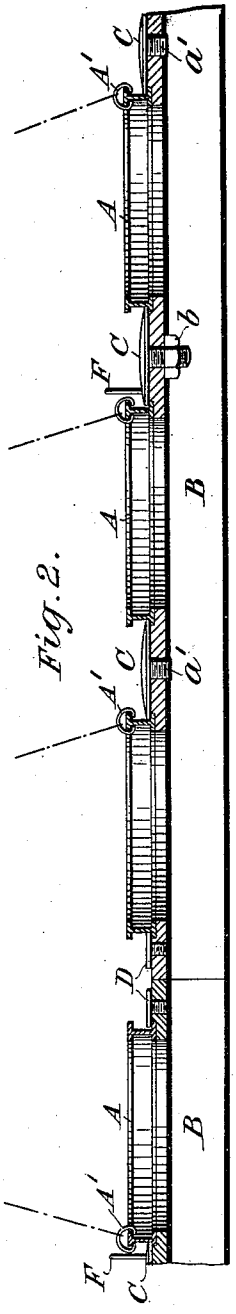

Fig. 2.

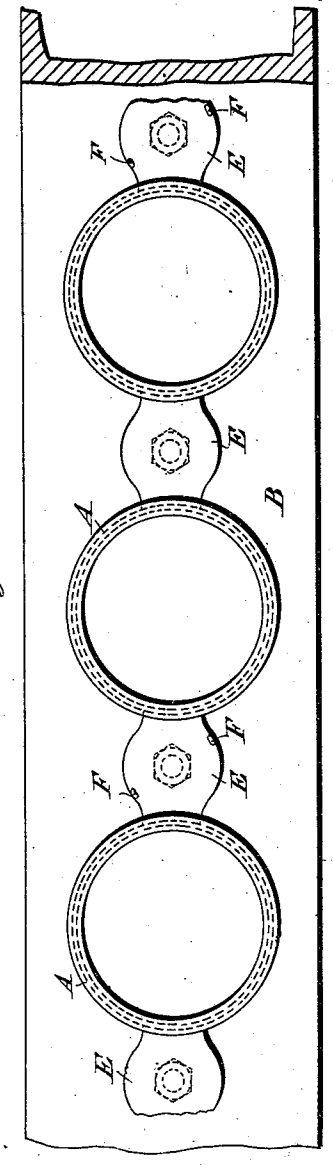

Fig. 3.

WITNESSES.

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EDMUND TWEEDALE, SAMUEL TWEEDALE, AND JOSEPH SMALLEY, OF MANCHESTER, ENGLAND.

RING AND TRAVELER-CLEARER.

SPECIFICATION forming part of Letters Patent No. 564,124, dated July 14, 1896.

Application filed March 7, 1896. Serial No. 582,287. (No model.) Patented in England May 12, 1892, No. 9,008.

To all whom it may concern:

Be it known that we, EDMUND TWEEDALE, SAMUEL TWEEDALE, and JOSEPH SMALLEY, subjects of Her Majesty the Queen of Great Britain, residing at Castleton, Manchester, in the county of Lancaster, England, have invented a certain new and useful Improvement in Mounting Rings and Traveler-Clearers of Ring Spinning and Doubling Frames, (for which we have obtained Letters Patent in Great Britain under date of May 12, 1892, No. 9,008 of 1892,) of which the following is a specification.

This invention has for its object improved means for securing the rings to the ring-rail in ring spinning and doubling frames, and also improved means for keeping the traveler free from loose fibers.

In the accompanying drawings, Figure 1 is a plan, and Fig. 2 sectional elevation, of our improved means for mounting and securing rings to their rails, and also the means we employ for keeping the travelers free from loose fibers. Fig. 3 is a plan showing a modification.

In carrying out our invention we employ rings A, having a flange top and bottom. The ring-rail B is bored or formed with a recess, in which the lower flange of the ring A snugly fits, whereby it is at once set to its working position, care being taken that the size of the bored part allows for no lateral movement. The ring A is made secure and held in position by a plate C, which may be provided with a screw *a*, the outer edges of said plate being large enough as to rest on the edge of the bottom flanges of two adjacent rings A, as shown in Fig. 1, so that only one holding-down plate C is required between each ring. The plates may be provided with cross-cuts for a screw-driver or with the holes *a a* for a key, as shown.

At the end of each length of adjoining ring-rails the screwed plates C are reduced in diameter and may take the form shown at D in Figs. 1 and 2, fitting only the edge of one ring, which is necessary in consequence of the joining of the rails.

Instead of using a screw or peg *a'* on the under side of each plate C, we may employ a screw and nut *b*, as shown in Figs. 1 and 2, and instead of using a circular plate C we may employ one having two concave ends, as shown at E in Fig. 3, which, as will be seen, fits closely to the body of the rig A and possesses more holding surface on the flanges of the ring than is the case with a circular plate like those previously described, and shown in Fig. 1.

The clearers for removing bits of loose fibers from the travelers A' are shown at F, and they are composed of metal cut or otherwise formed out of the same metal as the holding-down plate C. These clearers are turned up and made to stand erect or vertically, as shown in Fig. 2, and they serve the purpose of keeping the travelers A' free from fibers during their travel.

In Fig. 1 only one clearer F is shown as rising up from a plate C, but we may make two clearers rise up from one plate, so as to act upon the two travelers of the rings adjoining each other, as shown in Fig. 3, in which case the plates having these clearers would only be required between the rings alternately.

What we claim is—

1. In a ring spinning and doubling frame, the combination with the ring-rail having a plurality of circular recesses in its upper face concentric with the usual openings therethrough, and double-flanged rings having their bottom flanges fitting snugly in said recesses in said rail; of a plurality of flat holding-disks mounted upon the upper side of the rail between said rings, and each adapted to bear upon the bottom flanges of two adjacent rings; and screw-bolts binding said holding disks or plates down upon said adjacent flanges, substantially as described.

2. In a ring spinning and doubling frame, the combination with the ring-rail having a plurality of circular recesses in its upper face concentric with the usual openings therethrough, and double-flanged rings having their bottom flanges fitting snugly in said circular recesses in said rail; of a plurality of flat holding disks or plates mounted upon the upper side of the rail between said rings, and each adapted to bear upon the bottom flanges of two adjacent rings; screws binding said holding disks or plates down upon said

flanges; and a pair of clearers, one for each adjacent ring, formed upon each alternate holding-disk, substantially as described.

3. In a ring spinning and doubling frame, the combination with the ring-rail having a plurality of circular recesses in its upper face concentric with the usual openings therethrough, and double-flanged rings having their bottom flanges fitting snugly in said circular recesses; of a plurality of flat circular holding disks or plates, each of sufficient diameter to engage the bottom flanges of two adjacent rings, and each having a screw-bolt formed centrally thereon adapted to engage in an opening in the rail; the said holding-disks being mounted upon the upper side of the rail between said rings, and bearing upon the bottom flanges of adjacent rings, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

EDMUND TWEEDALE.
SAMUEL TWEEDALE.
JOSEPH SMALLEY.

Witnesses:
FREDERICK A. VERITY,
SAMUEL JACKSON.