(No Model.)

J. M. LINSCOTT.

STOP MOTION FOR LOOMS.

No. 263,292. Patented Aug. 22, 1882.

Fig. 1.

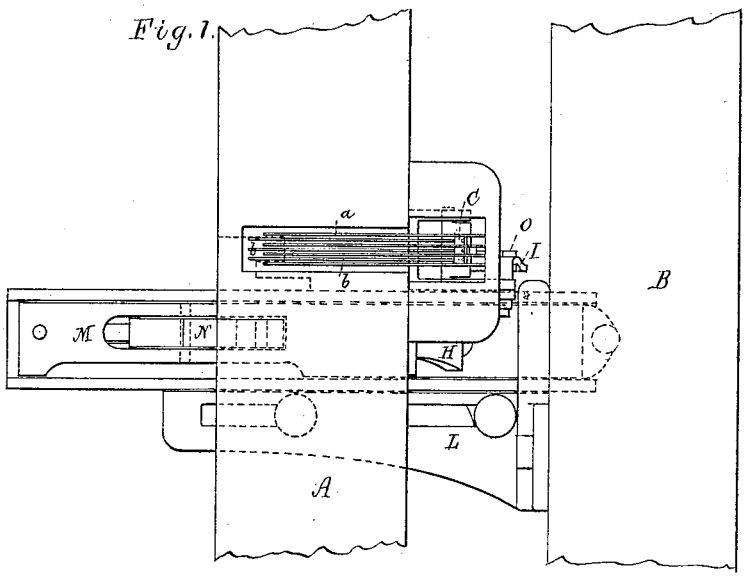


Fig. 5

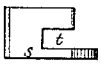


Fig. 3.

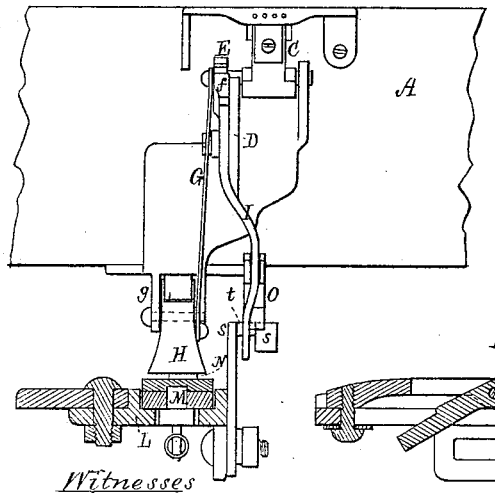


Fig. 2.

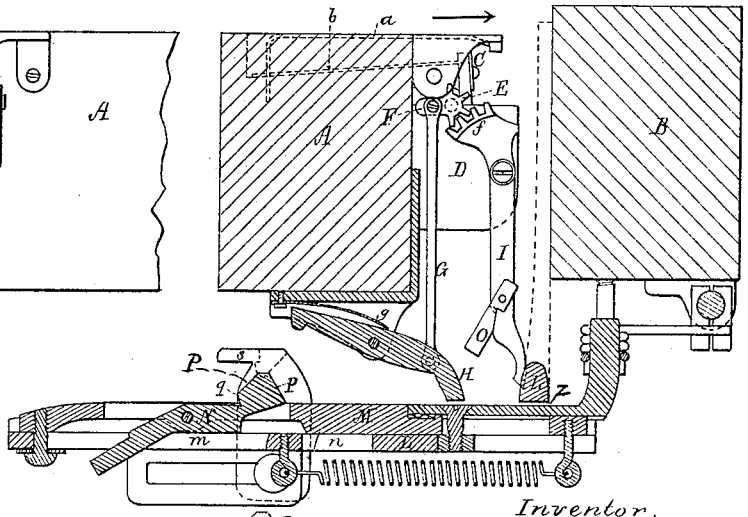
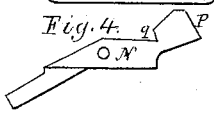


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN M. LINSCOTT, OF LEWISTON, MAINE, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HIMSELF AND LEWIS C. PECK, OF SAME PLACE.

STOP-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 263,292, dated August 22, 1882.

Application filed January 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. LINSCOTT, of Lewiston, of the county of Androscoggin and State of Maine, have invented a new and useful Improvement in Stop-Motions for Looms for Weaving Cloth; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a partial top view, and Fig. 2 a transverse section, of the lay and breast-beam of a loom with my improved stop-motion applied thereto, showing in dotted lines where the bracket L is connected to the breast-beam, and at *z* the groove in which the slider M moves. Fig. 3 is a front view of a portion of the lay, showing the bracket and slider in cross-section. Figs. 4 and 5 are views hereinafter explained.

