J. N. LEONARD.

Stop-Motion for Thread-Stretchers.

No. 197,519 Patented Nov. 27, 1877.

FIG. 1.

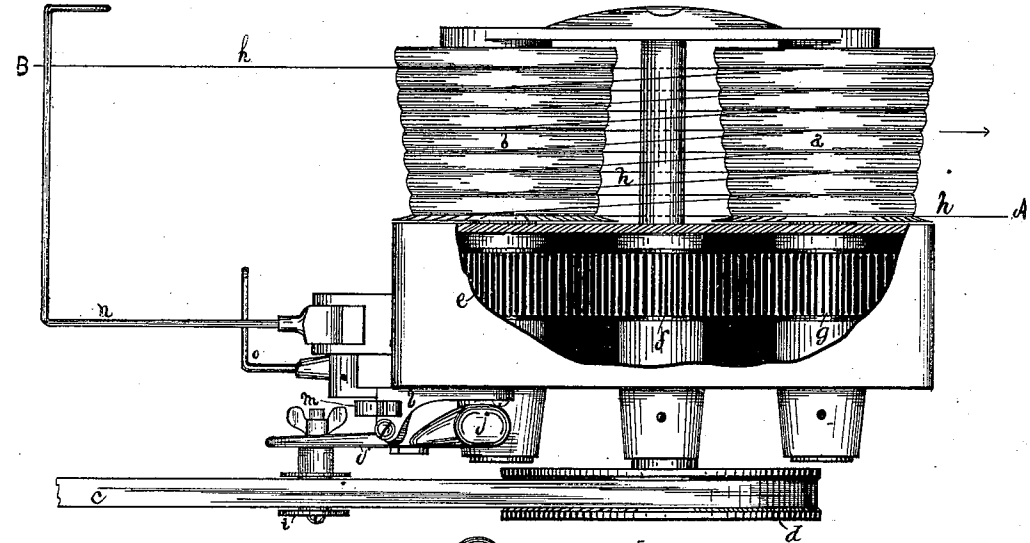
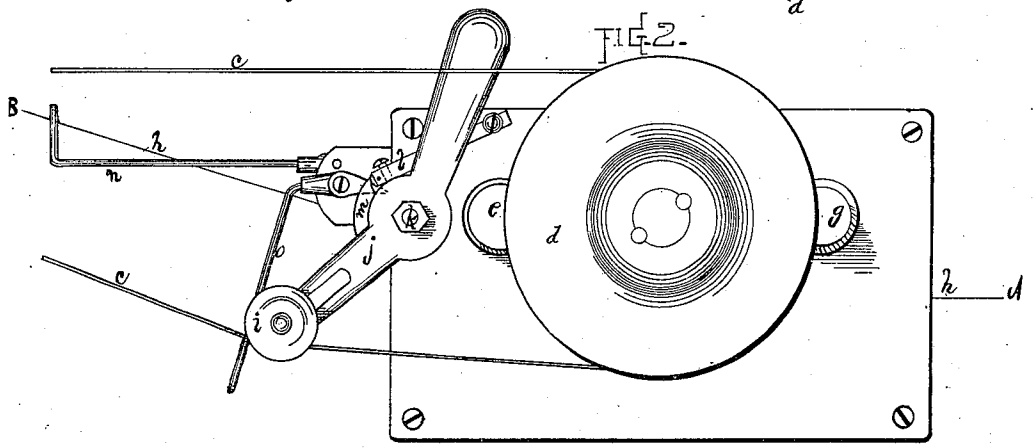


FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN N. LEONARD, OF WAREHOUSE POINT, CONNECTICUT, ASSIGNOR TO THE LEONARD SILK COMPANY, OF SAME PLACE.

IMPROVEMENT IN STOP-MOTIONS FOR THREAD-STRETCHERS.

Specification forming part of Letters Patent No. **197,519**, dated November 27, 1877; application filed September 22, 1876.

To all whom it may concern:

Be it known that I, JOHN N. LEONARD, of Warehouse Point, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements pertaining to Stop-Motions for Thread-Stretchers, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a plan view, with a part of the top of the case broken away, so as to show interior. Fig. 2 is a side view.

The invention is an automatic stopping device designed as an attachment to a machine for stretching silk thread.

I will first describe the thread-stretching mechanism and then the automatic stop.

The letters *a b* denote two cone-pulleys, rotating in the same direction, (denoted by the arrow,) being driven by the belt *c* running on the pulley *d*, actuating the intermediate gears *e f g*. The pulleys which form the cones are not common flat-faced pulleys, but are grooved or fluted. The silk *h* comes from a bobbin or the like stationed at A, runs around the smallest of the pulleys on cone *a*, thence on the under side to the corresponding pulley on cone *b*, comes up to the top of this last, and thence runs to the next larger pulley on cone *a*, and so on till it finally passes off the largest pulley on cone *b* to another bobbin or the like stationed at B. As the thread passes from one pulley to the next larger it is stretched a little, and in the aggregate largely.

I will now describe the automatic apparatus for stopping the rotation of the cone-pulleys if the thread breaks. The belt *c* is a loose belt, strained tight enough to effect rotation by the idler *i* on lever *j*, pivoted on pin *k*. It is held so strained by pivoted pawl *l*, acting on ratchet-tooth *m*. As the silk passes from cone *b* the pivoted feeler *n* lies on it. If the thread breaks this feeler falls, and, striking the pivoted tripping-lever *o*, causes it to raise the pawl *l* and free it from its engagement with the tooth *m*, so that the idler rises, releasing the strain on the belt, and allows the pulley *d*, and consequently the cone-pulleys, to stop rotating.

I claim as my invention—

In combination, the pivoted lever *j*, armed with its idler, pawl *l*, tripping-lever *o*, and feeler *n*, all substantially as described, and for the purpose set forth.

JOHN N. LEONARD.

Witnesses:

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