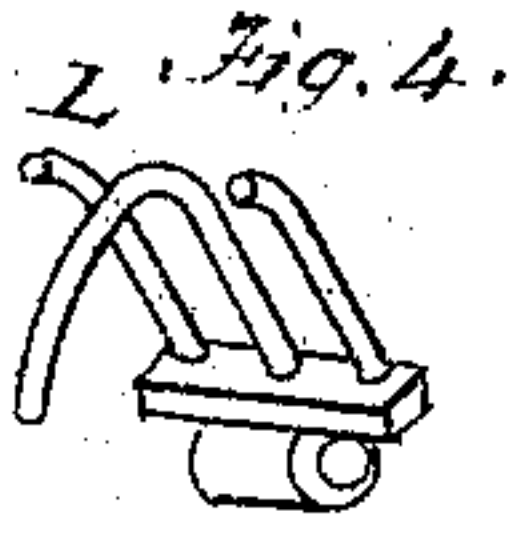
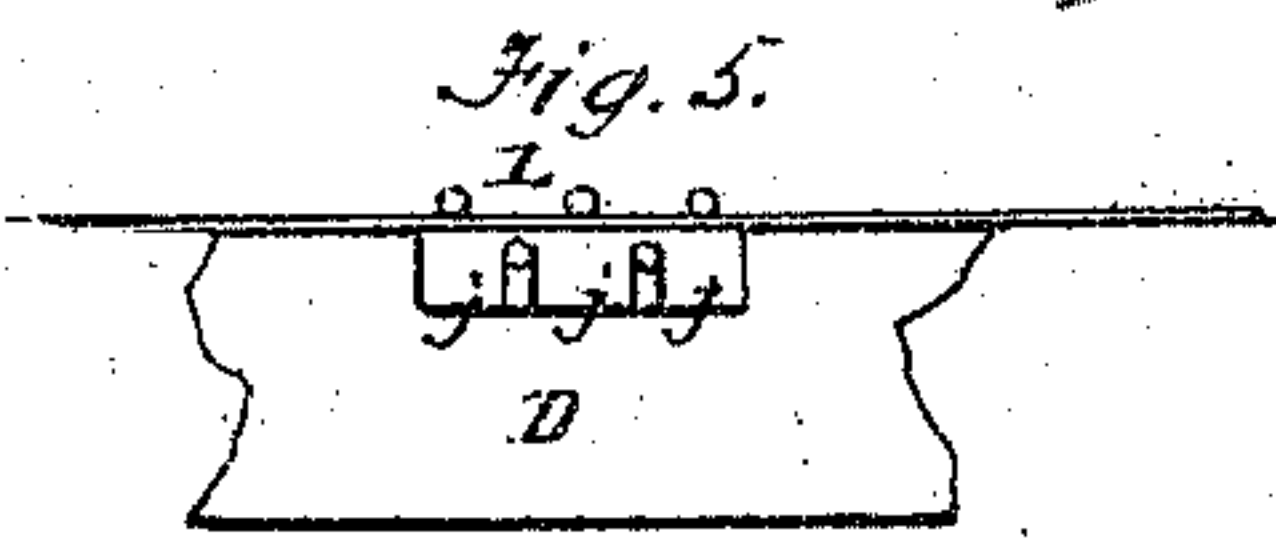
