(No Model.)

S. M. HAMBLIN & W. H. GOLDSMITH.

TRAVERSE MOTION FOR SPOOLING MACHINES.

No. 417,824. Patented Dec. 24, 1889.

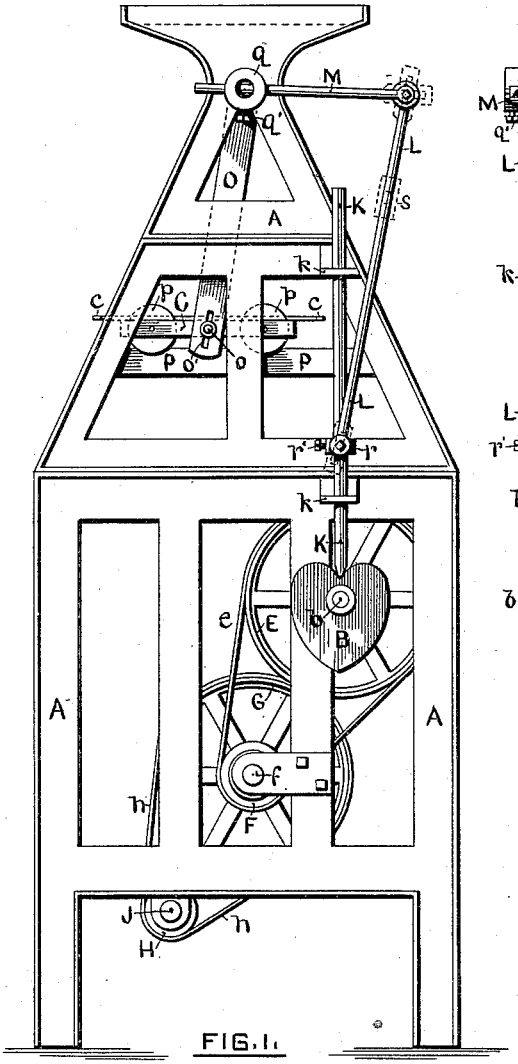

FIG. 1.

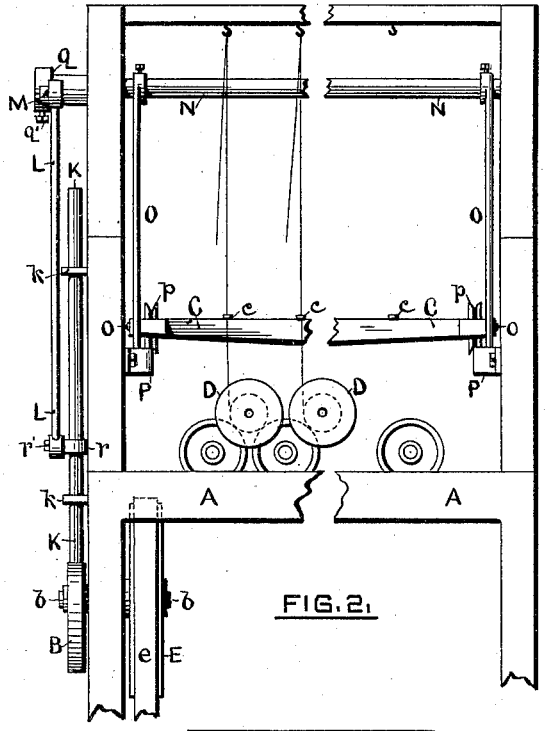

FIG. 2.

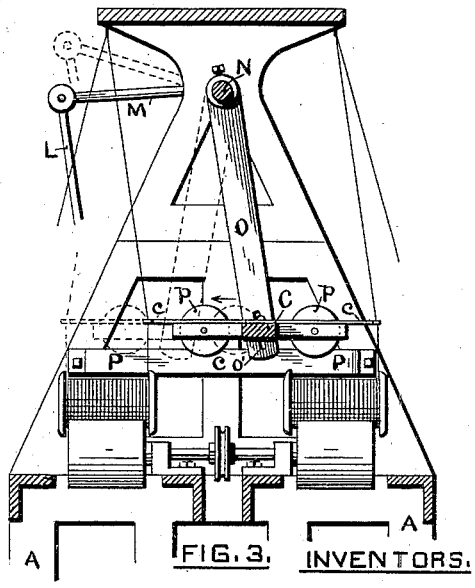

FIG. 3.

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TRAVERSE-MOTION FOR SPOOLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 417,824, dated December 24, 1889.

Application filed May 24, 1889. Serial No. 311,930. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN M. HAMBLIN, of New Bedford, in the county of Bristol and State of Massachusetts, and WILLIAM H. GOLDSMITH, of Fall River, in the county of Bristol and State of Massachusetts, have jointly invented a new and useful Improvement in Traverse-Motions for Spooling-Machines; and we do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a description thereof.

