H. D. Hunt,

Looms.

No. 69,673. Patented Oct. 8. 1867.

Fig. 1.

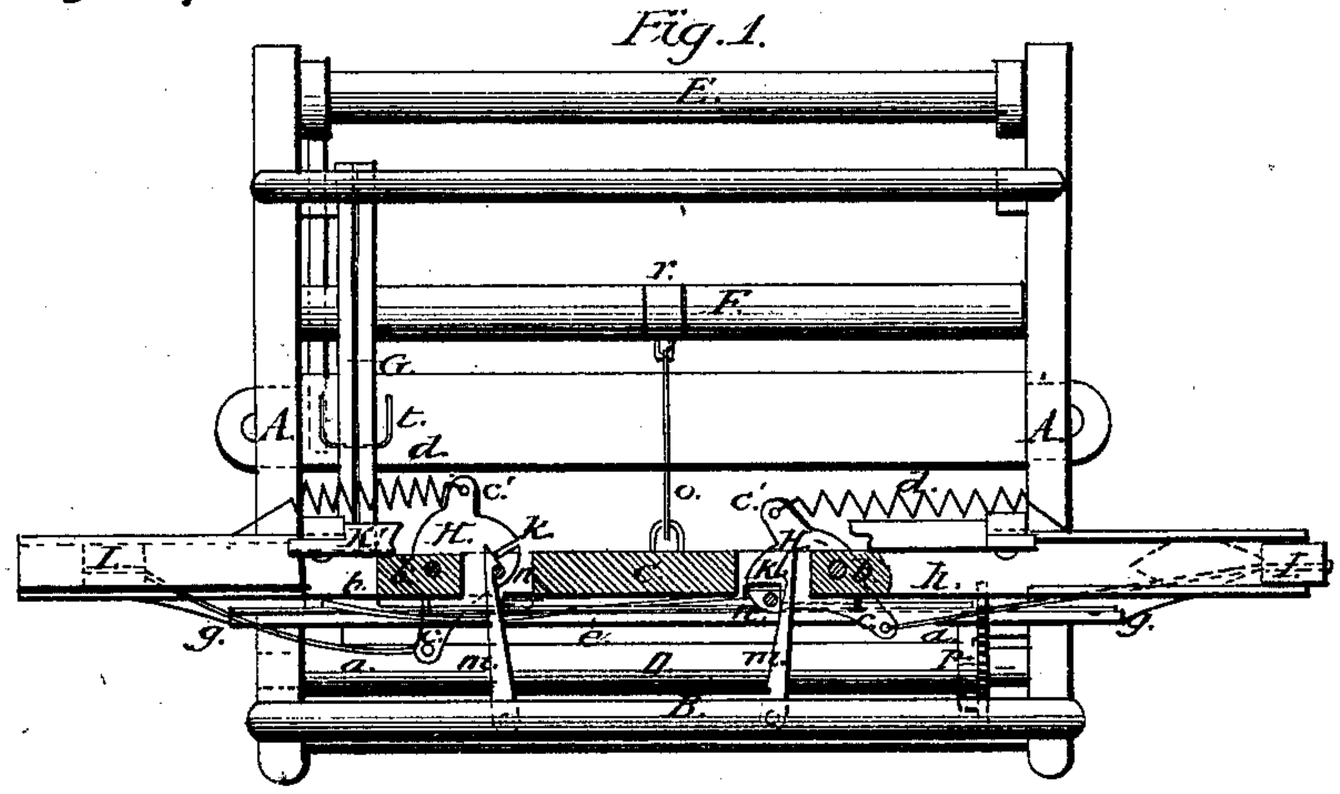


Fig. 2.

