

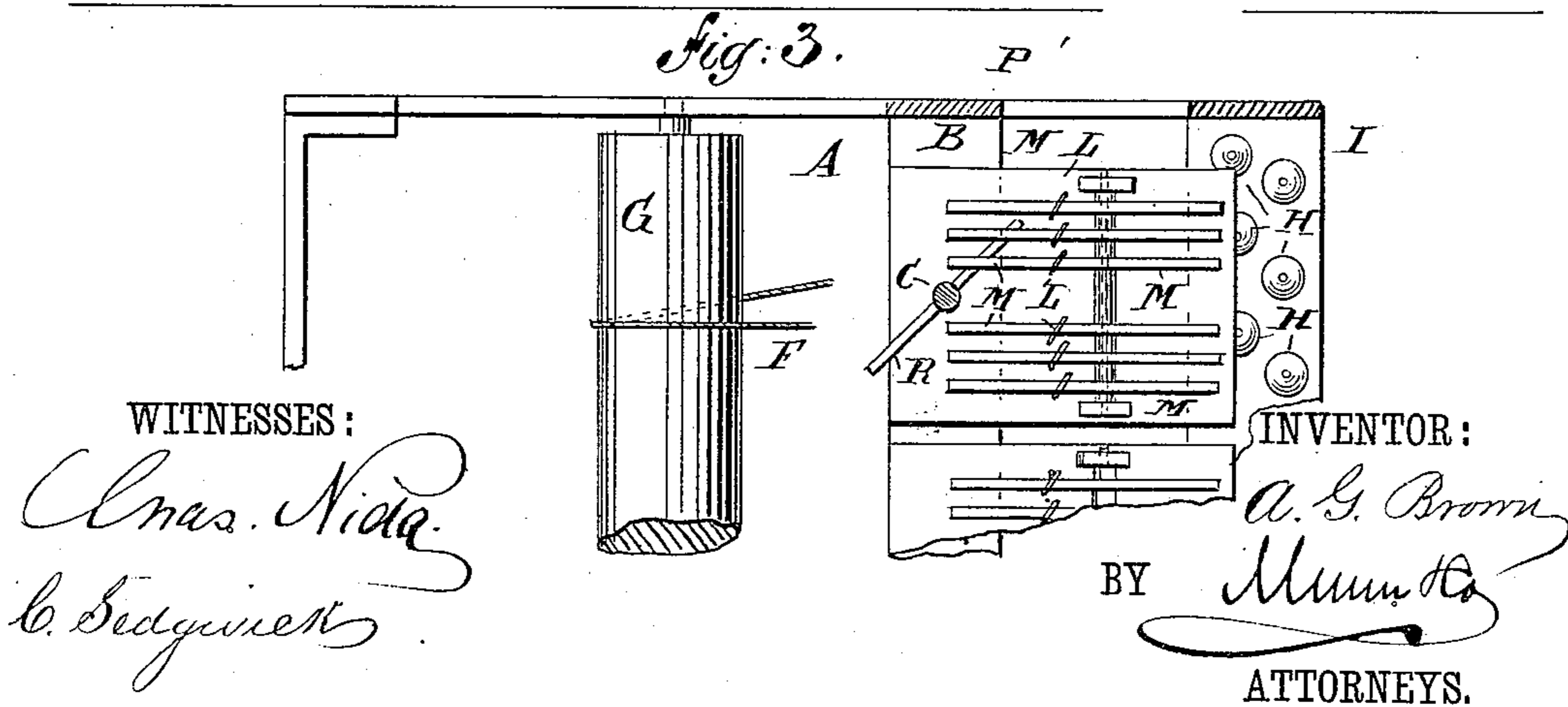
