

No. 743,503.

PATENTED NOV. 10, 1903.

D. HARRINGTON.
SPINNING RING.

APPLICATION FILED APR. 1, 1902.

NO MODEL.

Fig. 1.

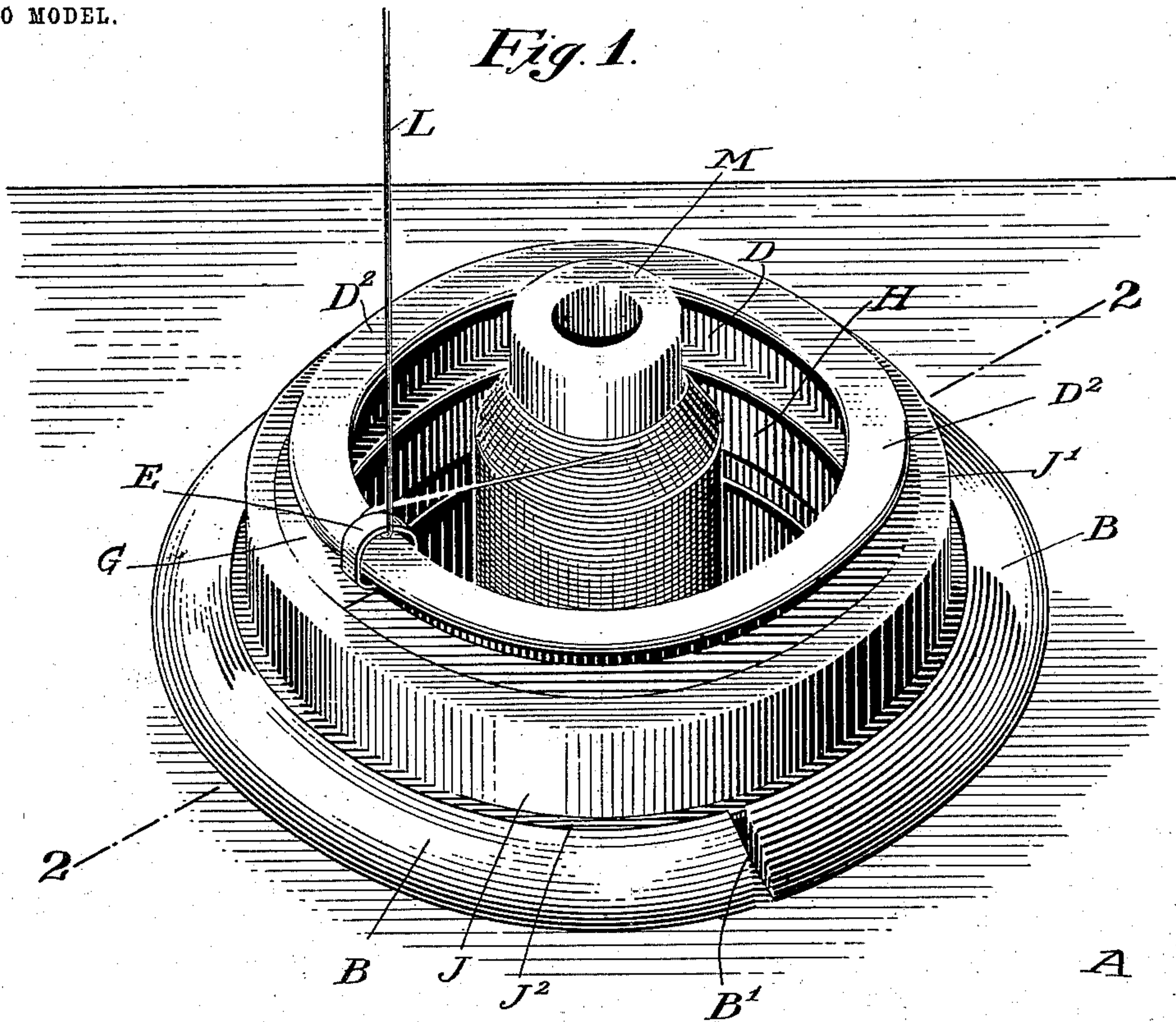
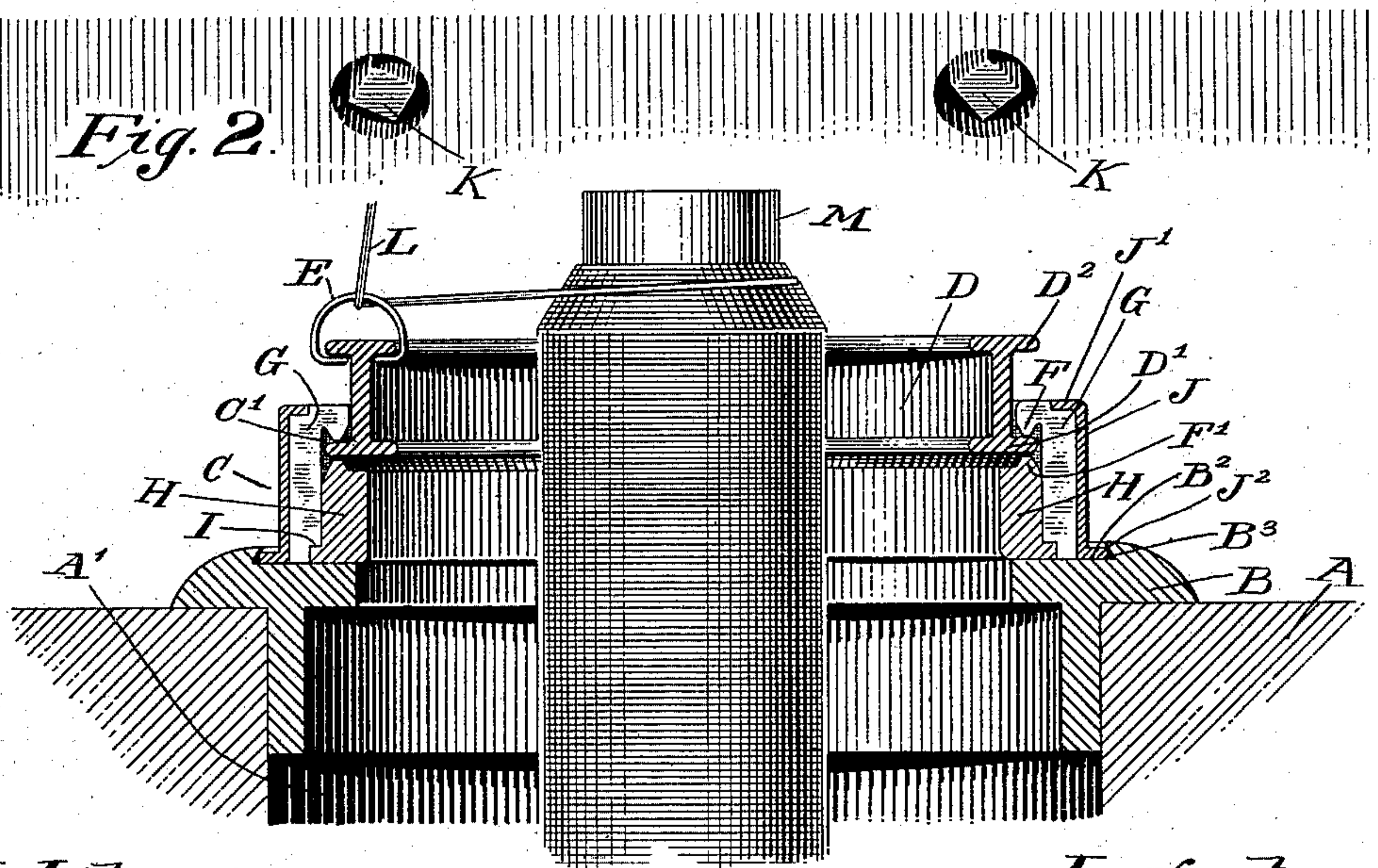