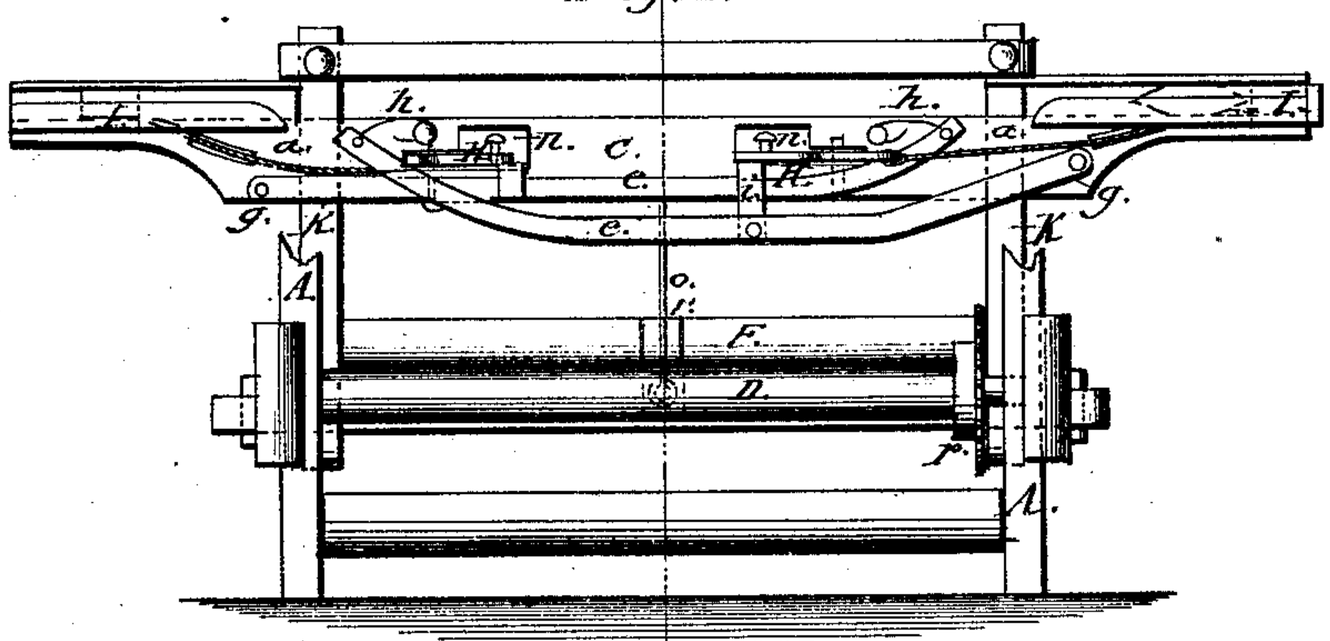
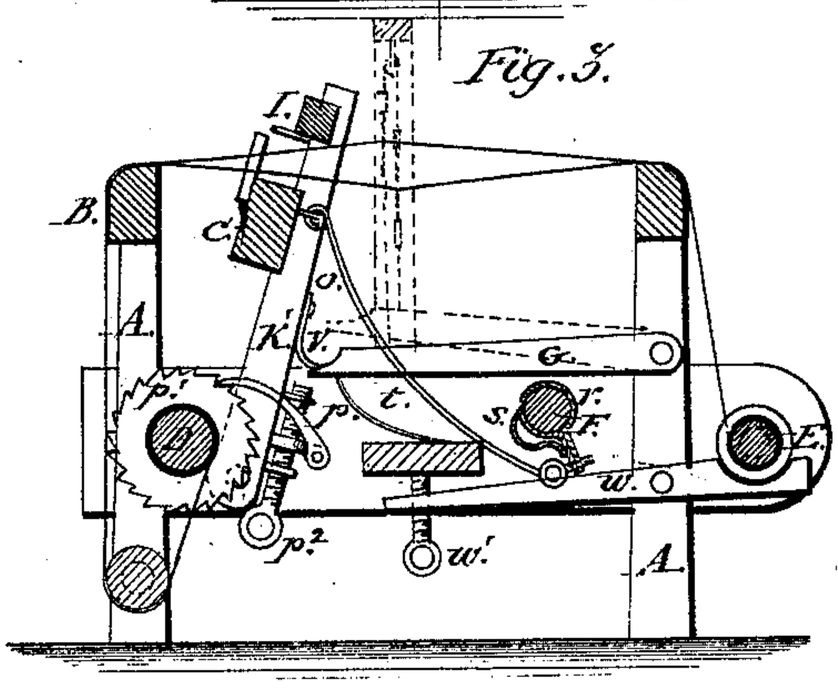


Fig. 3.



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HENRY DEWAIN HUNT, OF DANVILLE, ILLINOIS.

Letters Patent No. 69,673, *dated October* 8, 1867.

