

E. T. LANPHEAR.  
Spinning-Ring and Traveler.

No. 204,832.

Patented June 11, 1878.

Fig. 1.



Fig. 3.

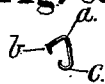
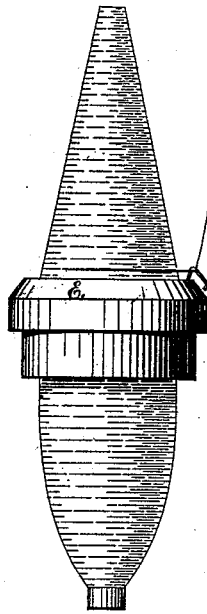


Fig. 2.



WITNESSES

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## IMPROVEMENT IN SPINNING RING AND TRAVELER.

Specification forming part of Letters Patent No. **204,832**, dated June 11, 1878; application filed February 6, 1878.

*To all whom it may concern:*

Be it known that I, EDWIN T. LANPHEAR, of Phenix, in the county of Kent and State of Rhode Island, have invented certain new and useful Improvements in Spinning Rings and Travelers; and I hereby declare that the following is a full, clear, and exact description of the same, which will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in the ring and traveler used in the art of ring-spinning; and consists in the peculiar construction of the ring and traveler by which the strain on the yarn is diminished and the friction reduced, as will be more fully set forth hereinafter.

Figure 1 is a sectional view of the ring, showing the traveler in the position occupied while spinning. Fig. 2 is a view showing the ring and traveler and a cop of yarn, all in their relative positions when in the operation of spinning. Fig. 3 is a view of the traveler.

In ring-spinning machines the ring and traveler co-operate so intimately that a modification of one usually requires a modification of the other.

The object of this invention is to produce a drag on the yarn by a ring-traveler in which the point of contact of the yarn on the traveler will yield to the strain and allow said traveler to swing toward the cop or bobbin or outwardly from the same freely, so that this point of contact will adjust itself to the variations of the strain on different parts of the cop. In the spinning-ring provided with the usual horizontal race, and also in such spinning-rings as have heretofore been provided with an inner vertical race, the travelers could not adjust themselves or yield to the strain on the yarn, as, by their form and the form of the ring, the traveler was confined to follow the race.

On examination of Figs. 1 and 3 it will be observed that my improved traveler is of peculiar and novel shape, forming nearly a right-angled triangle, the angle *a* forming the point of contact of the yarn with the traveler. *b* is the open end of the traveler, and *c* the other end, bent so as to enter the inner race and

allow the point *a* to swing toward or from the center of the ring, as either the centrifugal force or the strain on the yarn will predominate when winding different parts of a cop or bobbin.

To allow the traveler to adjust itself to this varying strain the ring is provided with an inner race, *d*, and with the beveled edge *e*. The curved end *c* of the traveler enters the race *d*, and the end *b*, when spinning, is held by the yarn off from the beveled edge *e*, and the traveler can swing freely on the race *d* without coming in contact with the beveled surface *e*. When, however, an end breaks, the traveler will slide outward on the beveled surface *e*, and thus allow the ready piecing up of the broken yarn, which is so difficult with the old vertical race-ring and usual traveler.

The operation of this traveler in spinning is as follows: When spinning a cop on a ring-spinning frame the yarn will pass from the delivery-rolls through the eye, and thence under the traveler, at the angle *a*, to the cop or bobbin. The contact of the yarn with the traveler will be always in the angle *a*, and the contact will be more positive in this angle and produce more friction than the contact with the ordinary traveler. The thread will, therefore, be more even and the fiber more closely laid. Small leaf or other loose impurities are removed by this contact of the yarn on the traveler.

The traveler in yielding to the strain prevents the breaking of the thread, and thus saves care in piecing up, producing better yarn; and if the ring is not exactly concentric with the spindle the traveler will readily adjust itself to the varying strain without breaking down of the ends.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The spinning-ring having the interior race-groove *d* and outward beveled face *e* arranged in relation to each other as described, in combination with the traveler *a b c*, constructed as and for the purpose described.

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Witnesses:

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