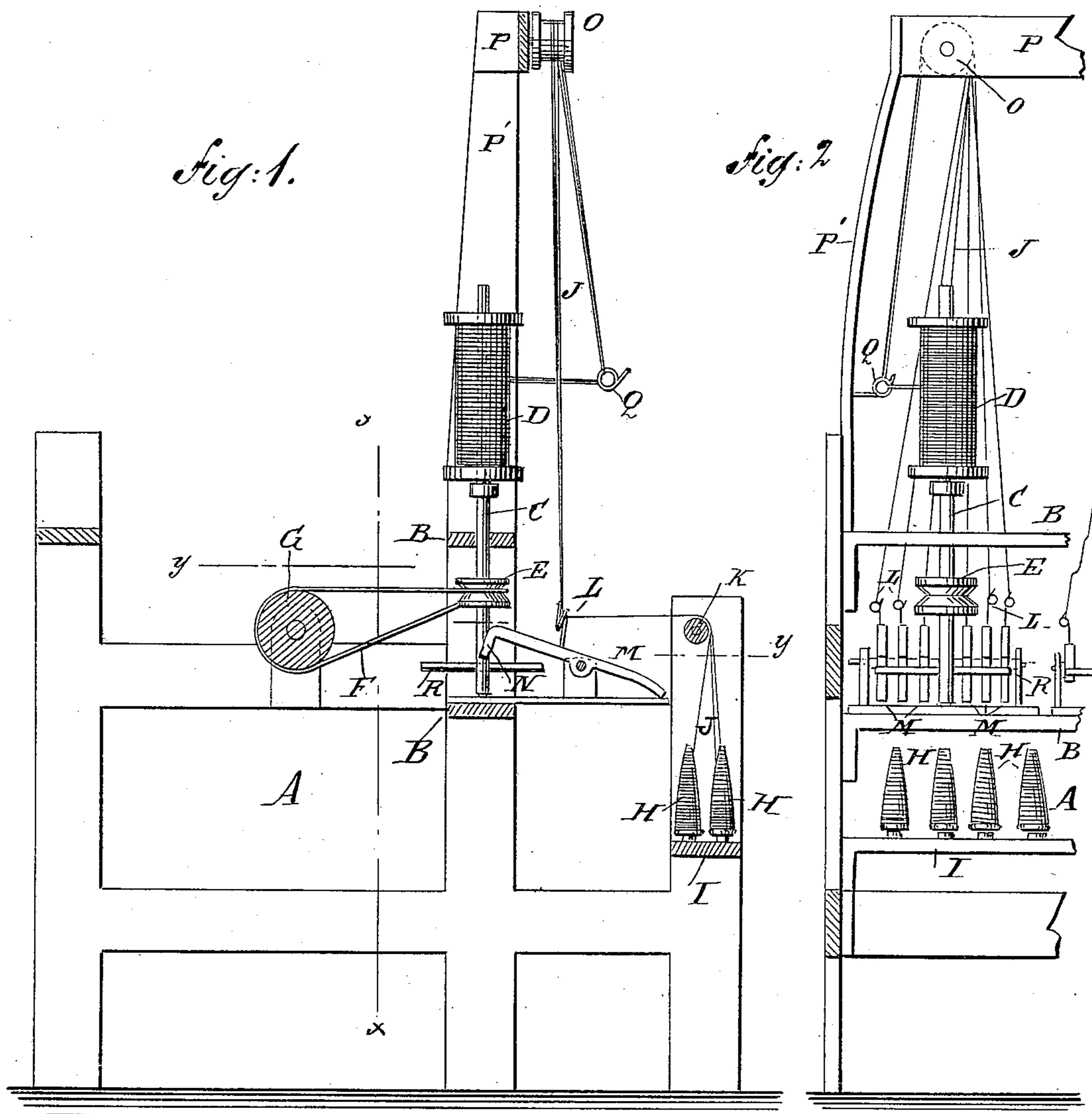
(No Model.)

