

No. 670,200.

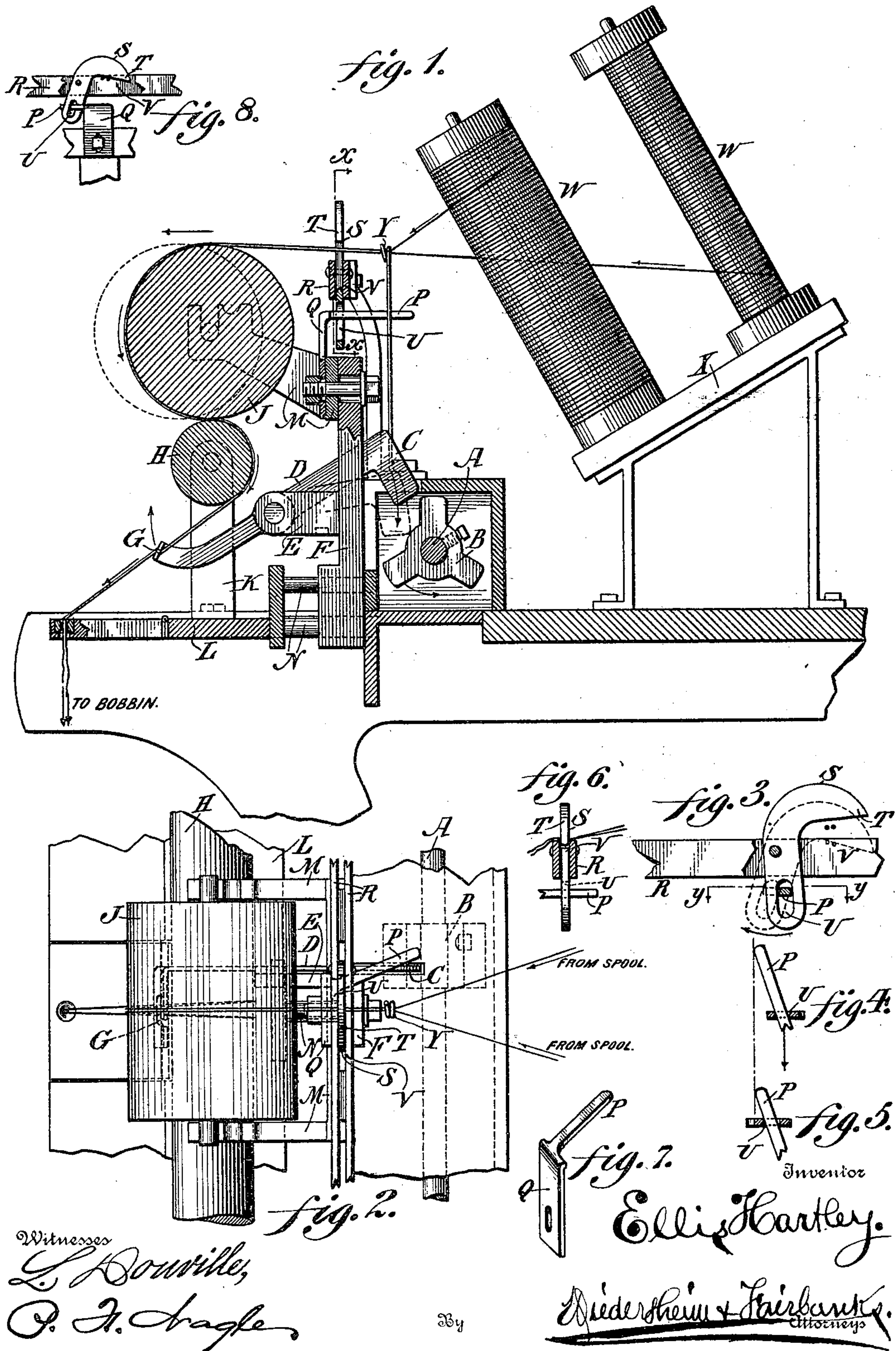
Patented Mar. 19, 1901.

E. HARTLEY.

STOP MOTION FOR DOUBLING AND TWISTING MACHINES.

(Application filed Apr. 9, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

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STOP-MOTION FOR DOUBLING AND TWISTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 670,200, dated March 19, 1901.

Application filed April 9, 1900. Serial No. 12,046. (No model.)

To all whom it may concern:

Be it known that I, ELLIS HARTLEY, a citizen of the United States, residing at Colwyn, in the county of Delaware and State of Pennsylvania, have invented a new and useful Improvement in Stop-Motions for Doubling and Twisting Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a stop-motion for a doubling and twisting machine, the same embodying, first, novel mechanism whereby in the event of the breaking of the yarn or thread the running of the yarn or thread from the spools to the bobbin is stopped, and, next, novel mechanism for preventing the yarn or thread when broken from winding around one of the feed-rolls.

