

Aug. 2, 1932.

R. GOLLONG

1,870,202

TWISTING CAP

Filed Aug. 31, 1931

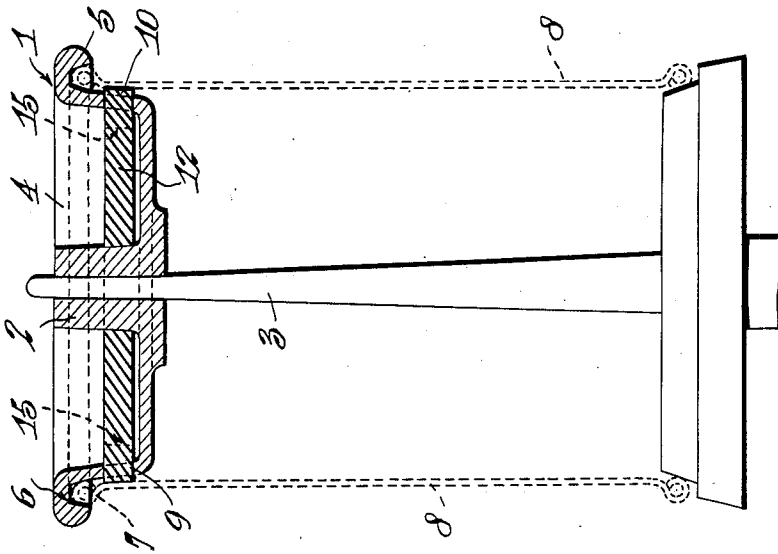
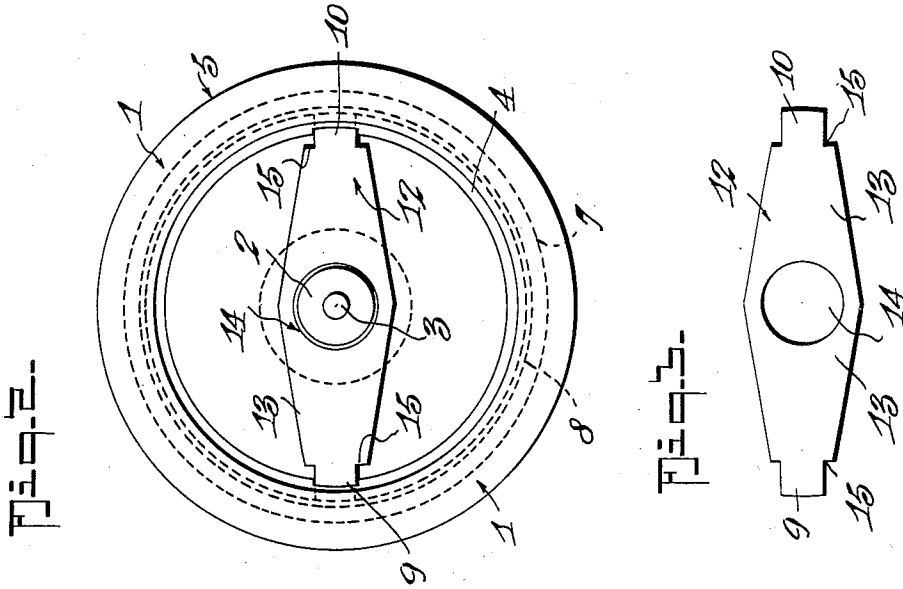


FIG. 1-

Inventor
Richard Gollong.

By Thomas H. Byron
Attorney

UNITED STATES PATENT OFFICE

RICHARD GOLLONG, OF JOHNSON CITY, TENNESSEE, ASSIGNOR TO AMERICAN GLANZSTOFF CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

TWISTING CAP

Application filed August 31, 1931. Serial No. 560,420.

My invention relates to the provision of a suitable cap to be used to hold a spool in place on a twisting machine spindle.

In the handling of artificial and kindred threads and filaments great difficulty has heretofore been encountered in holding the spools on the spindles during the twisting operation. Caps are placed over the spools and have been provided with some sort of a locking or holding means whose purpose has been to prevent the caps and spools from flying off the spindles while the latter are rotating at that high rate of speed necessary to impart the desired twist to the thread or filament. However the caps and locking means hitherto used have been inefficient in operation with the resulting breakage and damage to the thread or filaments together with loss of time and labor.

It is therefore an object of my invention to provide an inexpensive and efficient means to prevent the occurrence of the above mentioned difficulties.

Another object of my invention is to so construct a cap for twisting machine spindles which will prevent the spool from flying off the spindle while the latter is rotating at a high rate of speed.

A further object of my invention is to provide a cap having oppositely located holes in which fits a centrifugally actuated locking or holding means.

