Jan. 14, 1930. A. M. BOWEN 1,743,263

RING TRAVELER

Filed June 20, 1929

Fig. 1.

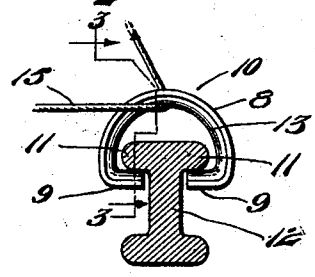


Fig. 2.

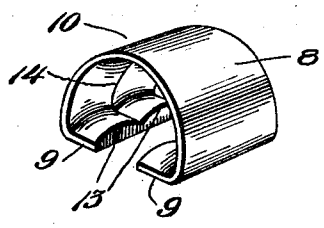


Fig. 3.

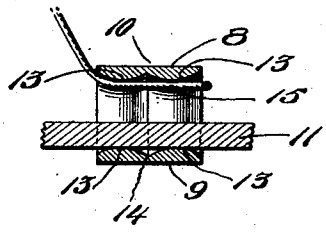


Fig. 4.

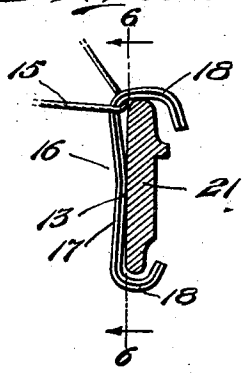


Fig. 5.

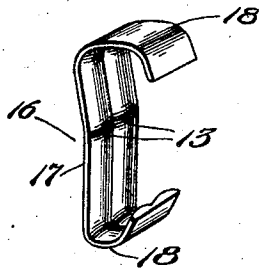
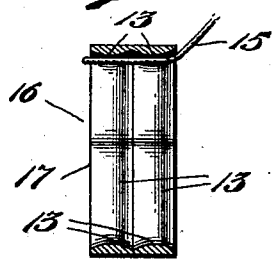


Fig. 6.



Inventor

Amos M. Bowen

By Horatio E. Bellows

Attorney

Patented Jan. 14, 1930

1,743,263

UNITED STATES PATENT OFFICE

AMOS M. BOWEN, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO U. S. RING TRAVELER COMPANY, OF PROVIDENCE, RHODE ISLAND, A CORPORATION OF RHODE ISLAND

RING TRAVELER

Application filed June 20, 1929. Serial No. 372,325.

My invention relates to ring travelers for use upon either the horizontal or vertical type of rings for spinning and twisting machinery.

The essential objects of my invention are to reduce the friction of the thread or yarn upon the traveler in its path to the bobbin on which the former is wound; to prevent chafing of the thread and preserve its even and transversely rounded contour; to prevent excessive heating of the traveler by the friction of the thread passing therethrough; and to reduce the frictional contact of the moving traveler with the ring.

One form of the device for accomplishing the results above sought is shown in the accompanying drawings, wherein the inner surface of the traveler is fluted, that is formed of a series of raised or oval portions having a flute or furrow therebetween.

To the above ends primarily my invention consists in a traveler possessing such structural features as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification

Figure 1 is a side elevation of a traveler of the horizontal type embodying my invention mounted upon a ring,

Figure 2, a perspective view of the traveler,

Figure 3, a section on line 3—3 of Figure 1,

Figure 4, a side elevation of a traveler of the vertical type embodying my invention mounted upon a ring,

Figure 5, a perspective view of the same, and

Figure 6, a section of the traveler taken on line 6—6 of Figure 4.

Like reference characters indicate like parts throughout the views.

In Figures 1 to 3 inclusive 8 represents the arch or body, and 9 the horns or bearings of a horizontal ring traveler 10 of usual external form, slidably engaging the horizontal flange 11 of the ring 12 carried by a spinning or twisting frame.

The characteristic feature of my invention, however, consists in a plurality, in this instance two, of transversely oval surfaces 13 extending longitudinally throughout the lengths of the body and horns, and extending transversely the entire width of the traveler. A resultant central longitudinal flute 14 is formed by the junction of the oval surfaces 13. In Figure 3 the thread 15 is shown passing from the rolls to the bobbin transversely of the traveler body 8 in contact with the summits of the oval surfaces 13; and the oval portions within the horns 9 are shown in contact only at their summits with the ring flange 11. The minimum area afforded by the summits of the oval surfaces to both the thread 15 and flange 11 tends to prevent the generation of frictional heat in or wear upon the traveler, as well as to prevent chafing or distortion of the thread. The air circulation afforded by the groove 14 has an additional tendency to reduce the generation of heat in the contacting parts.

In Figures 4 to 6 inclusive a vertical type of traveler 16, comprising an elongated arch or body 17, and horns 18, has embodied therein the described transversely oval surfaces 13 extending longitudinally throughout the lengths of the body and horns. The portions of the oval surfaces within the horns are shown adapted to engage the top and bottom of the vertical ring 21, and the thread 15 is shown passing transversely in contact with the portions of the oval surfaces within the body 17.

I claim:—

1. A traveler for spinning or twisting rings comprising a body and horns, and an internal longitudinally disposed flute extending throughout the lengths of the body and horns.

2. A traveler for spinning or twisting rings comprising a body and horns, and a flute formed in each of the horns on its inner surface.

3. A traveler for spinning or twisting rings provided with an internal flute extending throughout its length remote from its lateral edges.

4. A traveler for spinning or twisting rings comprising a body and horns, and a longitudinally disposed flute on the inner surface of the body extending the length of the body.

5. A traveler for spinning or twisting rings

comprising a body and horns, and a longitudinally disposed flute upon the inner surface of the body over which the thread passes, said flute forming with the inner surface continuous smooth transversely curved faces.

In testimony whereof I have affixed my signature.

AMOS M. BOWEN.