No. 860,448. PATENTED JULY 16, 1907.

R. L. CUMNOCK.

SPINNING AND TWISTING APPARATUS.

APPLICATION FILED AUG. 21, 1906.

Fig. 3

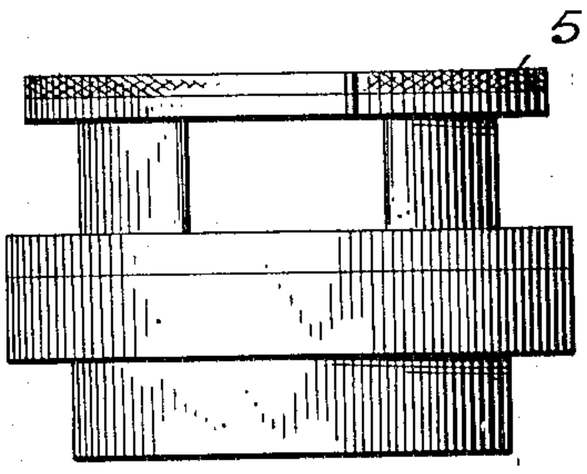


Fig. 1.

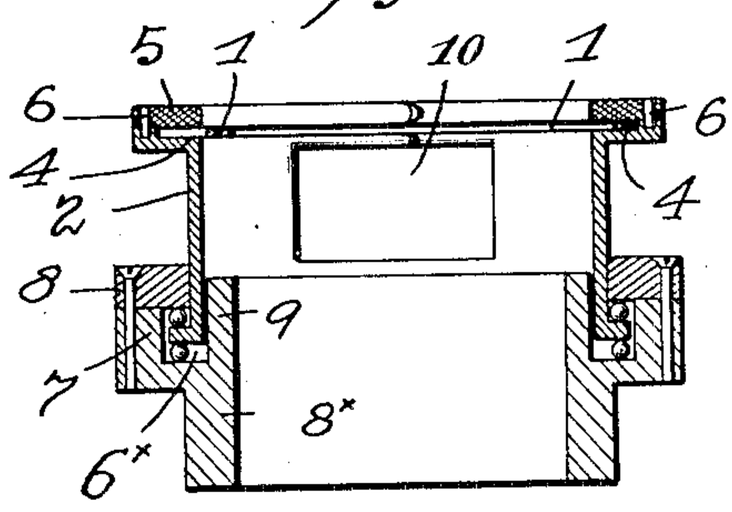


Fig. 2.

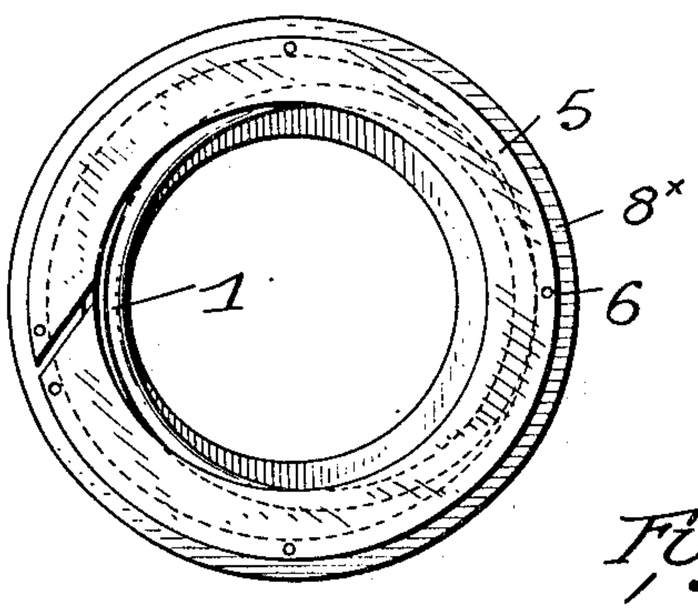


Fig. 4.

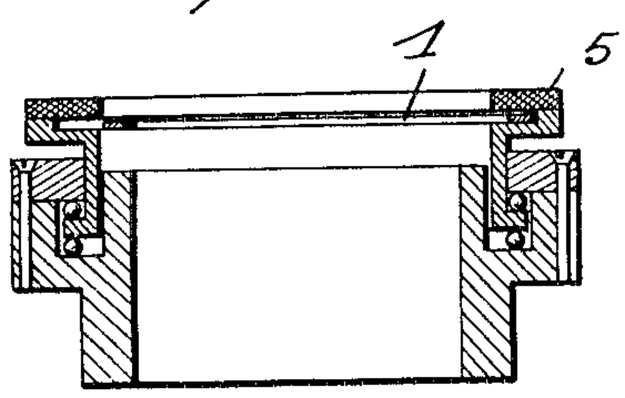
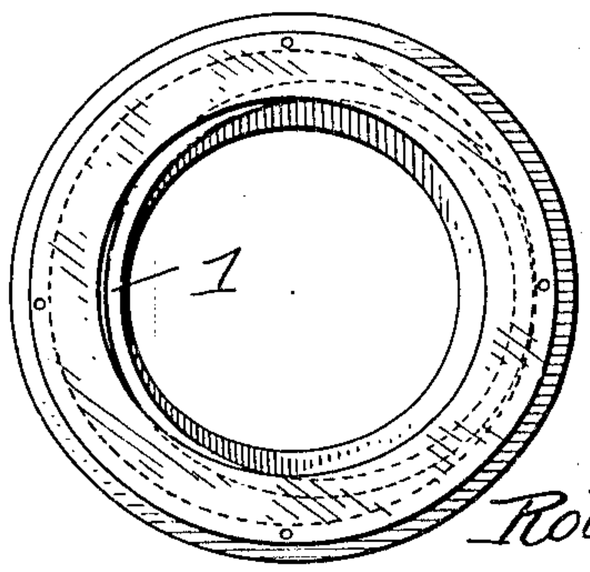


Fig. 5.



