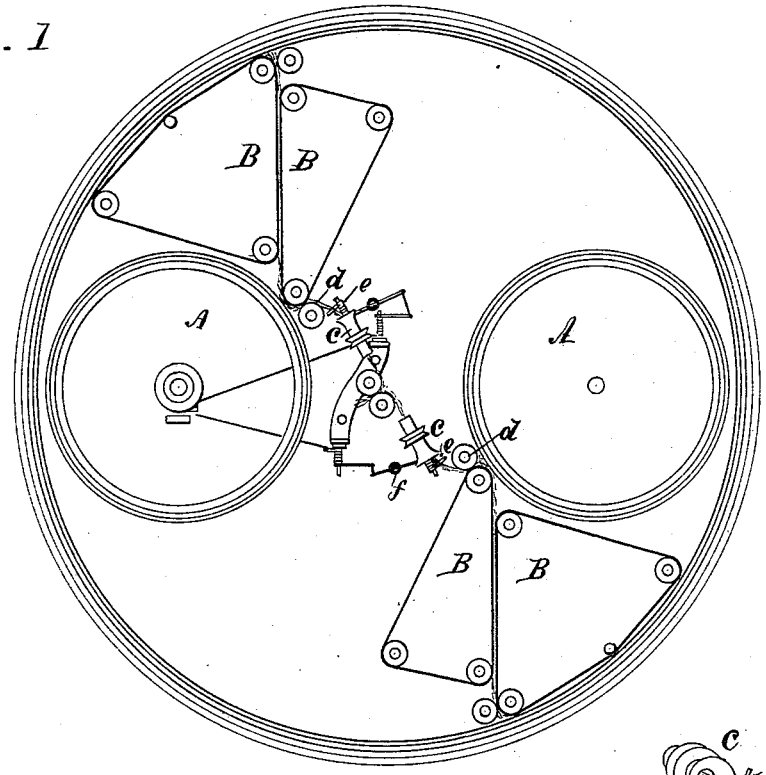
(No Model.) 2 Sheets—Sheet 1.

E. LODGE.

STOP MOTION FOR WOOL COMBING MACHINES.

No. 303,937. Patented Aug. 19, 1884.

Fig. 1



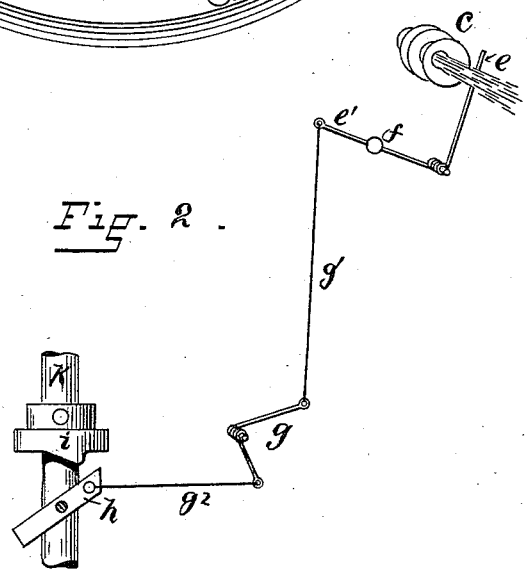


Fig. 2.

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(No Model.) E. LODGE. 2 Sheets—Sheet 2.

STOP MOTION FOR WOOL COMBING MACHINES.

