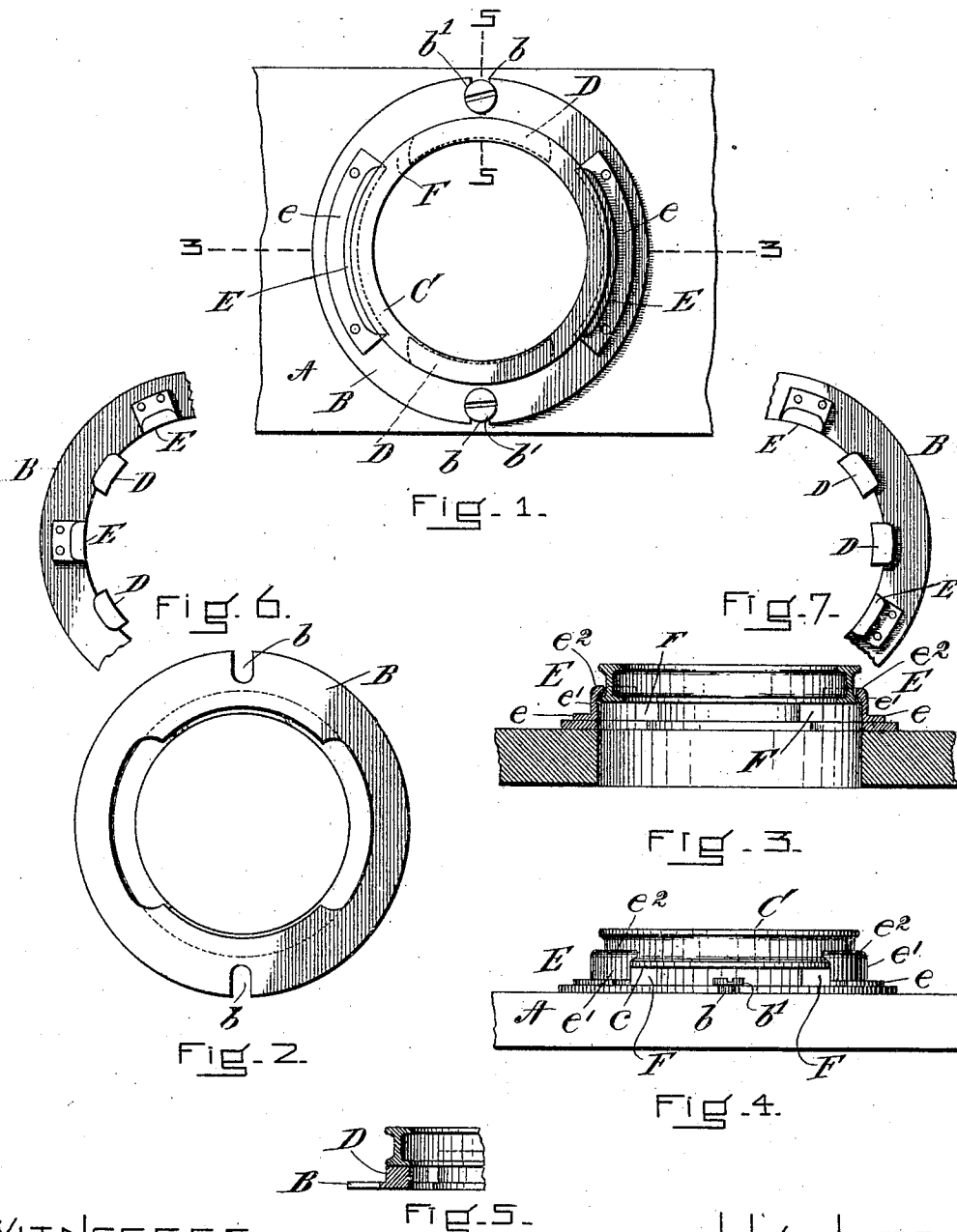


M. H. MALONEY.
 BASE FOR SPINNING RINGS.
 APPLICATION FILED MAR. 15, 1907.

938,392.

Patented Oct. 26, 1909.



WITNESSES=

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BASE FOR SPINNING-RINGS.

938,392.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, MICHAEL H. MALONEY, of Chelsea, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Bases for Spinning-Rings, of which the following is a specification.

