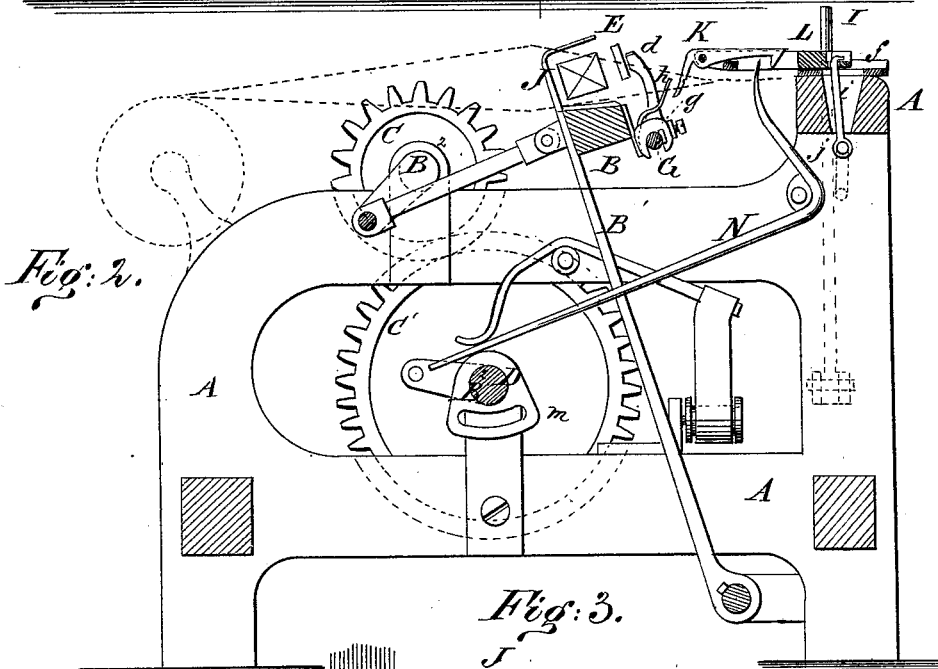
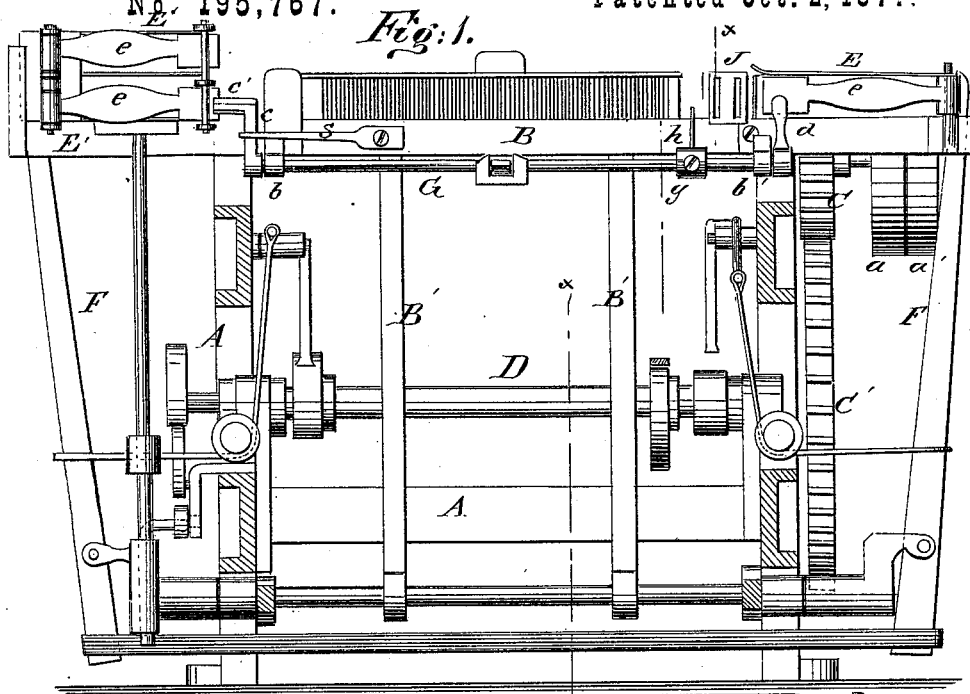