Fig. 2.



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SPINNING-RING.

SPECIFICATION forming part of Letters Patent No. 748,503, dated November 10, 1903.

Application filed April 1, 1902. Serial No. 100,894. (No model.)

To all whom it may concern:

Be it known that I, DAVID HARRINGTON, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Spinning-Rings, of which the following is a specification accompanied by drawings forming a part of the same, in which—

10 Figure 1 represents in perspective view a spinning-ring embodying my invention, the same being shown as mounted upon the rail of a spinning-frame; and Fig. 2 is a vertical sectional view on line 2 2, Fig. 1.

15 Similar reference letters and figures refer to similar parts in the different views.

My present invention relates to certain improvements in spinning-rings having a rotating traveler whereby the friction of the operating parts is reduced, the wear lessened, and the traveler rendered capable of an increase in speed whereby the efficiency and durability is increased, and I accomplish these results by the construction and arrangement of parts as hereinafter described, and pointed out in the annexed claims.

Referring to the accompanying drawings, A denotes the rail of a spinning-frame provided with a circular opening A' to receive an elastic flanged ring-holder B, cut apart at B' and held in the rail by means of set-screws in the usual manner. The upper end of the ring-holder B is recessed at B², forming an undercut shoulder B³, and supported in the recess B² is an annular collar C, preferably of wood, provided with an interior groove C' to receive the bottom flange D' of an ordinary spinning-ring D, the upper flange D² forming a track for a traveler E, such as is now in common use. The lower flange D' of the spinning-ring fits loosely in the interior groove C' and is capable of rotating freely therein, while at the same time the traveler E is free to rotate around the ring D in the usual manner. In order to reduce the friction between the flanged edge of the spinning-ring D and the annular collar C, I provide the upper and lower walls of the groove C' with ribs F F', thereby reducing the area of contact between the collar C and the flange D', and to facilitate the formation of these ribs and also to enable the flange D' to be inserted in the

