

R. LEWIS.

Stop Motion for Machines for Covering Cord.

No. 125,467.

Patented April 9, 1872.

Fig. 1.

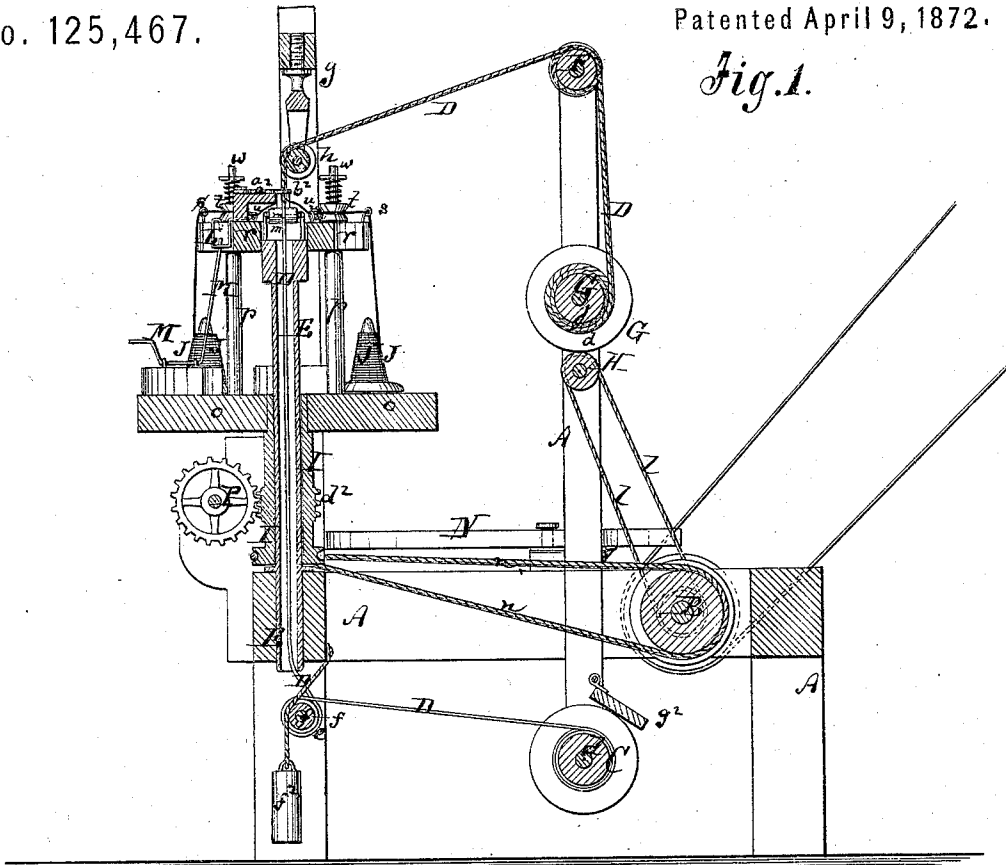
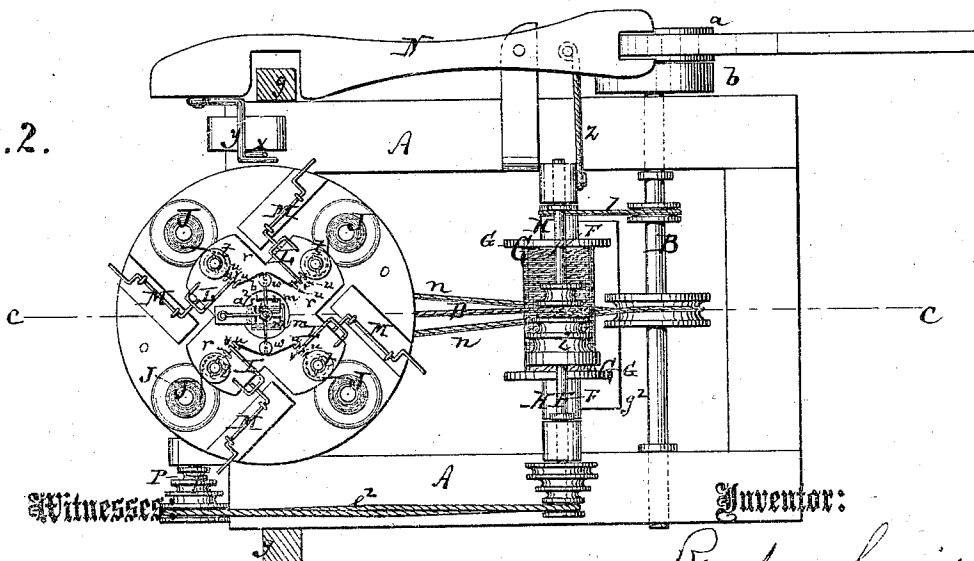


Fig. 2.