My invention relates to that class of spinning mechanism in which a ring is mounted free to rotate so that it may follow the movements of the traveler in case there is any such friction between the traveler and the ring as requires it. This class of ring is, as a class, now well known and so further description of the operation of the ring shown in the drawings need not be given except as modified by the use of my improvement. One difficulty with a ring of this kind is that when spinning certain kinds of yarn the lint flying from the yarn or spindle is apt to get into the groove or bearing in which the ring is running and impede or even stop its movement.

It is the essential object of my invention to overcome this difficulty by so far separating the clips and bearings through a successive and preferably alternate arrangement thereof that no lint can accumulate between them.

My invention embodies, also, further advantages which it is my object to obtain, all of which can best be seen and understood by reference to the drawings, in which I have shown several embodiments of my invention.

Figure 1 is a plan of the ring retained in the manner I shall hereinafter describe. Fig. 2 is a plan looking at the under side of the base or support for the ring. Fig. 3 is a section on line 3—3 of Fig. 1. Fig. 4 is a side elevation of the structure shown in Fig. 1. Fig. 5 is a section on line 5—5 of Fig. 1. Fig. 6 is a plan of a portion of a support or base for the ring with the ring removed, the figure being shown to illustrate a modified form and arrangement of members carried by the base for supporting and retaining the ring, and Fig. 7 is a plan the same as Fig. 6, excepting, however, that a slight further modification and arrangement of the ring supporting and retaining members are shown.

Referring to the drawings:—A is a rail on which is shown supported a base or ring support B. This base is provided with

slots *b* through which by means of screws *b*¹ the base or ring support is attached to the rail.

C is the ring which is a common form of traveler ring and has a lower ring *c*. The ring rests and is supported to turn on the surfaces or faces presented by separate bearings D which bearings are preferably raised in the manner of posts, or in other words, project upwardly from the base or ring support B as shown in Fig. 5, and are preferably also made integral therewith. In that embodiment of my invention included in Figs. 1 to 5, two raised bearings are shown one opposite the other. In Figs. 6 and 7 a further disposition or arrangement of the bearings is shown. To these figures further reference will hereinafter be made. Attached also to the base or support B are separate clips E. Each of these clips as shown comprises a flange portion *e* by which the clip is attached to the base or ring support, an upright portion or post *e*¹ against the inner side or face of which the ring is adapted to bear and be retained as against a lateral or horizontal displacement, and an overhanging portion *e*² projecting over the bottom flange of the ring and the under side or face of which, by the bearing of the flange against it, acts to define or limit the vertical movement of the ring. I would also explain that the surfaces or faces of the bearings on which the ring rests are such that the ring will normally be retained in a horizontal position substantially at right angles to the axis of the spindle with which the ring is coöperating. I would also say that the space between the side edges of the lower flange of the ring and that of the adjacent inside surfaces or faces of the uprights or posts *e*¹ and the space between the top surface of said flange of the ring and the adjacent under surfaces or faces of the overhangs is just about sufficient to allow the ring to have an easy and proper rotary movement and such as will maintain the ring to rotate in a plane substantially at right angles to the axis of the spindle with which the ring is coöperating without undue tipping or oscillating movement.

The bearings D and clips E thus provided are independent of one another in their relationship to the ring C. In other words, the clips and bearings are successively and preferably alternately arranged with a clearance F between them, meaning that the clips and

bearings are so far separated from one another that lint cannot lodge and accumulate between them so as to impede or stop the running of the ring. The simplest and one of the best modes of arranging the clips and bearings is that shown in Figs. 1 to 6, inclusive, in which the bearings and clips are both successively and alternately disposed in their relationship to the ring. The alternate arrangement is not, however, essential as it may be desirable to have more bearings than clips, as for example, in Fig. 7 I have shown a construction in which two bearings appear between separate clips. It is also to be understood that the exact form and number of the bearings and clips is unessential, as for example, in both Figs. 6 and 7 there is shown an embodiment of my invention in which a comparatively large number of clips and bearings are used and these are very small. A further advantage of such a construction and moreover one incidental to any form or arrangement of clips and bearings separated from one another sufficiently to effect the essential object of my invention, is that the faces or surfaces presented by the clips and bearings to frictionally impede the free running of the ring is materially lessened. Such successive arrangement of clips and bearings as I have described tends also to level the ring or maintain the same to rotate in a proper position during the operation thereof. The very essential advantage, however, obtained from the above described construction is that the base in which the ring is rotating presents no fixed parts forming places in which the lint could lodge and accumulate. By locating the clips and bearings in the relative positions indicated and sufficiently separating the same it will be seen that no lint can lodge between the adjacent clips and bearings. If any lint should lodge between the ring and the adjacent surface or face of any clip or bearing it will not remain, but will be swept away by the rotary action of the ring and fall into the clearance adjacent the clip or bearing.

