

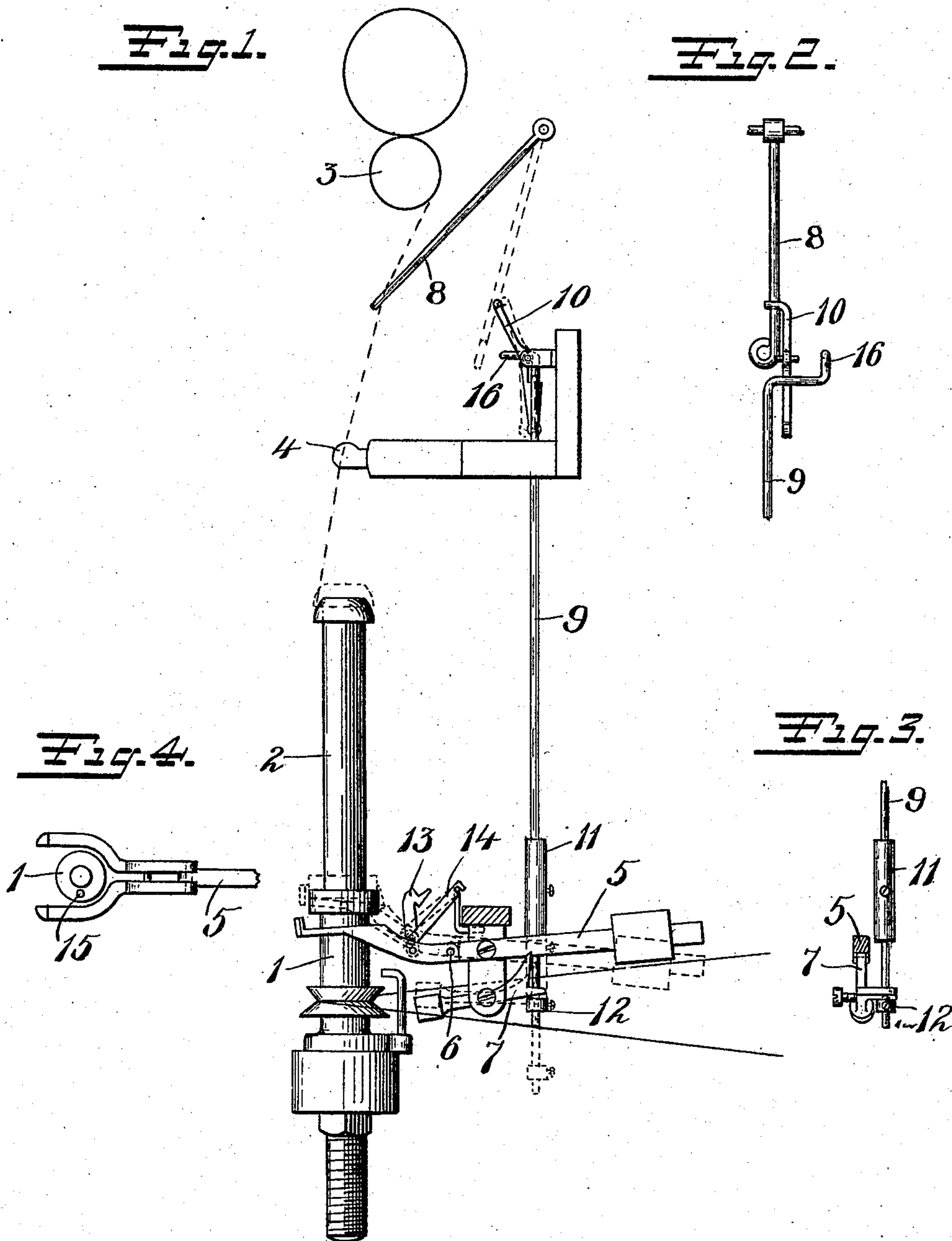
No. 848,012.

PATENTED MAR. 26, 1907.

R. H. COOK.  
STOP FOR TWISTER BOBBINS.  
APPLICATION FILED MAR. 15, 1906.

Fig. 1.

Fig. 2.



Witnesses  
*Chas. A. Reed*  
*Robt. S. Allen*

Inventor  
*R. H. Cook*  
By his Attorneys  
*Paul & Spence*



# UNITED STATES PATENT OFFICE.

RICHARD H. COOK, OF FALL RIVER, MASSACHUSETTS, ASSIGNOR TO THE  
AMERICAN THREAD COMPANY, OF NEW YORK, N. Y., A CORPORATION  
OF NEW JERSEY.

## STOP FOR TWISTER-BOBBINS.

No. 848,012.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed March 15, 1906. Serial No. 306,096.

*To all whom it may concern:*

Be it known that I, RICHARD H. COOK, a citizen of the United States, residing at Fall River, county of Bristol, Massachusetts, have  
5 invented certain new and useful Improvements in Stops for Twister-Bobbins, of which the following is a full, clear, and exact description.

My invention relates to improvements in  
10 textile machinery, and particularly for twisting-machines.

The object of the invention is to provide a simple and reliable mechanism for stopping a bobbin when the yarn or thread breaks during the winding operation. In such machines the bobbins are placed in parallel rows and the strands which are to be twisted are fed through a suitable guide to the winding-bobbin, so that the strands are twisted as desired. In case the strands of the thread  
20 break the loose end is likely to flip through the guide, take up dirt, &c., and smear it on the adjacent bobbins, as well as on the bobbin on which the thread is being wound. The  
25 result is the destruction of a considerable amount of thread, resulting in loss of material and time necessary for unwinding the thread.

My invention consists in improvements for  
30 promptly stopping the movement of the winding-bobbin in case the thread breaks.