A still further object of my invention is to provide a cap having oppositely located holes in which fits an elongated bar or member the ends of which frictionally engage the spool and which during the rotation of the spool tend to be pressed more firmly thereagainst due to the effect of the centrifugal force generated by the rotation of the said spool.

These and other objects will become more apparent from a perusal and study of the following description and the drawing in which:

Figure 1 is a sectional view of the cap and locking or holding means;

Figure 2 is a top plan view of the same; and

Figure 3 is a detailed view of the locking or holding means.

Referring now more particularly to the drawing, I have shown a cap 1 having an upstanding tapered hub 2 in which a spindle 3 is adapted to fit. The cap is circular in form and is provided with an upstanding circumferential wall 4. The edge is reversely bent as indicated at 5 and provides a seat 6 for the upper end 7 of a spool 8.

Disposed radially around the cap are a plurality of slots through which may extend the locking or holding ends 9 and 10 of the bar 12. This bar is made of flexible rubber or any other suitable material and consists of a tapered elongated body member 13 having an opening 14 formed in the center thereof of such a diameter as to fit over the hub 2, and due to the tapering of the hub, a snug fit is obtained. The ends of the bar are cut away at 15 to form the holding or locking ends or tongues 9 and 10.

In operation the cap with the holding means in position, as is clearly shown in Figure 1, is placed on a spindle and against the spool, the upper edge of the spool fitting in the seat 6. The holding ends of the bar are in frictional engagement with the inner walls of the spool. When the spindle and spool are rotating at a high rate of speed the centrifugal force generated by such rotation will tend to force the holding ends more firmly against the spool. Thus with the increase of rotation the more positively do the locking means function.

From the above description it will readily be appreciated that I have devised a simple and efficient locking means which will not loosen when rotated at a high rate of speed, but on the contrary, will be further forced into locking engagement.

While the preferred apparatus to be used in carrying out my invention has been described in detail, it is to be understood that the apparatus may be modified in many ways without departing from the spirit of my invention or the scope of the appended claims.

I claim:

1. A spool holder comprising a spool and a cap having oppositely disposed openings

- provided therein, and a centrifugally actuated locking means associated therewith comprising a bar having tongues formed at either end projecting through said openings and adapted to engage a spool.
2. A spool holder comprising a spool and a cap having oppositely disposed openings formed therein and having a hub portion adapted to receive a spindle, a centrifugally actuated locking means associated therewith comprising a bar having an opening formed therein to receive the hub and having means at either end projecting through said openings and adapted to engage a spool.
3. In a twisting machine, a spindle, a spool mounted thereon, a cap for holding the said spool on the spindle comprising a body portion having a plurality of radially disposed openings formed therein, an upstanding hub and an elongated member having a central opening fitting over the hub and having tongues formed at the end thereof projecting through two of said openings and adapted to hold said spool in place on the spindle.
4. In a twisting machine, a spindle, a spool mounted thereon, a cap for holding the said spool on the spindle comprising a body portion having a plurality of radially disposed openings formed therein, an upstanding hub and an elongated member having a central opening fitting over the hub and having tongues formed at the end thereof projecting through said openings and adapted to hold said spool in place on the spindle.
5. In a twisting machine, a spindle, a spool mounted thereon, a cap for holding the said spool on the spindle comprising a body portion having a plurality of radially disposed openings formed therein, an upstanding hub and a centrifugally actuated locking means comprising an elongated member having a central opening fitting over the hub and having tongues formed at the end thereof projecting through two of said openings and adapted to hold said spool in place on the spindle.
6. In combination, a spindle, a spool in operative position therewith, a cap, and means whereby the cap may be locked to the spool.
7. In combination, a spindle, a spool in operative position therewith, a cap, and centrifugally actuated means whereby the cap may be locked to the spool.
8. In combination, a spindle, a spool in operative position therewith, a cap, and means whereby the cap may be locked to the spool, said locking means comprising slots in the cap adjacent the spool, and members adapted to be projected through said slots under the action of centrifugal force.
9. In a device for securing in place a spool upon a spindle flange, in combination, a spindle flange, a spool associated therewith, a cap and a locking means for securing the cap to the spool.
10. In a device for securing in place a spool upon a spindle flange, in combination, a spindle flange, a spool associated therewith, a cap and a centrifugally actuated locking means for securing the cap to the spool.
11. In a process for securing a spool to a spindle flange, the steps of loosely associating a cap with the spindle, and locking the said cap to the spool by means operated through centrifugal force while the spindle is in operation.
- In testimony whereof I affix my signature.
RICHARD GOLLONG.

70

75

80

85

90

95

100

105

110

115

120

125

130