groove C', I form the collar C in two telescopic sections—an outer section G and an inner section H—with an abutting shoulder I on the contacting surface of the two sections arranged to limit the distance between the opposing ribs F F'. The inner telescopic section H is made in a solid ring, while the outer section G is preferably made in two halves in order to permit the insertion of the flanged edge of the spinning-ring in the groove C'. For the better protection of the outer section G of the wood collar and also to provide an efficient means for its retention in the recessed face of the elastic holder B, I inclose the periphery of the outer section with a tightly-fitting sheet-metal sleeve J, having its upper edge turned over to fit the upper surface of the section G, as at J', and having its lower edge engaged by the undercut shoulder B³. The telescopic sections G and H are placed together, with the flange D' of the spinning-ring inclosed in the interior groove C', and the collar C is then placed in the recessed face of the elastic holder B, which is inserted in the hole A' of the rail A and compressed by means of the set-screws K, (shown in Fig. 1,) thereby clamping the collar C securely in the elastic holder.

In the operation of spinning the strand of yarn L is conducted from the drawing-rolls to the bobbin M through the traveler E in the usual manner, and the rotation of the bobbin will cause the traveler E to move around the flanged track D² of the spinning-ring D, and as the friction between the traveler E and the spinning-ring D increases the ring will begin to rotate in the groove C', thereby gradually reducing the movement of the traveler upon the ring and decreasing the friction between them and also the wear caused by the tips of the traveler against the spinning-ring.

I do not confine myself to the use of a flanged ring, such as the ring D, as other forms of rings can be used. Neither do I confine myself to the use of a ring in the interior groove or track C', as such an interior or track may be used with any suitable rotating element capable of rotating therein. So far as this portion of the device is concerned my invention relates to the construction of a ring provided with an interior groove adapted for a rotative member and construct-

ed of some non-metallic material, such as wood, with an outer shell of metal overlapping the wooden bushing and having a flange adapted to be seated on the ring-supporting surface, which in the present instance consists of the elastic ring-holder, although any of the known means now practiced for holding the ring in place on the rail may be employed.

I consider the employment of wood to provide the contacting surface of the ring with a rotating member or traveling element an advantage, for the reason that it admits of lubricating material held in its pores, thereby reducing the friction, and it also enables a high speed of the rotating element with the generation of less electricity. For the accomplishment of this purpose I have invented a specially-constructed ring in which the track is entirely of wood, which is reinforced by a shell of sheet metal. I further reduce the area of contact of the track by means of angular ribs F F'.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a spinning-ring, the combination of a metallic sleeve having an exterior flange at its lower edge adapted to form a support for said sleeve, and a non-metallic collar inclosed in said sleeve and provided with an interior groove forming a track.

2. In a spinning-ring, the combination of a metallic sleeve having an exterior flange by which said sleeve is supported, a non-metallic collar formed in telescopic sections with the outer section over the end of the inner section, with a vertical space between said sections forming a groove or track.

3. In a spinning-ring, the combination with an outer sleeve inclosing a non-metallic collar, of a non-metallic collar formed in telescopic sections and provided with an interior groove or track, said track having ribs on its upper and lower walls.

4. In a spinning-ring, the combination with a non-metallic collar provided with an interior groove or track, of an outer metallic

sleeve, said sleeve having an exterior flange at its base forming a support for the sleeve, and an interior flange at its upper edge overlapping said non-metallic collar, substantially as described.

5. In a spinning-ring, the combination of an exterior metallic sleeve and a non-metallic collar inclosed in said sleeve and formed in two telescopic sections, said outer section having an interior flange overhanging said inner section, with a vertical space forming a groove or track with said sections interlocked at their lower edges, whereby the insertion of the inner section within the outer section is limited, substantially as described.

6. In a spinning-ring, the combination of a metallic sleeve having a flange at its lower edge, a non-metallic collar inclosed in said sleeve and consisting of two interlocking telescopic sections with their lower edges in the plane of the lower edge of said flanged sleeve, said collar having an interior groove or track, and means for attaching said flanged sleeve to the rail of a spinning-frame, substantially as described.

7. In a spinning-ring, the combination of an outer inclosing shell, a collar inclosed in said shell and consisting of an outer section and an inner section telescopically held in said outer section, said outer section having an interior flange, and said inner section having a shoulder abutting the end of said outer section, whereby its insertion in said outer section is limited and the space between said interior flange and the end of said inner section is determined.

8. In a spinning-ring, the combination of a non-metallic collar, provided with a groove or track, and a metallic shell by which said collar is reinforced, said shell having a flange overlapping the top of said collar, substantially as described.

Dated this 29th day of March, 1902.

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Witnesses:

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