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SPINNING AND TWISTING APPARATUS.

No. 860,448. Specification of Letters Patent. Patented July 16, 1907.

Application filed August 21, 1906. Serial No. 331,543.

To all whom it may concern:

Be it known that I, ROBERT L. CUMNOCK, a citizen of the United States, residing at Anderson, South Carolina, have invented certain new and useful Improvements in Spinning and Twisting Apparatus, of which the following is a specification.

My invention relates to spinning and twisting apparatus and my object is to provide a simple, efficient and inexpensive device for creating a drag upon the yarn as it passes to the yarn carrier or spindle.

The invention consists of the features, combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings,— Figure 1 is a central vertical sectional view through the spinning and twisting appliance. Fig. 2 is a plan view with the ring shown in dotted lines and with part of the ring holder broken away to show a portion of the ring in full line. Fig. 3 is a side elevation, and Fig. 4 is a sectional view similar to Fig. 1 of a modified form of the device. Fig. 5 is a view of a modification.

In carrying out my present invention, I dispense with the use of a traveler and employ instead thereof a ring which answers the purpose of a traveler in so far as it will create a drag on the yarn. This ring is indicated at 1, it being of considerably larger diameter than the spindle or yarn carrier which it surrounds. The support for this ring consists of a cylindrical member 2 having a flange at its upper end extending horizontally, said flange having at its edge a shoulder, the periphery of which is of slightly larger diameter than the ring. This construction provides a ledge 4 upon which the ring is supported so as to have freedom of movement in turning about the spindle under the action of the yarn. The ring is retained in place by a flange covering ring 5 which is supported on and attached by pins 6 to the shoulder above mentioned, and which covering ring extends inwardly over the ledge with its inner edge substantially flush with the inner side of the cylindrical member 2. This construction provides a recess in which the carrier ring lies. The ring is confined loosely in place so that it may have slight movement vertically off from the ledge under the action of the yarn in order that a floating effect may be secured. The cylindrical member constituting the holder for the traveler ring is itself adapted to have rotary movement for which purpose it is flanged at its lower end, the said flange extending into a ball race 6×, which is formed by the upwardly extending flange 7 and an overlying rim or flange 8, which is screwed to the part 7. The flange 7 forms a part of the main stand or stationary part 8× of the device which also is provided with a flange 9, reaching up on the inner side of the cylindrical holding member.

In the covering ring a diagonal slit is formed, which also extends through the upper flange and ledge of the cylindrical holding member so that the spinning device may be threaded. This is accomplished simply by running the thread through this slit and under the ring, through the opening, it then passing directly to the spindle. The ring is of such outside diameter that when it is pressed to one side against one portion of the confining shoulder its outer edge opposite to this point lies slightly within the plane of the inner periphery of the covering ring, the ledge and the cylinder, so that the thread is free to pass down outside of the ring and beneath the same to the spindle. The threading slit inclines from the outside edge inwardly in the direction of rotation of the ring.

The operation of the device will be clear to those skilled in the art, the ring creating the desired drag on the thread, while at the same time it is free to rotate, and its supporting member is also free to rotate. The weight of the ring is determined by the size of the thread and is such that it is in effect held in suspension by the thread.

The side of the cylindrical holding member for the ring is provided with an opening 10 beneath the point at which the threading slit is located so as to facilitate the operation of threading, it being possible to insert the finger through this opening to manipulate the thread as desired.

I do not wish to limit myself to the use of the threading slit as this, together with the side opening in the cylindrical body or shell, may be omitted. Such a form of the device is shown in Figs. 4 and 5 and in this form the rotary cylinder or the holding member for the traveler ring can be made much less in height, as shown. In threading this form of the device it is simply necessary to move the traveler ring to its extreme lateral position so that the thread, by a suitable needle or other instrument, may be inserted between the outer edge of the ring and the inner edge of the adjacent parts.

I prefer to make the covering ring of raw-hide or fiber in order to prevent wear on the traveler ring.

I claim as my invention:

1. In an apparatus of the class described, a ring shaped traveler to create a drag on the yarn and a ring shaped support having a channel or way therein in which the traveler ring moves, the said traveler ring having traveling movement on the supporting ring and means for sustaining

the supporting ring so as to have rotary movement, substantially as described.

2. In combination, the traveler ring, the ring shaped shouldered support therefor means for sustaining the ring shaped support to have rotary movement, the said traveler ring being of less outside diameter than the distance between the bearing shoulder of said support and the opposite point on the inner periphery of said support to permit the insertion of the thread between itself and the adjacent portion of the supporting member, when said ring is moved to its lateral position against said shoulder, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

ROBERT L. CUMNOCK.

Witnesses:
J. P. REED,
F. H. BURNS.