J. W. WATTLES.

Spinning-Rings.

No. 144,004. Patented Oct. 28, 1873.

Fig. 1.

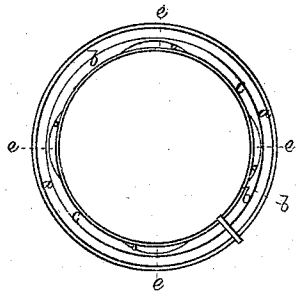


Fig. 2.

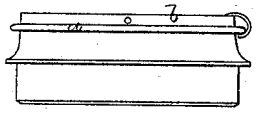
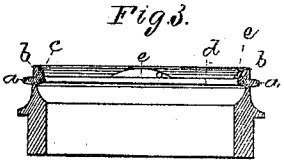


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH W. WATTLES, OF CANTON, MASSACHUSETTS.

IMPROVEMENT IN SPINNING-RINGS.

Specification forming part of Letters Patent No. **144,004**, dated October 28, 1873; application filed September 24, 1873.

To all whom it may concern:

Be it known that I, JOSEPH W. WATTLES, of Canton, of the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Rings for Ring and Traveler Spinning-Machines; 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, Fig. 2 an elevation, and Fig. 3 a transverse section, of one of my improved rings.

The said ring has a circular projection elevated on its race, such projection being to sustain the traveler at its middle or crown. The inner edge of the projection is curved transversely down to the inner edge of the race, such curve being the arc of ninety degrees of a circle, or thereabout, and there is made in the curved inner edge of the projection one or more mote or nub freeing recesses or notches. Each of such notches I sometimes form with a hole leading out of it, or with a shoulder or abutment at or near one end of it, in order that, when struck by a mote or nub or projection from the thread, such shoulder or hole may serve to detach or remove the mote, nub, or projection from the thread. The recess or notch, however, without such a shoulder or hole, will generally suffice to free the thread from the extraneous matter, mote, or nub. The raised projection serves to prevent the traveler from dropping upon the race, or holds the traveler up, so as to enable the thread to be readily passed through it, and thus saves the necessity of first lifting the traveler off the race in order to effect the threading of the traveler.

In the drawings, *a* denotes the race, and *b* the circular projection raised on such race. The outer side of the projection stands vertically, or about so, and makes a right or slightly obtuse angle with the top of the race. The inner face *c* of the projection is curved transversely from the top of the projection down to the inner edge *d* of the race, the curve being that of a quadrant of a circle, or approximately such.

This curved inner face of the projection is the surface against which the thread is borne by the traveler under the centrifugal force generated in the latter while it is in rapid revolution about the race. Such action of the traveler and the bearing-surface *c* is found to be highly beneficial in producing friction to facilitate the taking up of the yarn by the bobbin.

The mote or nub freeing recesses in the bearing-surface *c* are shown at *e e*.

The transverse curve of the bearing-surface *c* should conform, as nearly as possible, to the curve of that part of the traveler which is to run next to it. The recess or recesses serve also to allow the larger motes to be drawn with the yarn through the traveler, thereby preventing such from clogging the traveler or stopping its proper action. The greater bearing which the raised projection imparts to the traveler prevents both the traveler and the ring from wearing so fast as with a flat race. Furthermore, with my improved ring, little or no waste will collect on the traveler, and little if any will be thrown upon the ring-rail, the traveler and rail being kept comparatively clean.

I claim as my invention as follows, viz:

1. A spinning-ring having its circular projection *b* made or provided with the curved bearing-surface *c*, as described, extending from the top of the projection to the inner edge of the race *a*, and to operate in connection with a traveler, as set forth.

2. A spinning-ring made or provided with the traveler-supporting projection *b* and the curved bearing-surface *c*, and with one or more recesses, *e*, arranged in the latter, all being and operating substantially as specified.

JOSEPH W. WATTLES.

Witnesses:
S. N. PIPER,
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