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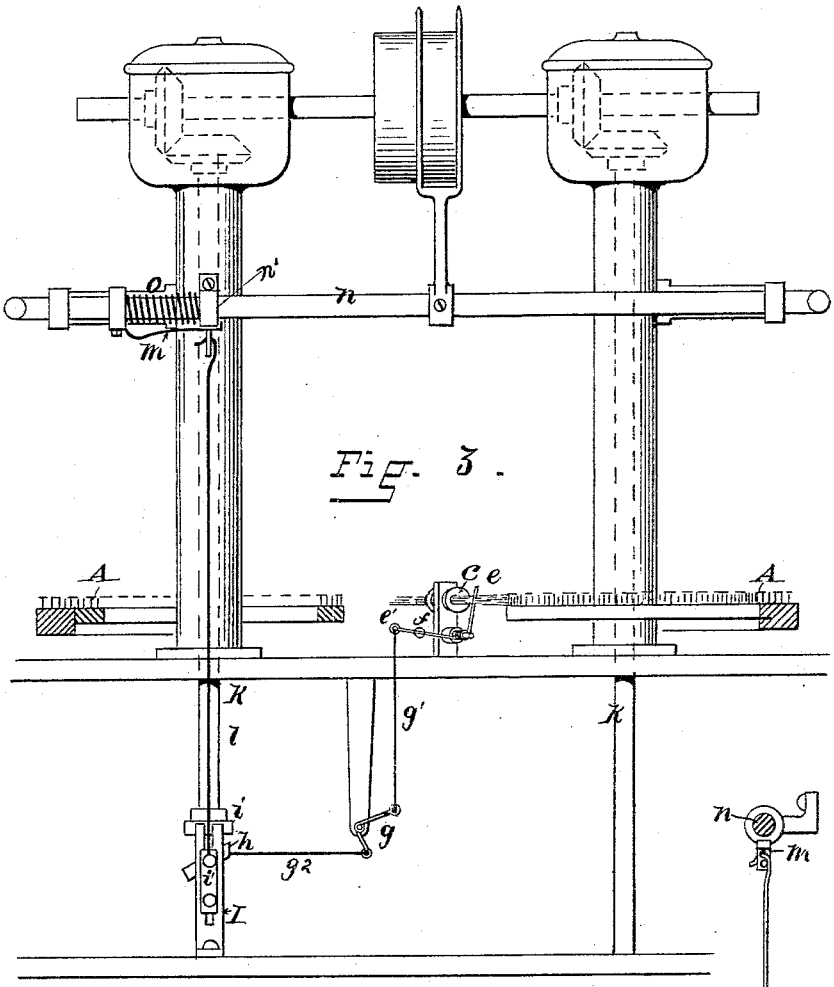

Fig. 3.

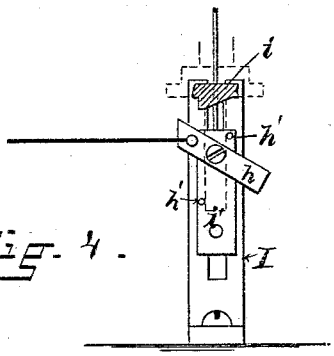

Fig. 4.

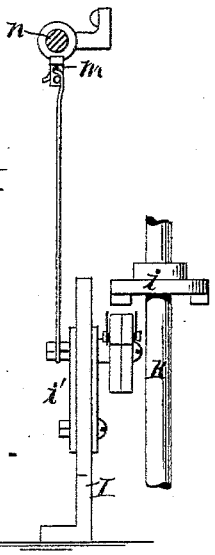

Fig. 5.

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UNITED STATES PATENT OFFICE.

EDWARD LODGE, OF GENEVA, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO JAMES A. BURNS, OF SAME PLACE.

STOP-MOTION FOR WOOL-COMBING MACHINES.

SPECIFICATION forming part of Letters Patent No. 303,937, dated August 19, 1884.

Application filed August 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD LODGE, of Geneva, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Stop-Motions for Wool-Combing Machines; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to wool-combing machines; and it consists in the peculiar and novel construction and arrangement of an adjustably-weighted lever arranged to bear against the passing sliver and connections between the lever and the shipper, whereby the breaking of the sliver will automatically operate the shipper and move the belt so as to stop the machine, as hereinafter described and claimed.