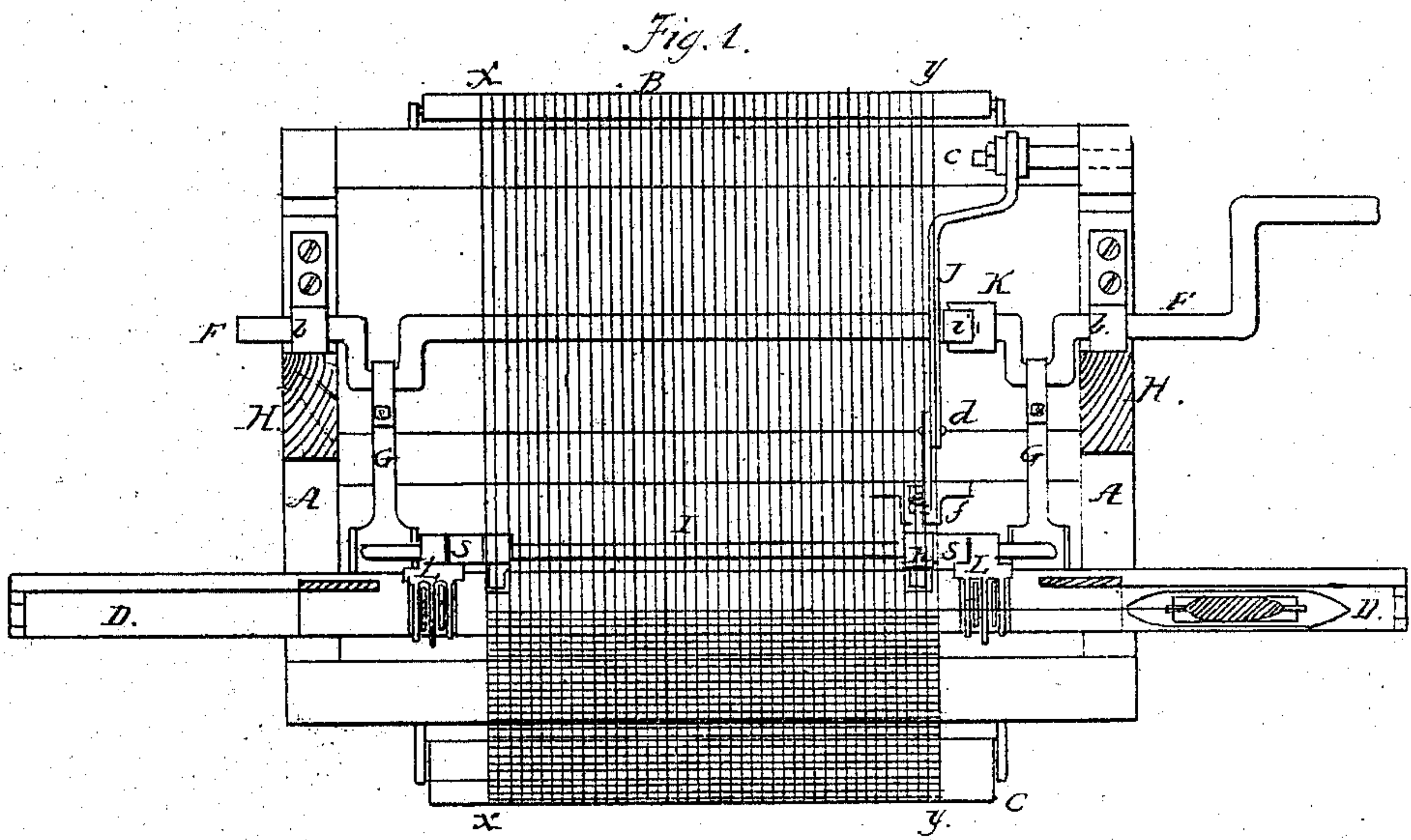
