

(No Model.)

J. BOOTH.
TWISTER RING TRAVELER.

No. 586,230.

Patented July 13, 1897.

FIG. 1.

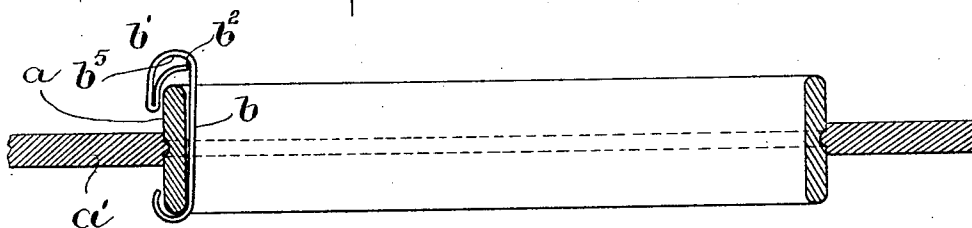


FIG. 2.

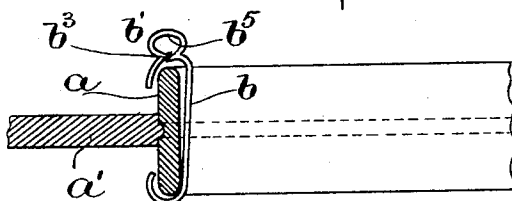
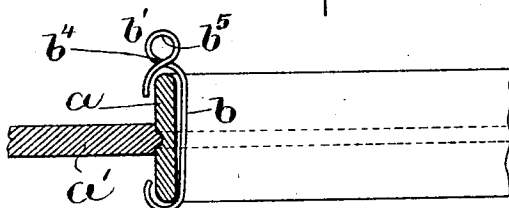


FIG. 3.



WITNESSES:

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INVENTOR:

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attys

UNITED STATES PATENT OFFICE.

JOHN BOOTH, OF CENTRAL FALLS, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO CHARLES D. WOOD, OF SAME PLACE.

TWISTER RING-TRAVELER.

SPECIFICATION forming part of Letters Patent No. 586,230, dated July 13, 1897.

Application filed March 27, 1897. Serial No. 629,517 (No model.)

To all whom it may concern:

Be it known that I, JOHN BOOTH, of Central Falls, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Twister Ring-Travelers, of which the following is a specification.

This invention relates to ring-twisting machines employed for twisting together a plurality of threads or strands which pass through a body of water on their way to the ring-traveler, by which they are guided to the spindle.

The ordinary ring-traveler employed in ring-twisting machines has no provision for preventing contact between the wet strands and the ring when the spindle is at rest, and the portions of the strands adjacent to the spindle are allowed to gravitate. The ring is usually made of steel, so that contact of the wet strands with it causes rust, which permanently discolors the portions of the strands that touch the ring. The stains thus formed cannot be bleached out, and the rust has a chemical action which rots and weakens the fibers.

My invention has for its object to provide a twister ring-traveler adapted to prevent contact between the wet strands and the ring-rail when the spindle is at rest; and it consists in a twister ring-traveler having arms formed to engage the edges of a twister-ring, a thread-guiding eye above the upper arm, said eye being separated from the upper edge of the ring by a barrier formed to prevent the contact of the thread with the ring when the traveler and the accompanying spindle are at rest.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of a traveler embodying my invention and a sectional view of the ring on which it travels. Figs. 2 and 3 represent similar views showing other forms of traveler embodying my invention.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a twister-ring which is or may be of the usual form, its edges projecting upwardly and downwardly from a suitable central support or

holder *a'*, which is attached to the lifting-rail.

b represents the traveler, which is made of brass or other inoxidizable material and is formed to extend across the inner side of the ring and to engage its edges, as usual in ring-twisting machines, the traveler having end arms which embrace the edges of the ring. The upper end of the traveler has a thread-guiding eye *b'*, between which and the upper edge of the traveler is a barrier formed to support the thread which passes through said eye and prevent the thread from falling into contact with the ring. The said eye is formed to present a thread-bearing *b⁵*, which is located substantially in line with the vertical section of the ring when the traveler is in its operative position or, in other words, practically in line with the top and bottom edges of the ring in any vertical section thereof, instead of projecting materially either inside or outside the circle of the ring and being out of line with its vertical section. It is important in ring-twisting machines that the strain or draft of the thread be exerted on the traveler at a point practically in line with the upper and lower edges of the ring, in order that the binding or cramping of the traveler on the ring may be minimized. I have therefore arranged the eye *b'* so that it is practically a vertical extension of the traveler, its form and arrangement being such that the thread-bearing *b⁵* has substantially the same relation to the vertical section of the ring (excepting as to its distance from the upper edge of the ring) as in an ordinary twister-traveler, in which the thread-bearing is the under side of the upper arm of the traveler instead of being the under side of an eye above said arm.

The thread-guiding eye, arranged as above described, and the thread-barrier between the said eye and the ring are the novel features of my improved traveler. The construction of the traveler, including said eye and barrier, may be variously modified. In Fig. 1 the said barrier is an inwardly-projecting extension of one of the arms of the traveler, said extension being separated from the body of the traveler by a narrow opening *b³*, which permits the thread to be pulled up into the

thread-eye, but prevents it from dropping loosely back.

5 In Fig. 2 the barrier is formed by two co-operating angles or projections on the traveler, said angles being separated by a narrow opening b^3 , which is formed to act like the opening b^2 .

10 In Fig. 3 the barrier is formed by the crossing of two parts of the traveler below the eye, the crossed parts normally bearing against each other, but being separable, to permit the thread to be pulled up into the eye without allowing it to drop loosely back.

15 It will be seen that in each case provision is made for quickly engaging the thread with the traveler, as well as for preventing its contact with the ring.

20 I do not limit myself to the forms here shown, as my invention is capable of embodiment in various other forms.

I claim—

1. A twister ring-traveler formed to engage the edges of a twister-ring and having a

thread-bearing which is located substantially in line with the vertical section of the ring 25 when the traveler is in its operative position, and a thread-barrier below said bearing.

2. A twister ring-traveler having arms formed to engage the edges of a twister-ring, a thread-guiding eye above the upper arm, 30 and having a thread-bearing which is located substantially in line with the vertical section of the ring, said eye being separated from the upper edge of the ring by a barrier having provisions for permitting the thread 35 to be pulled upwardly into the guiding-eye, and for preventing loose downward movement of the thread from the eye.

In testimony whereof I have signed my name to this specification, in the presence of 40 two subscribing witnesses, this 25th day of March, A. D. 1897.

JOHN BOOTH.

Witnesses:

BENJAMIN A. REYNOLDS,
C. FRED CRAWFORD.