

J. A. H. CARROLL.
Stop-Mechanisms for Twisting and Doubling Machines.

No. 139,768.

Patented June 10, 1873.

Fig. 1.

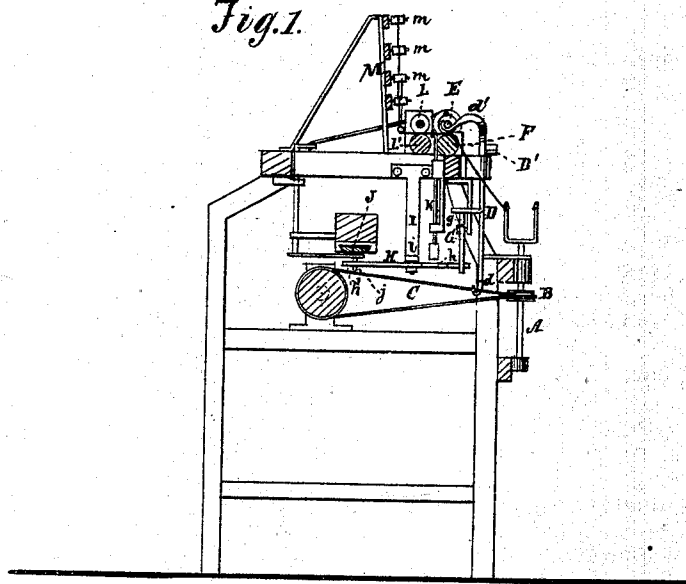
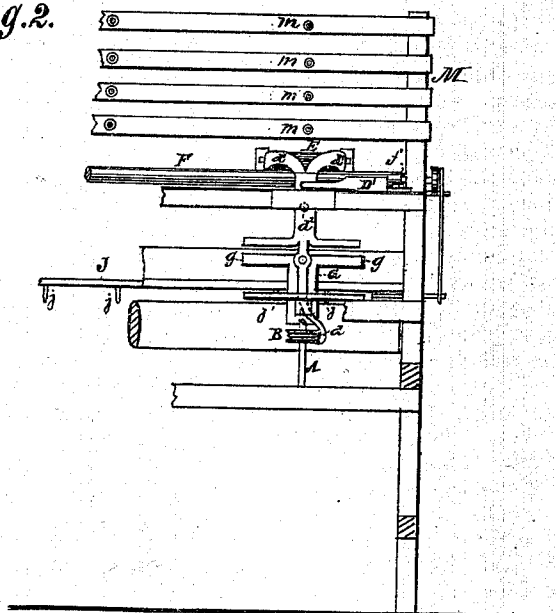


Fig. 2.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN STOP-MECHANISMS FOR TWISTING AND DOUBLING MACHINES.

Specification forming part of Letters Patent No. **139,768**, dated June 10, 1873; application filed April 29, 1873.

To all whom it may concern:

Be it known that I, JAMES ALBERT H. CARROLL, of the city of Baltimore and State of Maryland, have invented a new and useful Improvement in Twisting and Doubling Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a vertical section, and Fig. 2 is a front elevation of an end portion of the twisting-machine.

The invention relates to means by which the twister, flier, or spindle or twist-plate of the twister and feed-rolls of same twister or cord-making machine may be made automatically to cease their operation whenever a thread is broken or full number of ends cease to be supplied to the rollers.

A represents a twister-spindle having the pulley B, around which passes the cord or band C. The latter passes to the roll or pulley, by which it is driven through the hook *d* of a bearing-piece, D, that has arms *d'* *d'*, on which rest the journals of the top feed-roll E. F is the feed-roll, whose bearings *f* are stationary. G is a vertical slotted T-bar, having the horizontal arms *g g*, and supporting in its slot a bar, H, that has the platform *h* at one end, is fulcrumed loosely or by a universal joint or a ball-and-socket joint on a pin, *i*, of the bent bar I, and has one end, *h'*, passing between the pins *j j* of the reciprocating bar J. K is an end-weighted cord, wire, or thread, which is, by a hook or other means, hung upon each or all of the threads which are to be twisted, and which are constantly liable to break. In the latter event much labor and trouble and loss is created, since the threads not broken continue to be fed and the twister to operate, thereby twisting a less number of threads in the cord than is required, doing work which needs to be undone, and causing loss of the material twisted. L L' represent two rolls, behind and between which the threads pass from the pins *m* on frame M before they enter between the feed-rolls E F. The top roll L is loose and rests yieldingly upon the threads,

so that if the feed is stopped they are held stationary, but which allow the feed-rolls to draw the threads forward readily when they are in operation.

The operation is as follows: If one or more threads that are being twisted, and to which a weighted thread, wire, or cord K is hung, should chance to break, or the spool run out, the weight *k* drops upon the platform *h*, and vibrates vertically the rod H. This has the effect of bringing the end *h'* between the pins *j j* of reciprocating bar J, which then gives bar H a horizontal oscillation. The T-bar G is thus made to turn on its pivot so as to force the belt or band C from the twister-pulley B, and stop the rotation of spindle A. At the same time that the belt which passes through the hook of bearing-piece D is forced upward, the latter is raised, and with it the upper feed-roll. This stops the feed of the unbroken threads. The bearing-piece D *d'* of the roller when lifted is caught by a spring-catch, D'; entering a hole, *d''*, and held until the broken thread is readjusted. One or more horizontal bars, working with or without pins, will serve to stop the flier and raise the feed-roll, while mechanism to stop the spindle or spool by throwing the band off, or by friction on spindle or spool, may be used.

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

1. The combination, with band C and the shaft of the roll E, of the hook-piece D *d d'*, the slotted T-bar G *g*, the platform-bar H *h h'*, the bar I *i*, the reciprocating bar J *j j*, and the weighted cords K hung to the threads, as and for the purpose described.

2. The rolls L L', the top one of which is loose to hold the threads, applied in connection with the separable feed-rolls E F, as and for the purpose specified.

The above specification of my invention signed by me this 28th day of April, A. D. 1873.

JAMES ALBERT H. CARROLL.

Witnesses:

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