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Fig. 4.

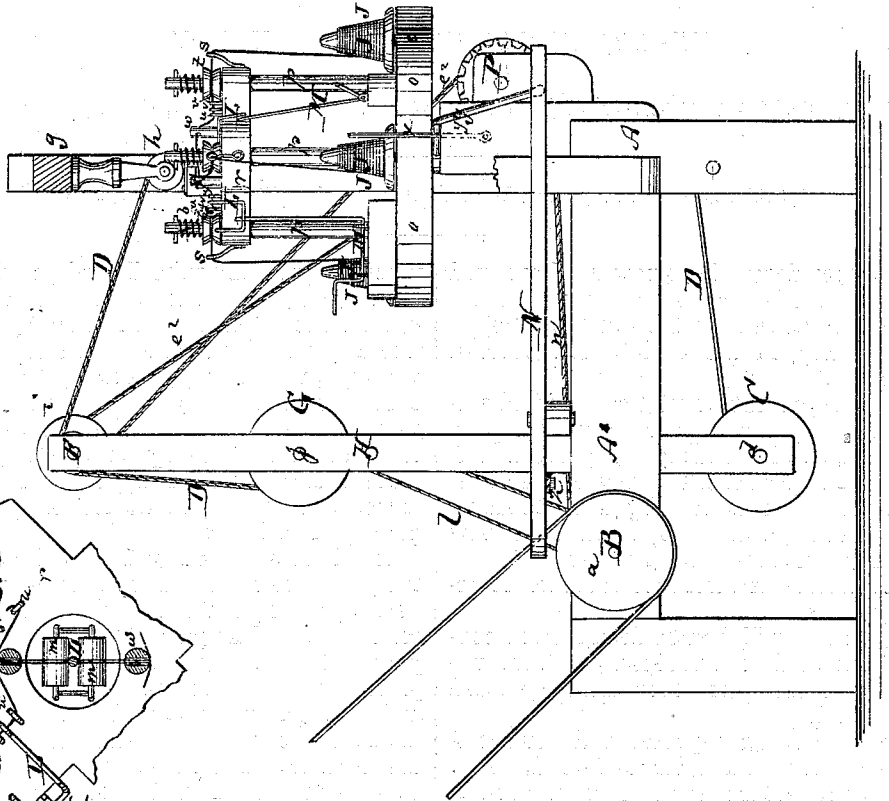


Fig. 5.

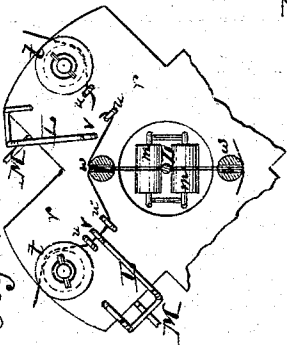
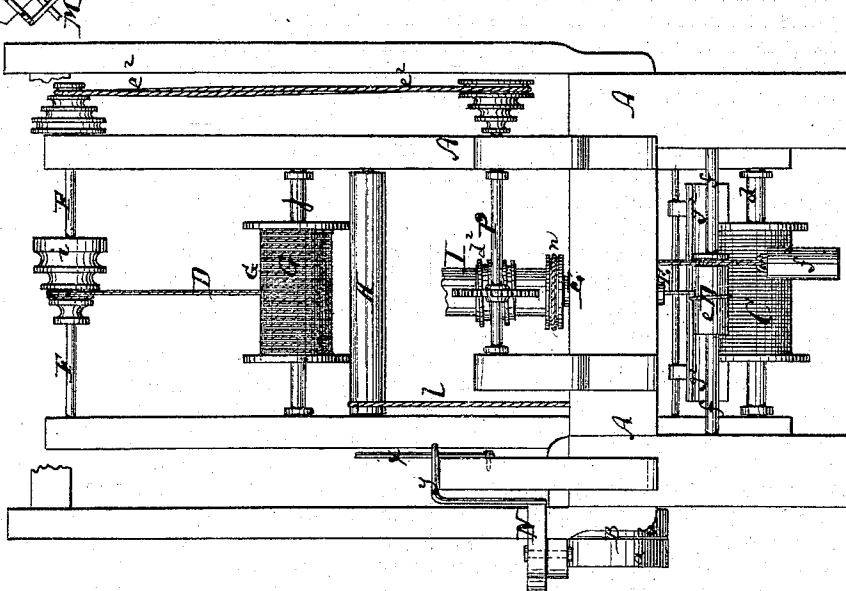


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

REUBEN LEWIS, OF NEW YORK, N. Y.

IMPROVEMENT IN STOP-MOTION FOR MACHINES FOR COVERING CORD.

Specification forming part of Letters Patent No. 125,467, dated April 9, 1872.