Figure 1 is a plan view of a wool-combing machine, showing the application of the stop-motion to the sliver delivered from two combs. Fig. 2 is a skeleton view of the stop-motion, showing the same in connection with the sliver and the clutch. Fig. 3 is an elevation of a portion of a wool-combing machine, partly in section, showing the connection with the belt-shipper of the clutch and stop-motion. Fig. 4 is an enlarged view of the clutch and the slide by which the shipper is released. Fig. 5 is an enlarged view of the driving-shaft, the clutch, and connection with the shipper.

In the drawings, A A are the small circular combs; B B, the aprons by which the wool is drawn and conducted from the combs. *c c* are the twisting-trumpets. *d* is the take-up roll over which the sliver passes to the twisting-trumpet *c*. Between the roll *d* and the trumpet *c* the arm *e* bears lightly against the sliver. The arms *e* and *e'* form a bell-crank lever, the arm *e'* being weighted by the adjustable weight *f*, so that the arm *e* will be held against the sliver, and when the same breaks the weight *f* will force the arm *e'* down by gravity. The end of the lever *e'* is connected with the bell-crank lever *g* by the wire or rod *g'*, and the bell-crank lever *g* with the hinged pawl *h* by the rod or wire g^2. The pawl *h* is pivoted so as to engage with the cam *i*, which is mounted upon the shaft *k*, so as to turn with it. The pawl *h* is pivoted to the slide *i'*, which is capable of a vertical motion, and is supported in the bracket I. The slide is held in the raised position by the wire *l*, the upper end of which is connected with the spring-latch *m*, by which the shipper-rod *n* is held against the coiled spring *o*. Upon one of the standards of the machine-frame is secured a latching-shoulder, *n'*, with which the upturned end of the spring-latch *m* engages, for the purpose of preventing the coiled spring *o* from moving the shipper-rod except when the latch is depressed properly, as hereinafter described.

The operation of the device is as follows: As long as the sliver is of the required strength the arm *e* bears against the same, and the pawl *h* is held in the inclined position shown, the slide *i'* being held in the raised position by the spring-latch *m*. As soon as the sliver breaks, the weight *f* depresses the arm *e'*, and through its connections with the pawl *h* raises the pawl into a vertical position, where it encounters the stops *h' h'*. (Shown in Fig. 4.) The rotating cam *i* now encounters the pawl, and the two inclined surfaces coming in contact, the slide *i'*, to which the pawl *h* is hinged, is depressed, thus drawing the spring-latch *m* below the latching-shoulder *n*, and allowing the coiled spring *o* to move the shipper-rod *n*, and with it the shipper and the belt, from the tight to the loose pulley, thereby stopping the machine. Separate pawls and connections with the lever *e* are used for each comb, so that any defect in the sliver of either comb will stop the machine.

By the use of this stop mechanism an even and uniform sliver is secured and all imperfect work and waste avoided.

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

1. The combination, with the small comb and trumpet, of a weighted lever adapted to bear against the sliver, the shaft *k*, the cam mounted upon said shaft, the bracket I, the slide *i'*, supported in said bracket, the pawl *h*, mounted upon said slide, the wire *l*, the spring-latch *m*, and the connections from the weighted lever to the pawl *h*, constructed and arranged to operate substantially as described.

2. The combination, with the lever e e' and the adjustable weight f upon the lever e', of the rod g', bell-crank lever g, and rod g^2, the bracket I, the slide i', supported in said bracket, the pawl h, mounted upon said slide, the shaft k, the cam i, mounted upon said shaft, the shipper-rod n, carrying the spring o and latch m, the shoulder n', and the rod l, constructed and arranged to operate substantially as set forth.

3. The combination, with the weighted lever adapted to bear against the sliver and the shipper-shaft, of a latch mounted upon the shipper-shaft, and connections, substantially as described, with the weighted lever arranged to permit the throw of the shipper-shaft upon the breaking of the sliver, for the purpose of automatically stopping the machine.

EDWARD LODGE.

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