IMPROVEMENT IN HAND-LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, H. D. HUNT, of Danville, in the county of Vermillion, and State of Illinois, have invented a new and useful Improvement in Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of a loom with a part of the lay removed to show one part of my invention.

Figure 2 is a front view of the lay with the breast-beam removed, showing my improvements.

Figure 3, a vertical cross-section, taken in the line *x x*, fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in hand-looms, and consists in connecting movable plates and levers attached to the lay with the breast-beam and shuttle-drivers in such manner that the movement of the lay shall operate on the drivers to throw the shuttle; and also other devices connected with the take-up of the cloth-beam, and the working of the treadles and yarn-beam, hereinafter more particularly described.

A represents the frame of a common hand-loom, B the breast-beam, C the lay, D the cloth-beam, E the yarn-beam, F the treadle-cam shaft, and G the treadles. In the lay C, on each side of the middle, a segmental-plate lever, H, is pivoted in a slot in the lay at *b*, fig. 1, and having on opposite sides projecting arms *c c'*, one of which arms *c* projects through the slot on the front side of the lay, and is connected by a cord, *a*, with the drivers I to throw the shuttle; and the other arm *c'*, which projects from the slot on the back side of the lay, is connected with one end of the spiral springs *d*, the other end of which springs is fastened to the frame of the loom, the office of which is to draw the segmental-plate levers H quickly when it is tripped, as hereinafter described, and thus act on the drivers I to throw the shuttle to the opposite side. On the front side of the lay are two long curved levers *e e*, extending from side to side, pivoted at opposite ends to the lay at *g g*, and connected at their other ends to springs *h h*, fastened to the lay. Each of the levers is provided with an arm, *i*, that projects upward to catch in a nick, *k*, in the side of the segmental-plate lever H when it is drawn through the slot by the hook *m* attached to the breast-beam B, and catching on the knob *n* when the lay is pushed forward. The levers *e e* are constructed and arranged to operate in such a manner that they shall alternately project the arms *i i* into the nicks *k k* in the segmental levers H H by the forward motion of the lay, to hold them until the return or back movement of the lay shall trip the arms and release the segmental levers, when they are drawn back by the springs *d d* to operate on the drivers I, as hereinbefore described, thus, by the motion of the lay, driving the shuttle automatically instead of employing the right hand of the weaver to do it in the usual way.

It will be observed that when the lay is pushed forward one of the hooks *m* will catch on the knobs *n*, and draw the segmental lever H through the slot to the front side of the lay, when the back edge of the segmental lever will bear upon one of the long levers *e*, and depress its end connected with the spring *h*, by which depression of the lever the arm *i* on the same lever will be withdrawn from the nick *k* in the other segmental lever H to trip it, and allow the spiral spring *d* to draw it back quickly, and operate the driver with which it is connected; and thus by every movement of the lay forward and back this operation will be repeated alternately by the segmental levers H and the long levers *e e* to drive the shuttles in the opposite boxes automatically.

At the lower end of one of the swords K is attached an adjustable pawl, *p*, that works the ratchet-wheel p^1 on the cloth-beam D. The pawl *p* is adjusted by a hand-screw, p^2, to regulate the take-up of the cloth on the beam. On the back side of the lay C is attached a rod, *o*, connected with a metal collar, *r*, placed on the treadle-cam shaft F to move it around a certain distance by means of the pawl *s*, working in a slot in the collar when the lay C moves back to the breast-beam. The treadles G are held up in position by an inclined spring, *t*, under their ends when the depresser *v* on the sword K′ is drawn from their points by the back movement of the lay. Under the yarn-beam E is placed a brake, *w*, curved to fit it, which is adjusted by a set-screw, *w'*, to tighten the beam and regulate the tension of the warp, instead of the ordinary weight and pulley.

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

1. The segmental levers H, pivoted to the lay C, in combination with the long curved levers *e*, the hooks *m*, the springs *d*, the cords *g*, and the drivers I, constructed, arranged, and operating substantially as and for the purposes herein described.

2. The adjustable pawl *p* and screw p^2, connected with the lathe, and in combination with the ratchet-wheel p^1 on the cloth-beam D, arranged and operating as and for the purpose specified.

The above specification of my invention signed by me this 11th day of March, 1867.

HENRY DEWAIN HUNT.

Witnesses:

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