A. G. BROWN.

STOP MOTION FOR SPOOLERS, TWISTERS, AND DOUBLERS.

No. 267,487.

Patented Nov. 14, 1882.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALEXANDER G. BROWN, OF WILLIAMSTOWN, MASSACHUSETTS, ASSIGNOR
TO HIMSELF AND DANFORTH & CO., OF SAME PLACE.

STOP-MOTION FOR SPOOLERS, TWISTERS, AND DOUBLERS.

SPECIFICATION forming part of Letters Patent No. 267,487, dated November 14, 1882.

Application filed January 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER G. BROWN, of Williamstown, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Stop-Motion for Spoolers, Twisters, and Doublers, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for automatically arresting the spindle of a spool in case one of the threads that are being wound on this spool breaks.

The invention consists in the combination, with a rotating spool-carrying spindle provided with a transverse rod or bar, of as many pivoted check-levers as there are threads to be wound on the spool, which check-levers are each provided with a loop through which a thread passes, whereby when the threads are unbroken the check-levers will be raised, permitting of a rotation of the spindle; but when a thread breaks the corresponding check-lever drops, the transverse rod of the spindle strikes against the end of this check-lever, and the spindle will be stopped immediately.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a cross-sectional elevation of a spooling or twisting frame provided with my improved stop-motion. Fig. 2 is a part of a longitudinal sectional elevation of the same on the line $x x$, Fig. 1. Fig. 3 is a part of a sectional plan view of the same on the line $y y$, Fig. 1.

The frame A is provided with two horizontal slats or strips, B, in which a series of vertical spindles, C, are journaled, which spindles are each adapted to carry a spool, D. Only one spindle is shown; but any desired number can be arranged in a row. The spindles C are each provided with a pulley, E, around which a driving cord or belt, F, passes, which cords also pass around a driving-cylinder, G, journaled in the frame, and provided with suitable devices of the usual construction for revolving it. The thread-bobbins H are mounted on spindles projecting upward from a rail, I, of

the frame A, and are arranged in groups—one group for each spool—each group containing as many bobbins as there are to be strands in the completed or twisted cord or thread on the spool D. From the bobbins H the threads J pass over a friction-roller, K, journaled in the frame A above the bobbins, and from this roller each thread passes through a separate loop, L, on a separate check-lever, M, pivoted on a platform of the frame A, between the bobbins and the spindles C. The loops L are attached to the upper edges of the check-levers M, between the fulcrum of the levers and the spindles C. The inner ends of the levers M—that is, the ends toward the spindles C—are provided with an angular downward projection or bend, N. From the loops L the threads pass over a roller, O, pivoted to a longitudinal rail, P, uniting the upper ends of the standards P' of the frame A. From the roller the threads pass through a loop or eye, Q, projecting from an ordinary transverse rail, and from this loop Q the threads pass upon the spool D. The inner ends of the levers M reach to the longitudinal line connecting the centers of the bottoms of the spindles C. Each spindle is provided with a transverse rod or bar, R, which is located a distance above the bottom supporting rail, B, less than the height of the end projections, N, of the levers M. When the levers M are lowered the lower ends of the projections N rest on the bottom rail, B. If the transverse bar R is located very near the bottom rail, B, the projections N at the ends of the check-levers can be dispensed with, for in this case the thickness of the levers will be sufficient to stop the rod R.

The operation is as follows: As the threads are wound upon the spool D there is sufficient tension in the threads to raise the levers M to such an extent that the lower ends of the projections N of these levers M will be above the transverse rod R of the spindle, thus permitting this rod or bar to swing in a circle or rotate without striking any of the projections N. As soon as any thread breaks the corresponding lever M will drop, and the transverse rod or bar R will strike against the projection N of this lever, whereby the spindle will be

stopped immediately. As soon as the ends of the thread are again united the lever that has dropped will be raised by the thread, and the spindle can revolve again. Thus if any thread
5 that is being wound upon a spool breaks, the spindle of this spool will be stopped and a loss of thread on the spool will be avoided, and the twisted thread wound on the spool will always be of uniform thickness. Any number of bob-
10 bins H can be combined with one spool; but there must be a lever M for each thread or bobbin.

The within-described device can be used on twisters, doublers, spoolers, or quilling-frames.

15 I am aware of the English Patent No. 2,480 of 1859, and therefore lay no claim to such invention, my invention being confined to the

precise construction and arrangement of parts as pointed out in the claim.

Having thus fully described my invention, I 20 claim as new and desire to secure by Letters Patent—

The levers M, pivoted to a platform between the bobbins and spindle C, and each provided with a loop, L, between its fulcrum and spin- 25 dle C, and with a downward projection, N, on its inner end, in combination with the bobbin-spindles, the bar R, rollers K O, loop Q, and spool-spindle C, substantially as and for the purpose set forth.

ALEXANDER G. BROWN.

Witnesses:

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