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H. L. HYDE

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STOP MOTION FOR TWISTING MACHINES

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Fig. 1.

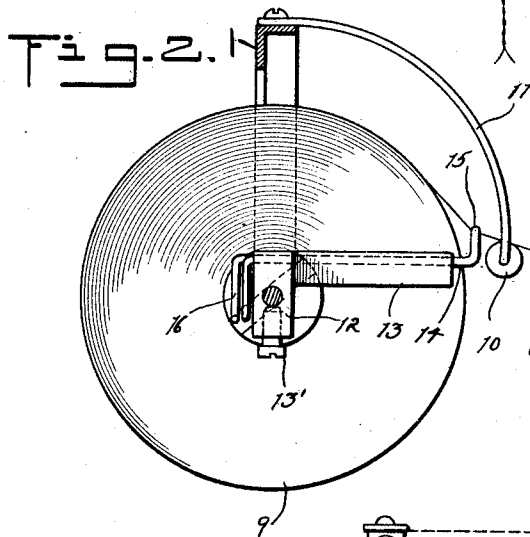
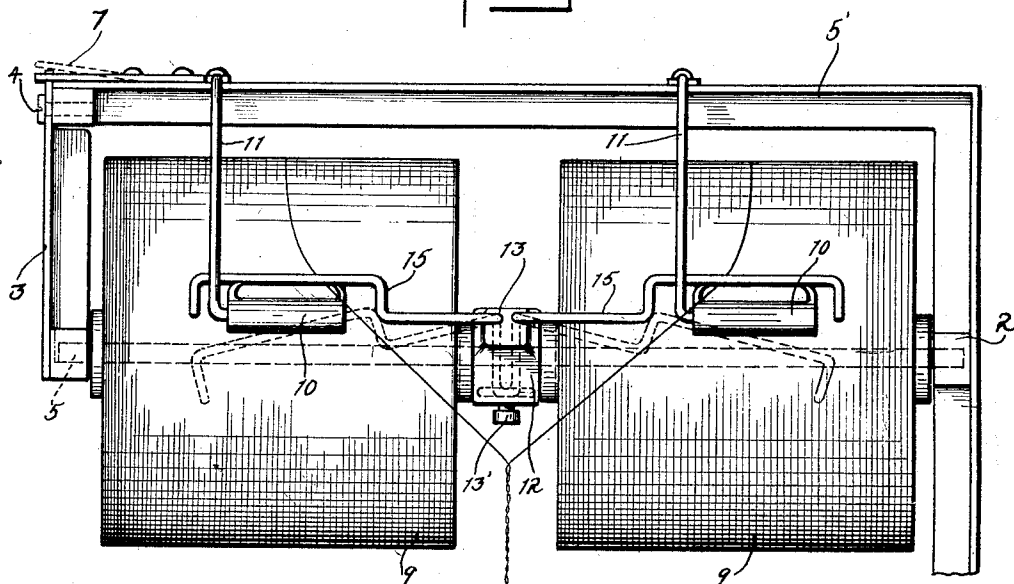


Fig. 3.

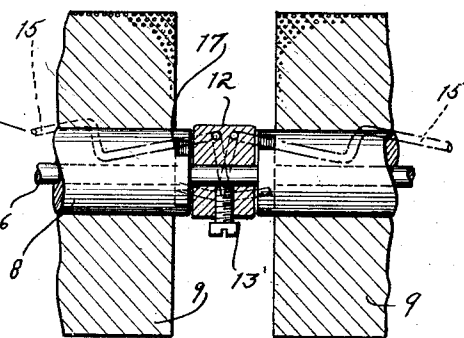
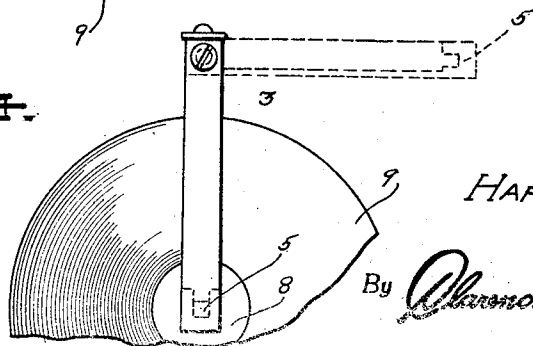


Fig. 4.