The accompanying single sheet of drawings illustrates the principle of the invention, which will be readily understood by one acquainted with the art.  
35

Figure 1 is a side view of mechanism embodying my invention for coöperating with a single bobbin. Fig. 2 is a front view of a detail of construction. Fig. 3 is a rear view of another detail. Fig. 4 is a plan view of another detail.  
40

1 indicates the spindle, revolved by suitable means, as is customary, and carrying the bobbin 2.

3 and 4 indicate the customary guides in twisting-machines. The strands which are to be twisted are fed around the guide-roll 3 through the guide 4 onto the bobbin 2.  
45

5 is a lever pivoted to the frame, preferably  
50 formed in two parts hinged together at 6. The rear end is weighted and the front end forked, so that it stands underneath the lower end of the bobbin. The front end

may, however, be lifted up and thrown back, tilting it on its hinge.

7 is a dog which is weighted at its front end, having its rear end engaging a notch in the lever 5, so as to hold its front end depressed out of engagement with the bobbin.

8 is a pivoted arm, having an eye or passage at its outer end for the thread.

9 is a vertical rod, normally supported by the pivoted latch 10 and having two stop members 11 and 12 near its lower end.

13 is a catch pivoted to the lever 5, adapted to engage beneath the lower end of the bobbin when the front end of the lever 5 is raised, the movement being occasioned by the catch 13, having the link 14 pivoted at one end intermediate the length of 13 and at  
70 the other end to the frame.

15 indicates the driving-pin on the spindle.

16 indicates a projecting portion of the rod 9, serving as a handle.

The arm 8 is normally held in the position  
75 shown in Fig. 1 by the tension of the thread. If the thread breaks, the arm 8 is released and strikes against the latch 10. This releases the rod 9, which causes stop 11 to strike against the dog 7 and releases the lever 5, so  
80 that its front end is brought up beneath the bobbin. The bobbin is thus lifted clear from its driving engagement with the spindle and held stationary by the forked arms and the catch-lever 13. The end of the thread is  
85 again passed through the eye of the arm 8 before the thread is repaired. The rod 9 is then lifted and caught by the latch 10. In lifting the rod 9 the dog 7 is raised, which in turn raises the rear end of the lever 5, so as  
90 to drop the bobbin onto the spindle and permit it to again take up its winding rotation.

The parts are simple in construction, readily installed, and efficient in operation. The arm 8 being light in weight—for instance, formed of a light copper wire—causes but little tension on the thread. The momentum of the arm when it is released and swings on its pivot becomes sufficient by the time it strikes the latch 10 to disengage the latch  
100 from the rod 9. The weight of the rod 9 and its attachments being considerable, sufficient momentum is attained by the time the stop 11 strikes the dog 7 to readily disengage it from the lever 5. The overweighting of the  
105 lever 5 at its rear end causes a quick move-



ment, so that the bobbin 2 is immediately disengaged from the driving-spindle. These parts may be very readily installed and in the ordinary twisting-machine and without  
5 great expense and operated with very slight charges for maintenance.

The mechanism for disengaging the bobbin from the driving-spindle is normally in such a position as to in no way interfere with  
10 the operation of the machine. The member which controls the operation or sets in operation the disengaging mechanism is so constructed and mounted that it places but little tension upon the yarn or thread which  
15 is being twisted and wound. The attachment, therefore, has practically no effect upon the yarn. It is possible to attain these advantages because the operating member is normally disconnected or free from the bob-  
20 bin-disengaging mechanism. This is of particular importance where the yarn which is being wound is very fine and light.

What I claim is—

1. In a twisting-machine, a winding-bob-  
25 bin, a driving-spindle therefor, means on the spindle engaging the bobbin, a lever for disengaging the bobbin from the driving-spindle, a catch pivoted upon said lever adapted to engage said bobbin; a dog normally holding  
30 said lever, a rod for disengaging said dog, a latch normally sustaining said rod, and a swinging arm having a passage for the yarn or thread, said arm being adapted to disengage said latch from said rod when the yarn  
35 or thread breaks and a link connected to said catch for causing it to be thrown into position when said lever disengages the bobbin.

2. In a twisting-machine, a twisting-spin-  
40 dle, a bobbin, means on the spindle engaging the bobbin, a lever for disengaging the bob-

bin from the spindle, a catch pivoted upon said lever adapted to engage said bobbin; a dog normally sustaining the lever, means for  
45 forcibly striking said dog to disengage it from said lever, a swinging arm having a passage for the thread or yarn, and means set in operation by the movement thereof for releasing said striking means and a link connected  
50 to said catch for causing it to be thrown into position when said lever disengages the bobbin.

3. In a stop-motion for a bobbin, a bobbin, a driving-spindle adapted to carry a bobbin, means on the spindle engaging the bob-  
55 bin means for disengaging the bobbin from said spindle, a catch pivoted upon said lever adapted to engage said bobbin; a swinging arm having a passage for the thread or yarn, and means set in operation by the movement  
60 thereof for bringing said disengaging means into operation when the yarn or thread breaks and a link connected to said catch for causing it to be thrown into position when  
65 said lever disengages the bobbin.

4. In a stop-motion for a bobbin, a bobbin, a driving-spindle, means on the spindle en-  
70 gaging the bobbin, a pivoted lever having one end adapted to engage said bobbin having its opposite end overweighted, means for normally holding said lever disengaged from said  
75 bobbin, a catch-lever pivoted to said engaging lever also adapted to engage said bobbin, a link connected to said catch-lever for causing it to be thrown into position when said en-  
gaging lever operates, and means for releasing said engaging lever when the thread breaks.

RICHARD H. COOK.

Witnesses:

GEORGE P. GILMORE,  
ARTHUR ANDERTON.