Figure 1 represents a partial side elevation and partial vertical section of a stop-motion embodying my invention. Fig. 2 represents a top or plan view thereof. Fig. 3 represents a partial side elevation and partial vertical section of a portion on line *xx*, Fig. 1. Figs. 4 and 5 represent horizontal sections of portions on line *yy*, Fig. 3, one of the members thereof being in different positions. Fig. 6 represents a view at a right angle to Fig. 3. Fig. 7 represents a perspective view of a detached portion. Fig. 8 represents a view of the parts shown in Fig. 3, a member thereof being in a different position.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a shaft which receives rotary motion from any suitable member or part of the machine and carries the spur or winged wheel B, which is adjacent to the limb C of the lever D, the latter being mounted on the arm E of the sliding standard F, said lever having at the end opposite to the limb C the eye G, through which the yarn or thread is run after it leaves the rolls H J on its way to the bobbin, the roll J being above the roll H. The roll H is mounted in the supports K, which rise from the portion L of the frame of the machine. The roll J is mounted on the support M, which is attached to the standard F.

On the portion L of the frame of the machine are the ways N, on which are fitted the standard F, whereby the latter is supported

and adapted to be moved in the directions to and from the wheel B, it being noticed that the lever D and roll J move with said standard. 55

P designates a finger which is connected with the plate Q, by which it is attached to the standard F, said finger being deflected laterally, so as to lie oblique or form an obtuse angle with said plate Q, as most clearly shown in Fig. 2. 60

Pivoted to the beam R, which constitutes a stationary member of the frame of the machine, is the dog S, which has a laterally-turned jaw T and a slotted head, the slot U therein being adapted to receive the finger P. 65

The portion of the beam R below the jaw T is channeled, forming the jaw V, which is adapted to receive the jaw T when the latter is lowered. 70

W designates spools which are supported on the board X on the frame of the machine, and Y designates an eye for guiding the yarn or thread from said spools to the roll J.

The operation is as follows: The yarn or thread from the two spools is passed through the eye Y, under the jaw S, between the rolls H and J, and through the eye G of the lever D, thus holding the latter in the position shown in the drawings, the yarn or thread then being conducted to the doubling and twisting machine, it being noticed that the limb C of said lever is retained clear of the wheel B. Should the yarn or thread from either spool or both spools break, it requiring both threads to control the lever D, the latter is released and the limb end drops, thus causing the engagement of one of the spurs, teeth, or projecting members of the wheel B with the limb C, and as the wheel continues to revolve it pushes said lever in the present case to the left, whereby the roll J is removed from the roll H, as shown in dotted lines, whereby the rolls are relieved of their feeding action and the running off of the yarn or thread ceases. At the same time as the finger P follows the motion of the standard F its oblique direction causes it to ride in the slot U of the dog S and force the lower or heel end of the same in the direction of the arrow, Fig. 3, whereby the jaw T is lowered against the jaw V and the yarn or thread nipped or pinched by said jaws, so that the tendency of any yarn or thread contiguous to rolls being 75 80 85 90 95 100

caught by the latter and wound around either of the same is prevented, as feeding of the yarn or thread to the rolls absolutely ceases at said jaws.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a stop-motion, a lever, a movable support for the same, a feed-roll mounted on said
10 movable support, a feed-roll mounted on a stationary support, a rotating device, and a projecting member thereon, the latter being adjacent to said lever, whereby said member may engage with said lever when yarn or
15 thread is broken, thus shifting the support and separating the feed-rolls, in combination with an annularly-deflected finger on said movable support, a beam having a channel therein, and a dog mounted on said beam, the
20 jaw of said dog being adapted to enter said channel.

2. In a stop-motion, a feed-roll, a support for said roll adapted to be shifted when yarn or thread is broken, a finger mounted on said
25 support, a movable jaw adapted to engage with said finger and a stationary jaw provided with a channel adjacent to said movable jaw, said jaws being interposed between the yarn-supply and feed mechanism, said
30 finger being deflected whereby as it advances with its shiftable support it operates the movable jaw and clamps the yarn or thread in advance of the feed-rolls in said channel.

3. In a stop-motion, a lever, a movable sup-

port for the same, a feed-roll mounted on said 35 support, a feed-roll mounted on a stationary support, a rotating device with a projecting member thereon, the latter being adjacent to said lever, whereby said member may engage with said lever when yarn or thread is broken, 40 thus shifting the support and separating the feed-rolls, in combination with a deflected finger on said movable support for the feed-roll, a stationary beam constituting a jaw and a dog mounted on said beam, the jaw of said 45 dog being adapted to engage with said jaw of the beam simultaneously with the stoppage of said feed-rolls.

4. In a stop-motion, a spur-wheel, a lever mounted adjacent thereto, and adapted to be 50 held therefrom by the yarn or thread when intact, a shifting support carrying said lever, feed-rolls, one of which is mounted on said support, jaws carried independent of said shifting support, and a deflected finger on the 55 latter, one of said jaws being movable and having said finger engaging with the same, the other jaw being stationary and having a channel in its face, whereby the jaws may be closed when said support is operated on the 60 breaking of the yarn or thread, and the movable jaw is then caused to engage said channel.

ELLIS HARTLEY.

Witnesses:

JOHN CALHAIN,
CLINTON CASE.