In order that the sides of the clips or bearings may perform the function of wiping edges to clear the ring of lint, these sides are preferably inclined with respect to the ring or rather flange of the ring. This may be seen by reference to Fig. 1 in which the sides e^3 of the portions e^2 of the clips which overhang the lower flange of the ring are inclined with respect to the flange of the ring at points just adjacent to the faces of the overhangs so that any lint which might accumulate on the flange will be shunted off away from the ring and will not pass under the overhang of the clip. The same may be said of the bearings for, as may be seen in Fig. 1, the sides d of the bearings D at points just adjacent to the faces presented thereby

are also inclined with respect to the under side of the flange of the ring so that as the ring turns on these bearings the inclined sides thereof will wipe diagonally across the under side of the flange of the ring and accordingly will act to throw off the lint and prevent it from passing between the bearing and the flange.

What I claim as my invention is:—

1. A device of the character specified having in combination a rotatable ring, members comprising separate bearings on which said ring rests to rotate thereon and separate clips for retaining said ring whereby it may be rotated in the operation of the device, said members being successively arranged in respect to their cooperation with said ring and so far separated from one another as to provide a clearance between each one of said members and the member next adjacent to it.

2. A device of the character specified having in combination a rotatable ring, a ring support, members arranged on said support, the same comprising separate bearings on which said ring rests to rotate thereon and separate clips for retaining said ring whereby it may be rotated in the operation of the device, said members being independent of one another and successively arranged on said support in respect to their cooperation with said ring and which members also are so far separated from one another as to form a clearance between each one of said members and the member next adjacent to it.

3. A device of the character specified having in combination a rotatable ring, a ring support having thereon members independently and successively arranged, said members comprising raised bearings on which said ring rests to rotate thereon and separate clips for retaining said ring whereby it may be rotated in the operation of the device.

4. A device of the character specified having in combination a rotatable ring, a ring support, members independently and successively arranged thereon, said members comprising raised bearings on which said ring rests to rotate thereon and separate clips for retaining said ring whereby it may be rotated in the operation of the device and which members comprising said clips and bearings are so far separated from one another as to form a clearance between each one of said members and the member next adjacent to it.

5. A device of the character specified having in combination a rotatable ring, a ring support, separate bearings on which said ring rests to rotate thereon and separate clips for retaining said ring whereby it may be rotated in the operation of the device, said clips and bearings being successively arranged upon said support in respect to their cooperation with said ring and the sides of said bearings just adjacent to the top

surfaces or faces thereof being inclined with respect to the portion of the ring resting on said bearings.

5 6. A device of the character specified having in combination a rotatable ring, a ring support, separate bearings on which said ring rests to rotate thereon and separate clips adapted to laterally retain said ring and to overhang the same in part presenting faces
10 for retaining said ring as against vertical displacement, said clips and bearings being successively arranged in respect to their co-operation with said ring and the sides of the overhanging portions of said clips at points
15 just adjacent to the faces presented thereby being inclined with respect to the portion of the ring bearing against said faces.

7. A holder for a spinning ring, comprising a plurality of posts, some of said posts
20 having overhanging faces to project over the flange of the ring and limit the upward movement of the ring, and the other posts having faces upon which the ring may rest, said faces being unopposing substantially as
25 set forth.

8. A holder for a rotary spinning ring, comprising a support and a plurality of posts, some of said posts having only faces which project over the flange of the ring and limit the upward movement of the ring, 30 the other posts having only faces to extend under the ring and limit the downward movement thereof, and some of the posts having means for limiting the lateral movement of the ring, said faces in said posts being respectively in different planes to permit 35 the rotation of said ring substantially as described.

9. A holder for a spinning ring, comprising a base having a plurality of up-standing 40 posts, some of said posts having faces to project over a portion of the ring and limit the upward movement thereof, and the other posts having faces upon which the ring may rest, said faces being unopposing, substantially for the purpose set forth. 45

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Witnesses:

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