Specification describing a new and Improved Stop-Motion for Machines for Covering Cord, Wire, &c., invented by REUBEN LEWIS, of New York city, in the county and State of New York.

Figure 1 represents a vertical central section of my improved covering-machine, the line C C, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a front elevation; Fig. 4, a side elevation of the same; and Fig. 5, a detail top view of part of the revolving carrier-disk.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with all that is necessary to a full understanding thereof, and then clearly pointed out in the claim.

A, in the drawing, represents the supporting frame of the machine, made of wood, metal, or both, of proper form and size for supporting the several parts of the mechanism. B is the horizontal driving-shaft, hung transversely in the frame A, and provided with a fast-pulley, *a*, and loose-pulley *b*, for the reception of the driving-belt. C is the spool, upon which the cord to be covered (the core D) is wound. This spool is fitted upon a transverse rod, *d*, and turns loosely thereon. The cord D is from the spool C drawn forward around a sleeve, *e*, that turns loose on another transverse rod, *f*, and then upward through a stationary vertical tube, E. Above the upper end of the tube E is suspended, from a yoke, *g*, of the frame A, a pulley, *h*, over which the cord D is placed, and thence conducted backward over a cone-pulley, *i*, on a transverse shaft, F, and downward upon the receiving spool G, that turns loose upon a transverse rod, *j*. Motion is imparted to the receiving-spool G by friction, against the edges of its flanges from a friction-roller, H, which receives rotary motion by a band, *l*, from the main shaft B. Directly above the top end of the tube E, and before reaching the pulley *h*, the cord D passes between two friction-rollers, *m m*, that hang in arms projecting from the tube E, and are, by a suitable spring or springs, crowded together to bind against the cord with suitable force. Their object is to keep the cord steady and prevent it from twisting and bending while subjected to the action of the covering fibers. I is a sleeve,

placed around the tube E, and provided with a pulley at its lower end, which receives a belt, *n*, from the shaft B, and is thereby revolved. The upper end of the rotating sleeve I carries a disk, *o*, that has projecting-pins for the reception of the bobbins J J, which carry the yarn or fibrous material wherewith the cord is to be covered. Posts *p p* projecting from the plate *o* carry at their upper ends a plate or cross, *r*, on which the device for guiding the cord D are arranged.

— It will be seen in Fig. 1 that the surface of the plate *r* is somewhat above the tube E, and nearly in line with the action of the friction-rollers *m m*. The yarn from the bobbins J is passed through eyes *s s* at the edge of the plate *r*, around friction-rollers *t t*, on top of *r*, and through eyes *u, v*, and *w*, as indicated in fig. 5; thence through perforated screws *w* to the cord D. The rollers *t t* receive friction by springs bearing on their surfaces. The eyes *u u* and *s s* are formed by wires that are affixed to the rotary plate *r*. The eyes *v*, however, are formed on swinging wires L, that serve to hold wire-levers M M, pivoted to the top of the disk *o*—that is to say, the upper ends of the levers M are confined under the middle portions of the wires L as long as by the tension of the covering yarn, the eyes *v* are held in line with the eyes *u u*. When, however, one strand of such yarn breaks, its lever L will swing aside, as in Fig. 5, allowing the lever M to swing down. The lower part of the lever M will thereby be brought in the way of a pivoted wire, *x*, which locks behind an arm, *y*, of the shipping-lever N. Whenever the wire *x* is struck by a dropped lever, M, it releases the shipping-lever, which will, by a spring, Z, be vibrated to carry the belt to the loose pulley, and arrest the machine. Thus the breaking of any one of the strands of covering material effects the instantaneous stoppage of the entire mechanism. The screws *w* are vertically adjustable to regulate the height at which the covering is applied to the cord D. I prefer to conduct two strands of the covering yarn through every screw *w*, as indicated in Fig. 5. The plate *r* also carries an arm, *a*², which bears against the cord D, just after the same has been covered, and embraces it with a wire-loop, *b*², to smoothen it and lay the fibers nicely against it. The sleeve I car-

ries a worm, d^2 , and serves thereby to turn a shaft, P, which by a belt, e^2 , turns the shaft F, and helps feeding the cord D. The belt e^2 passes around cone-pulleys, as shown, to regulate the comparative speed of the cord D. By thus regulating the motion of D it can be covered more or less, as the slower the feed the thicker will be the covering under the same speed of the shaft B. The sleeve e , on the rod f , receives friction by a weight, j^2 , which is suspended against it. Friction is or may also be applied to the spool C by a hinged plate, g^2 .

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. The combination of the rotary plate r with the loops $s s$, $u u$, and $v v$, substantially as described.

2. The combination of the levers M M with the levers L L, as set forth.

3. The combination of the shipping-lever N, having the arm y , with the wire x and levers M L, as set forth.

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