J. W. WATTLES.
Spinning-Ring.

No. 199,604. Patented Jan. 22, 1878.

Fig. 1.

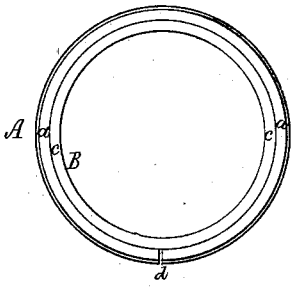


Fig. 2.

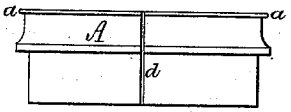


Fig. 3.

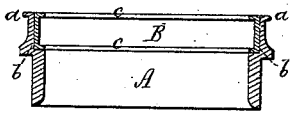


Fig. 4.

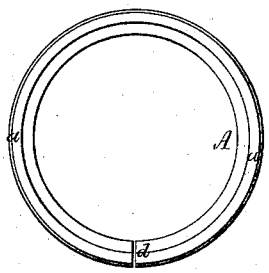
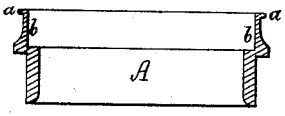


Fig. 5.



Witnesses.
S. N. Piper
L. Underwood

Fig. 6.

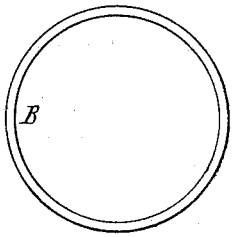


Fig. 7.

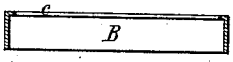


Fig. 8.

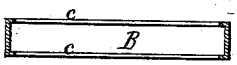


Fig. 9.

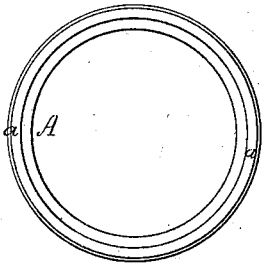
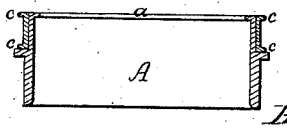


Fig. 10.



Inventor
Joseph W. Wattles.
by his attorney
R. H. Eddy.

UNITED STATES PATENT OFFICE.

JOSEPH W. WATTLES, OF CANTON, MASSACHUSETTS.

IMPROVEMENT IN SPINNING-RINGS.

Specification forming part of Letters Patent No. **199,604**, dated January 22, 1878; application filed August 21, 1877.

To all whom it may concern:

Be it known that I, JOSEPH W. WATTLES, of Canton, in the county of Norfolk and State of Massachusetts, have made a new and useful invention, having reference to the rings of what are termed Ring-and-Traveler Spinning Frames or Machines; and do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a transverse section, of a spinning-ring embracing my invention. Fig. 4 is a top view, and Fig. 5 a transverse section, of the contractile-socketed semi-race ring. Fig. 6 is a top view, and Fig. 7 a transverse section, of the ring-bushing, provided with a single partial or semi race. Fig. 8 is a transverse section of it, as having two partial or semi races. Fig. 9 is a top view of the socketed semi-race ring, without any cross-cut.

In ordinary or most spinning-rings, the wear of the traveler on the race takes place mostly, if not entirely, on its inner flange or periphery, the centrifugal force generated in the traveler during rapid movement of it around the ring causing it to so wear the ring. Generally speaking, a ring, after having thus become too much worn or reduced, has been rendered or considered useless, and as so much waste material. One purpose of my invention is to utilize such worn rings, as they can be easily socketed or rabbeted and supplied with a bushing, provided with one or two semi-races, as hereinafter described. I, however, generally prefer to construct each ring with a semi-race and a rabbet or socket, and insert in the latter a bushing or annulus, having a semi-race at one or at each end thereof, as represented in the acccompanying drawings. When the bushing has a semi-race at each of its ends, it becomes reversible, or capable of being used with either semi-race upward, and aside of the semi-race of the rabbeted or socketed ring. The said socketed ring I make either with or without a cross-cut or opening, enabling it to be contracted upon the bushing, either by a screw acting directly against the shank of the ring, or against a contractile receiver for holding the ring in place, in or with respect to a sustaining-rail.

In the drawings, A denotes the ring as having the semi-race *a* and the circular rabbet or socket *b*, the latter being for reception of the bushing or annulus B, furnished with a semi-race, *c*, at one or each of its ends, as represented.

The ring may have an opening or a cross-cut, *d*, arranged in it, as shown, or it may be without such.

Should it ever be desirable to have the socket or rabbet and the semi-race bushing on the outside of the ring, such may be as shown in Fig. 10, in which case the ring would have to be without any cross-cut. Furthermore, the semi-race bushing on its surface next the ring may be provided with a screw to screw into a corresponding female screw made in the ring.

From the above it will be seen that after the semi-race of the bushing may have become too much worn, such bushing may be removed from the ring, and another unworn bushing may be substituted, or when the bushing has two semi-races it may be reversed, so as to bring the unworn semi-race uppermost and in proper relation to the semi-race of the ring.

The race part of the bushing and that of the ring are to compose the race. One, instead of being exactly equal in width to the other, may vary a little therefrom, each being what may be termed a partial race.

I do not claim a spinning-ring having a steel lining constituting a portion or one lip only of the race, and not extending below such race. With my invention I have, in addition to such portion of a race, an annulus or bushing to project down from it or to be furnished, at its opposite ends, with lips or flanges of a race; and, furthermore, the ring to receive the bushing has the socket therefor necessarily extended some distance below the flange or race-lip, projecting from the upper part of such ring.

What I claim as my invention is as follows:

1. The ring, as constructed, with the stationary partial or semi race and the socket,

for the reception of the movable bushing, having a single partial or semi race, or two of such, as described.

2. The combination of the movable partial or semi race bushing with the ring having the stationary partial or semi race and the socket or rabbet for holding the movable bushing.

3. The contractile ring, as constructed, with the partial or semi race, the rabbet or socket, and the cross-cut, arranged as set forth.

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Witnesses:
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JOHN R. SNOW.