The object of my invention is to prevent the usual looping or corrugating of the weft or filling thread by the stop-motion fork while the lay is beating up, such looping or corrugating being injurious to the cloth when woven, as is well known by weavers. Instead of the fork, while the lay is beating up, resting upon the thread and pressing it down between the bars of the grid, so as to loop or corrugate it, (the said thread,) the fork by improvement is forced upward off the thread immediately after falling upon it, and is kept off until it (the said fork) is advanced far enough to drop clear of the thread on the next fall of the fork.

My improvement relates to the kind of stop-motion described in the United States Patent No. 251,699, dated January 3, 1882, and granted to Elwood M. Cole, the nature of such improvement being defined in the claims hereinafter presented.

Before specifying the additions to or changes I have made in the stop-motion of the said Cole, I will describe the essential parts of such stop-motion to which my invention specially relates.

In the drawings, A denotes the race-beam of the lay, and B the breast-beam of a loom. Extending nearly across the top of the lay is the stationary grid *a* to receive the prongs *b* of a fork, C, provided with journals and pivoted within a support-piece or bracket, D, fastened to the front face of the lay, the same being arranged so as to admit of the fork being turned upward and downward in a vertical plane. Fixed on one of the journals of the fork is a gear or toothed sector, E, from which an arm, F, projects toward the lay in manner as shown. This arm near its free end is pivoted to a connecting-rod, G, that extends upward from a tripping-pawl, H, pivoted to a bracket, *g*, affixed to the race-beam. The sector E engages with another toothed sector, *f*, constituting the upper and shorter arm of a lever, I, formed and arranged as shown, and fulcrumed to the support-piece D. Attached to and projecting from the breast-beam is a bracket, L, carrying a slider, M, adapted to slide rectilinearly in the bracket. Within and to this slider is fulcrumed a catch-lever, N, formed as represented in side view in Fig. 4, the bracket being slotted, as shown at *m* and *n*. The lay in going back carries the lower arm of the lever I against a projection, *s*, supported by the bracket L, so as to cause the fork C to be tilted high enough for the shuttle at its next throw to pass under the prongs of the fork.

I have thus described generally the principal parts of the said patented stop-motion of the said Elwood M. Cole. For the remainder of it and for an explanation of its mode of operation reference may be had to the specification and drawings of such patent. The additions or change I have made in such stop-motion may be thus explained. In the first place I have modified the projection *s* by constructing it with a flat and rectangular upper surface, and provided such projection with a notch, *t*, arranged in it in manner as shown in top view in Fig. 5. Secondly, I have jointed to the lower arm of the lever I a gravitating arm, O, which by its weight falls against the lever, and is stopped thereby from falling farther forward or toward the lever, such arm being free to move in the opposite direction. The lower arm of the lever I, shaped as represented, is arranged to play within the notch *t*, the gravitating arm O being arranged to move over and upon the projection *s* and somewhat aside of the notch *t*, without falling into it. Further-

more, I have added to the catch *q* of the lever N an inclined projection or cam, P, which is extended up from such lever N and with respect to the said catch in manner as represented.

From the above it will be seen that while the lay is beating back the gravitating arm O will meet the projection *s* before the lever I does, and consequently the fork C will be thrown up and kept raised while the said gravitating arm is moved along against and across the projection, the rise of the fork thus taking place sooner than it would were there no such gravitating arm to the said lever. By this construction the fork is raised before the lay comes to the rear end of its beat, and hence is drawn out of the way of the shuttle, which is thrown as the lever I strikes against the projection *s*.

The lever I on being moved along passes into the notch *t* and against its bottom, and holds up the fork for the shuttle to pass without contact therewith. At the next advance of the lay forward in the direction indicated by the arrow, Fig. 2, should there be a filling or weft thread on and across the grid, the fork will rest on such thread and the tripping-pawl H, and, being held above its lowest position, will be carried against and over the inclined projection or cam P. In consequence thereof the tripping-pawl will be forced upward by the said cam, whereby the fork C will be moved and held upward off the thread until the said fork may have advanced far enough to fall clear thereof, which it will on the tripping-pawl passing off the cam P; but should there be no filling or weft thread on the grid the tripping-pawl will be permitted to descend low enough to meet the catch *q* of the lever N, and by its action against such will cause a forward movement of the slider M, and consequently a stoppage of the loom to take place.

What I claim as my invention is as follows, viz:

1. The gravitating arm O and the lever I, in combination with the fork and intermediate connecting devices, and the stationary notched and flat projections *s* and the bracket L, substantially as described.

2. The fork C, provided with journals and having an arm, F, the lay, and its bracket, in combination with the tripping-pawl H and its connecting-rod G, lever N, having the cam P, and the slider M and its bracket L, all constructed and arranged as and for the purpose set forth.

3. The fork C, pawl H, lever I, gravitating arm O, and their intermediate connecting devices, in combination with the stationary and notched projections *s*, catch-lever N, having cam P, and slider M and its bracket L, all combined and arranged as set forth.

JOHN M. LINSCOTT.

Witnesses:
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E. B. PRATT.