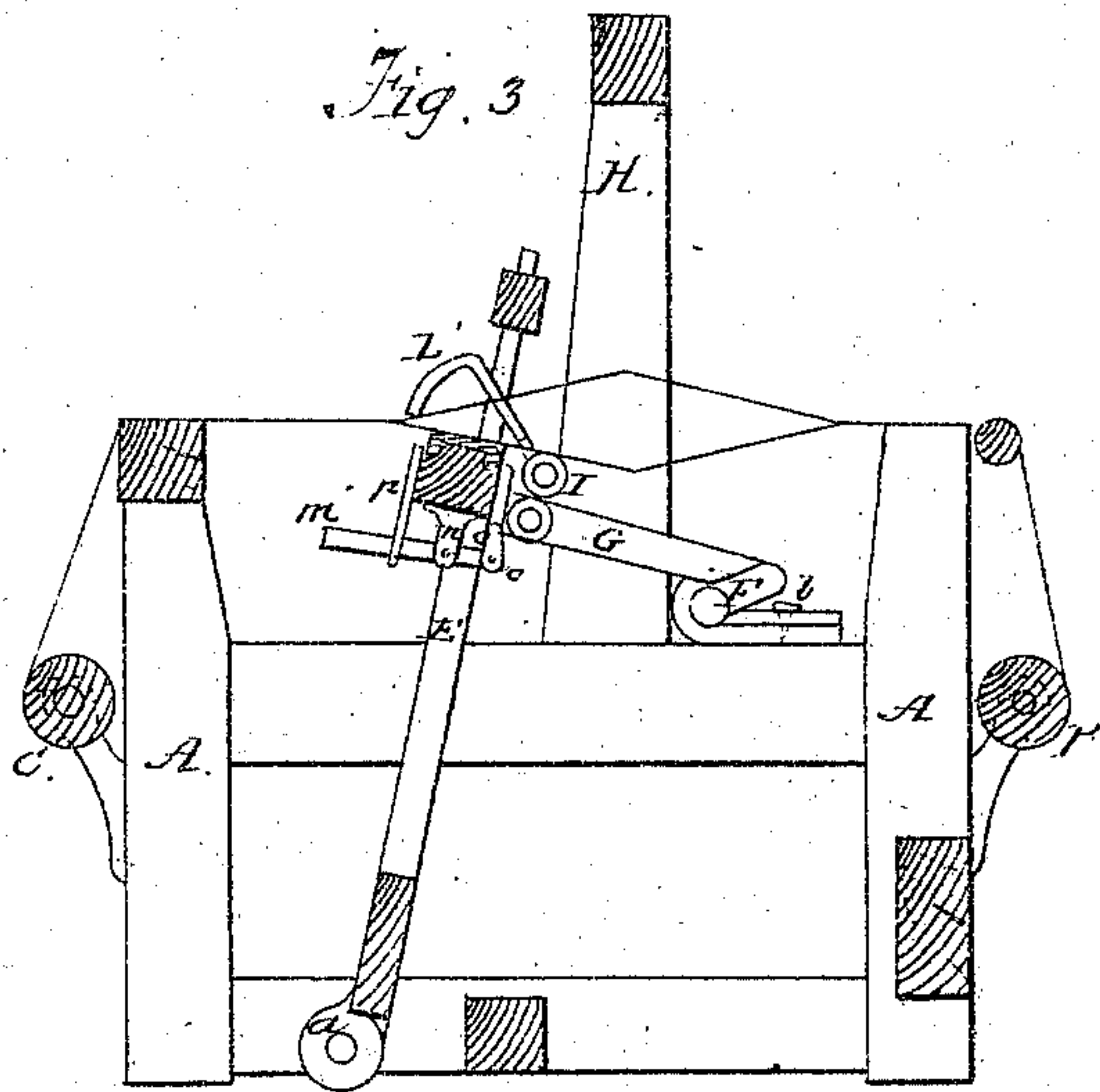
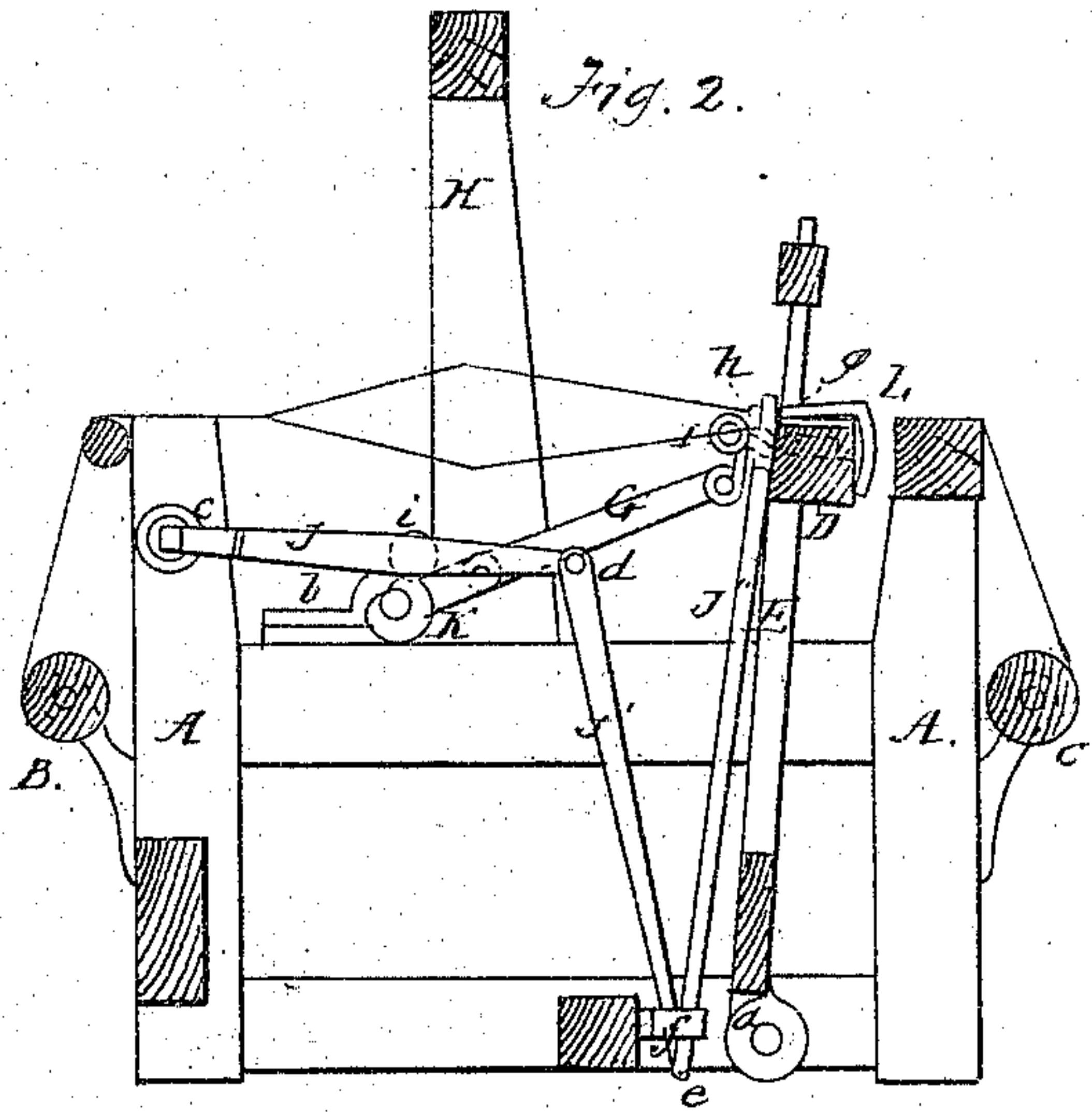