This invention relates to a "traverse-motion" for spooling-machines; and it consists in certain features of construction and arrangement hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents an end view of a machine provided with the traverse-motion. Fig. 2 shows a front view of a portion of the machine. Fig. 3 represents a transverse section of the same.

A is the frame of the machine.

B is the cam which operates the traverse bar or carriage C, which is provided with guides *c* to direct the threads to the spools or bobbins D, to be wound by the machine. The cam B is mounted on a shaft *b*, which shaft may be driven by any suitable means (said means forming no part of the invention) to cause the cam to rotate. The means shown in the drawings consist of a pulley E, mounted on the shaft *b*, a belt *e*, passing over said pulley and over a pulley F on a shaft or stud *f*, a pulley G on the shaft *f*, and a belt *h*, passing over the pulley G and over a pulley H on the shaft J, to which last-mentioned shaft the driving-pulley of the machine may be attached.

The cam B operates a rod or bar K, which is arranged to slide in any suitable guides, as *k*, on the frame of the machine. The lower end of this rod or bar rests upon the cam, and to said rod is pivoted one end of a pitman or connecting-rod L. The upper end of the pitman L is pivoted to a rod M, which is secured to a rock-shaft N, journaled or mounted in the frame of the machine. This rock-shaft has an arm or arms O, (preferably two, one near each end,) which extend downwardly from the shaft, and are connected or pivoted to the traverse bar or carriage C in any preferred manner, as by a pin *o* passing through a slot *o'* in the arm and into the traverse-bar, as shown in Fig. 1. The traverse-bar C is mounted to slide backward and forward or vibrate transversely of the machine on suitable supports or ways P, secured to the frame A. In order to reduce the friction between the traverse-bar and the ways as much as possible, the bar is preferably provided with pulleys or rollers *p*, which rest on the ways.

For the purpose of conveniently regulating the amount of movement of the traverse-bar, the rod M is preferably adjustably secured to the rock-shaft N in any suitable manner, as by passing through a collar or hub *q*, attached to one end of the rock-shaft, and being secured to said collar by a set-screw *q'*, as shown in Fig. 1. The same result may be obtained, however, by providing the outer end of the rod M with a slot and pivoting the pitman L to the rod by a pin passing through the slot, as indicated by dotted lines in Fig. 1.

In order conveniently to regulate the movement of the traverse-bar, so that said movement shall be equal on both sides of a central vertical line, the pitman L is preferably made adjustable with relation to the sliding rod K, as by pivoting the pitman to a collar *r* and securing said collar to the rod by a set-screw *r'*; or the pitman may be slotted at its lower end, as shown by dotted lines in Fig. 1, so it may be pivoted to the rod K in the desired relation thereto, as will be readily understood. The same result may be obtained, also, by making the pitman adjustable with relation to the rod M, as by furnishing the upper end of the pitman with a slot, as shown by dotted lines in Fig. 1, so the pitman may be pivoted to the rod M in the desired relation thereto; or the pitman may be made in two parts and these parts joined by a right and left hand screw connection *s*, (shown by dotted lines in said figure.)

What we claim, and desire to secure by Letters Patent, is—

1. The combination of the cam, the sliding rod, a pitman pivoted to the rod, a rock-shaft,

a rod attached to said shaft and pivoted to the pitman, the traverse bar or carriage, an arm or arms projecting from the rock-shaft and pivotally connected to the traverse-bar, and ways for the traverse-bar, substantially as set forth.

2. The combination of ways or supports for the traverse-bar, the traverse-bar having pulleys or rollers resting upon said ways, a rock-shaft provided with an arm or arms pivotally connected to the traverse-bar, a rod projecting from the rock-shaft, a pitman pivoted to said rod, a sliding rod pivoted to the pitman, and a cam for operating said sliding rod, substantially as set forth.

3. The combination of the cam, the sliding rod, the adjustable pitman connected with said sliding rod, a rock-shaft having a rod projecting therefrom and pivoted to the pitman, the traverse-bar, an arm or arms projecting from the rock-shaft and pivotally connected to the traverse-bar, and ways for supporting the traverse-bar, substantially as set forth.

4. The combination of the cam, the sliding rod, the pitman pivoted to said rod, a rock-shaft having an adjustable rod pivoted to the pitman, the traverse-bar, an arm or arms projecting from the rock-shaft and pivotally connected to the traverse-bar, and ways for the traverse-bar, substantially as set forth.

5. The combination of the cam B, the sliding rod K, provided with an adjustable collar *r*, the pitman L, pivoted to said collar, the rock-shaft N, provided with a collar or hub *q*, the rod M, adjustably secured to said collar and pivoted to the pitman, a traverse-bar C, ways P, for supporting the traverse-bar, and an arm or arms O, projecting from the rock-shaft and pivoted to the traverse-bar, substantially as set forth.

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