G. RICHARDSON.

Spinning-Ring and Ring-Rail.

No. 163,887. Patented June 1, 1875.

Fig. 1.

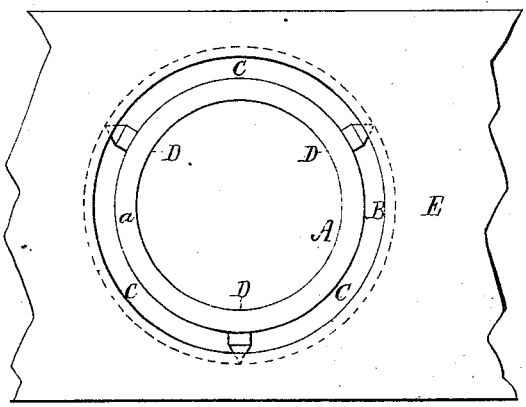

Fig. 2.

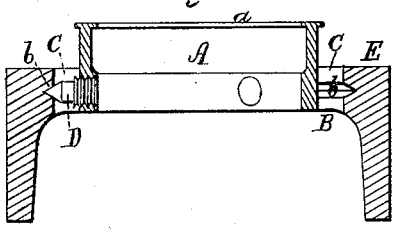

Fig. 3.

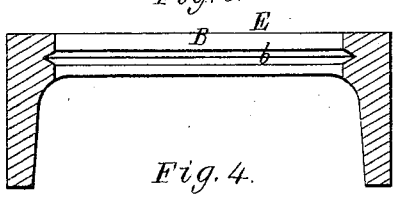

Fig. 4.

Witnesses.
S. W. Piper
L. N. Fuller

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by his attorney.
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UNITED STATES PATENT OFFICE.

GEORGE RICHARDSON, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN SPINNING-RINGS AND RING-RAILS.

Specification forming part of Letters Patent No. **163,887**, dated June 1, 1875; application filed May 11, 1875.

To all whom it may concern:

Be it known that I, GEO. RICHARDSON, of Lowell, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Machinery for Spinning; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, and Fig. 2 a transverse section, of a spinning-frame ring and its rail, with my improvement. Fig. 3 is a transverse section of the ring-rail. Fig. 4 is a view of the wrench used in revolving each of the adjusting-screws.

The invention appertains to the ring and its rail, provided with screws for adjusting the ring into concentricity with the spindle; and it consists, first, in the ring and rail, provided with a waste-discharging passage, encompassing the ring and open at top and bottom, so as to allow waste from the ring or traveler to fall through and beyond the ring-rail; second, in the ring-socket, provided with a groove arranged in and around its periphery, in combination with the ring and adjusting-screws, applied together and in such socket and groove, as hereinafter specified.

In the drawings, A denotes the ring as made with a traveler-race, *a*, but without any flange or shoulder, for supporting the ring on the rail E, or in the ring-socket thereof, such socket shown at B, being about a quarter of an inch larger in diameter than the shank or part of the ring extending within it. The socket and ring so made cause a space, C, to be formed around the ring, and to be open both at top and bottom, so as to allow waste from the ring or traveler to fall down through the space C, and be discharged from the rail without collecting thereon. Furthermore, there is on the periphery of the said socket, and extending around such, a groove, *b*, triangular in transverse section, such groove being to receive the conical points of three adjusting-screws, D D D, which screw into the ring at equal distances apart; each of such screws between its thread and conical point being formed square or polygonal in transverse section in order to enable it to be turned by a wrench constructed as shown in Fig. 4. While the groove and the screws serve to support the ring in the rail, the screws answer as means to enable such ring to be adjusted into concentricity with the spindle.

I do not claim a spinning-frame ring, provided with a supporting-flange to its shank, and having adjusting-screws screwed into such shank, to bear at their outer ends against the periphery of the ring-socket in the ring-rail. Nor do I claim a duplex race-ring, supported on a flange, projecting from the lower part of its socket in the ring-rail, all such devices having the space around the ring stopped either at top or bottom, so as to prevent discharge of waste through it.

I claim—

1. A spinning-frame ring, A, and its rail E, provided with a waste-discharging passage, C, encompassing the ring and open or uncovered both at top and bottom, to allow waste passing from the ring or the traveler, to fall down through such space and be discharged from the rail, as set forth.

2. The ring-socket B, provided with the peripheral groove *b*, arranged in it as explained, in combination with the ring A and its adjusting-screws D D D, applied together and arranged in such socket and groove, all substantially as specified.

GEORGE RICHARDSON.

Witnesses:

R. H. EDDY,

J. R. SNOW.