J. C. Fiske,
Stop-Motion for Looms.

N^o 75, 888.

Patented Mar. 24. 1868.



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Letters Patent No. 75,888, dated March 24, 1868.

IMPROVEMENT IN WEFT STOP-MOTION FOR LOOMS.

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

Be it known that I, JOSEPH C. FIFIELD, of Lowell, in the State of Massachusetts, have invented certain new and useful Improvements in Stop-Motions for Looms, of which the following, with the drawings, is a full description.

Figure 1 is a top view.

Figure 2 is a section through the line Y Y, looking from left to right.

Figure 3 is a section through the line X X, looking from right to left.

Figure 4 is a view of the finger-device.

Figure 5 is a section of shuttle-race and fingers, with yarn of shuttle unbroken.

Figure 6 is a section of shuttle-race and fingers, with shuttle-yarn broken.

A A represent the frame of a loom; B, yarn-beam; C, cloth-beam; D, shuttle-race; E, the lay, pivoted at *a*; F, the crank-shaft, running in boxes *b*; G, straps from the cranks to the lay, for operating the same; H, the position of the harness; I is a rod in bearings or boxes *b b*, attached to the shuttle-race on the rear upper side. J J' J'' are a series of levers, J being pivoted to the inside of the frame at *c*, and to J' at *d*. J' is pivoted to J'' at *e*, the upper end of J'' passing up to and resting against the rear of the shuttle-race. *f* is a projecting rectangular hollow bracket, fastened to a cross-beam of the frame, at the bottom thereof, through which the lower ends of J' J'' project, and which keeps them in position as they rise and fall. At the upper end of J'' is a small longitudinal slot, *g*, from front to rear. *h* is a finger upon the rod I, taking into the slot *g* of the lever-arm J''. K is a cam upon the crank-shaft, and *i* a friction-roller, attached to the lever-arm J, and resting upon the cam K. L is a finger-device, attached to the rod I, and moving with it. *j j j* are depressions in the top of the shuttle-race, into which the fingers of L fall when the shuttle-yarn is broken. *m m'* constitute a lever, *m* being pivoted to *m'* at *o*, and the fulcrum being at *n*, upon a projection underneath, and attached to the shuttle-race at *n*. *p* is a plate, attached to the front of the shuttle-race, and projecting downwards, with a slot in it, through which *m'* passes, and which keeps it in place. When the fingers of L are above the surface of the shuttle-race, *m m'* is stationary. When, however, these fingers fall into the slots, or recesses, or depressions *j j j*, a point or finger, *l*, attached to the rod I, falls upon *m*, and, forcing it downward, throws *m'* upward.

The operation is as follows: When the lay or shuttle-race is thrown back, the cam K raises the lever-arm J and the upper end of the arm J''. The slot *g*, acting with and upon the finger *h* of the rod I, raises it, and, by so doing, raises the finger-device L. When L is raised, the shuttle passes, and its thread is laid along upon the top of the bars or projections between the depressions *j j j*, as in fig. 5, and the lay beats up. So long as the thread remains unbroken, the fingers of L, as the lay beats up, fall and rest upon this thread, and the work goes on; but, should the shuttle-thread become broken, the fingers of L will fall down into the depressions *j j j*, as in fig. 6, and the point *l*, striking on *m*, will depress it, and raise the end of lever *m'*, which, projecting forward, will, when so raised, strike the proper lever-device or mechanism for unshipping the belt, or otherwise stopping the motion of the loom.

This is a stop-motion when the shuttle-thread breaks, and is peculiarly adapted to fancy weaving, where several shuttles are used. The middle finger of L is made long, and bent over, so as to prevent the thread of any but the shuttle immediately in use from getting under and entangling.

What I claim, and desire to secure, therefore, is—

1. The weft stop-motion mechanism, constructed, arranged, and operating, as to its several parts, in the manner and by the means described, in combination with the lay, as set forth.
2. The finger-device, constructed and arranged in the manner and operated by the means described.
3. The combination, with the lay, of parts L, *n*, *m*, and *m'*, when constructed and arranged as and for the purposes set forth.

In testimony whereof, I have hereunto subscribed my name.

JOSEPH C. FIFIELD.

Witnesses:

T. S. SMITH,
W. M. PARKER.