Inventor

HAROLD L. HYDE

By *Clarence A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE

HAROLD L. HYDE, OF PAWTUCKET, RHODE ISLAND

STOP MOTION FOR TWISTING MACHINES

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This invention relates to a stop motion for twisting machines, the general object of the invention being to provide means for stopping the rotary movement of one spool when the threads on another spool break, thereby preventing the spinning of thin thread on a machine which twists two threads together.

Another object of the invention is to provide means whereby the two spools may be readily placed on a spindle.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is an elevation of the invention.

Figure 2 is a vertical sectional view through Figure 1 showing one of the spools and the thread thereon in end elevation.

Figure 3 is a detail sectional view through the bracket and the cheese with the spools and spindles in elevation.

Figure 4 is an end view showing how the pivoted arm on the end of the bracket can be swung upwardly in order to remove the spindle or replace it.

In these views, the numeral 1 indicates a part of the supporting frame which has a bearing 2 at one end thereof and an arm 3 is pivoted to the other end as shown at 4, this arm having a notch 5 therein for receiving the other end of the spindle which is shown at 6. Thus, by lifting the spindle to free its ends from the notch 5 and then swinging the arms 3 to the dotted line position shown in Figure 4, the spindle with the spools thereon can be removed or replaced.

A spring 7 on the top of the frame 1 holds the arms 2 in either one of the two positions. The spools are shown at 8 and each spool carries a cheese 9 and the threads pass through or over the guides 10 which are carried by the curved arms 11 attached to the top of the frame.

A bracket 12 is attached to the spindle between the spools by a set screw 13' and said bracket is formed with a forwardly extending arm 13 having the bearing holes therein for the straight parts 14 of the rods 15, each of which extend in front of a cheese and has its outer part bent into substantially the shape of an inverted U, the bight of which is pierced by the thread as shown in Figures 1 and 2, thus the threads hold the rod in the full line position shown in Figure 1, but if the thread should break, the rod will turn in the bearing hole in the arm 13 and in some parts will drop into the dotted line position shown in Figure 1.

The rear end of each rod is formed with a crank 16 for engaging a kerf 17 in the inner end of the opposite spool. From the foregoing, it will be seen that should one of the threads break, the part 15 of the rod which engages said thread will drop, the parts 14 of said rod turning in the bearing hole in the arm 13 and this downward movement will cause the crank 16 to engage the kerf 17 of the other spool and thus the turning movement of said spool and the shoes thereon will stop and thus the spinning action between the two threads will cease and there is no danger of continuing the spinning action with but the one thread.

After the ends of the broken thread are connected together, the rod is returned to its normal position so that the stopping device is then set and the spinning action is continued.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

I claim:

1. A stop motion for a twisting machine having a pair of spools the threads of which are to be twisted together, a spindle on which the spools are placed, a bracket on the spindle between the spools, a pair of members each journaled in the bracket and having an outer

part extending in front of a spool and under which the thread from the spool passes, and a part on said member for engaging the opposite spool when the member drops on the breaking of the thread of the first spool.

5 2. A stop motion for a twisting machine having a pair of spools the threads of which are to be twisted together, a spindle on which the spools are placed, a bracket on the spindle
10 between the spools, a pair of members each journaled in the bracket and having an outer part extending in front of a spool and under which the thread from the spool passes, and a part on said member for engaging the
15 opposite spool when the member drops on the breaking of the thread of the first spool, the inner end of each spool having a kerf therein and each member having a crank end for engagement with the kerf when said member drops on the breaking of a thread.

20 3. In a thread twisting machine, a frame having a bearing in one part thereof, a pivoted arm depending from another part and having a notch therein, a spindle having one
25 end fitting in the bearing and its other end in the notch, a pair of spools on the spindle, a cheese on each spool, the inner ends of the spools having recesses therein, a bracket fastened to the spindle between the spools and
30 having a pair of bearing openings therein, a rod having a straight part rotatably arranged in each opening with the outer part of the rod bent and extending in front of each cheese, this part of each rod being of
35 substantially inverted U-shape with the thread passing under the bight thereof, the rear end of each straight part of each rod being bent into crank shape for engaging the recess in the opposite spool when the front
40 part of the rod drops on the breaking of the thread of the other spool.

In testimony whereof I affix my signature.

HAROLD L. HYDE.

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