J. MEGSON.
STOPPING-MECHANISM FOR LOOMS.

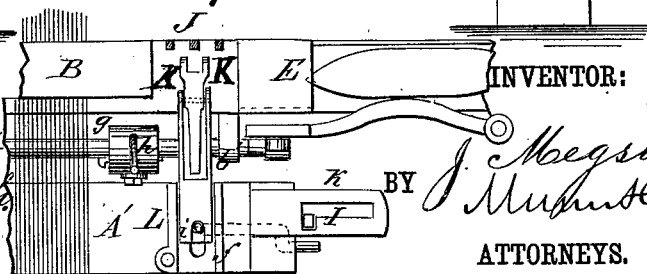
No. 195,767.

Patented Oct. 2, 1877.



WITNESSES:

Cmas. Nida.
J. H. Scarborough.



INVENTOR:

J. Megson
BY *M. M. M. M.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN MEGSON, OF SOUTH ADAMS, MASSACHUSETTS.

IMPROVEMENT IN STOPPING MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **195,767**, dated October 2, 1877; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, JOHN MEGSON, of South Adams, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Fork-Clearer or Stop-Motion for Looms, of which the following is a specification:

This invention has relation to looms, and especially to those looms which are designed for weaving figured fabrics.

My object is to stop the motion of a loom in the event of the weft or filling running out or breaking, if such motion of the loom is permitted by the fork being operated by the end of the thread which has been left by the shuttle. Such weft or thread permits the motion of the loom to continue in two ways, viz., by getting entangled on the fork and also by lying in the box in such a position as to cause the fork to move. In both cases the loom will run as if there was filling in the shuttle, and if more than one kind of filling is being used an imperfect pattern will be produced, or it will be necessary to adjust the pattern-chain.

In the case referred to, when the thread catches on the fork, the new attachment breaks it off, and when it lies in the box it slackens it, taking away its resistance to the fork.

In the annexed drawings, Figure 1 is a front elevation of some of the working parts of a power-loom, partly in section, showing my fork-clearer applied on the protection-rod. Fig. 2 is a longitudinal section through the loom, taken in the plane indicated by dotted lines *x x*, Fig. 1. Fig. 3 is a top view in detail.

Similar letters of reference indicate corresponding parts.

The letter A designates the frame of the loom; B, the lay. B¹ B¹ are arms connecting the lay with an oscillating shaft located at the bottom of the loom-frame. The lay receives vibration from cranks on the main driving-shaft B² acting through the medium of pitmen-rods, in the usual manner.

The shaft B² carries on one end fast and loose belt-pulleys *a a'*, and a pinion spur-wheel, C, which engages with a large spur-wheel, C', on a horizontal cam-shaft, D.

The right-hand end of the lay has a shuttle-box, E, applied to it, and at the opposite end

of the lay are two vertically-movable shuttle-boxes, E' E', which are mounted on a rod that receives endwise movements from cams constructed and acting through connections in the usual well-known manner.

The picker-staves F F are arranged and operated as usual, and the shuttles are of the well-known kind.

G designates the protection-rod, which is free to oscillate in eye-bearings *b b'*, fixed to the front side of the lay B. On one end of this rod is an arm, *c*, having a V-grooved head, *c'*, on it, and on the opposite end of this rod is an arm, *d*. A spring, *s*, presses the arms *c d* against the flat heads of the bowed and hinged tongues *e* of the shuttle-boxes, and holds these heads against the boxes, as shown in Fig. 1.

On this protection-rod I secure by a set-screw a saddle, *g*, to which is suitably fastened a curved finger, *h*, which extends upward and forward. This finger is thrown down out of the way when a shuttle is in either one of the boxes by the said shuttle pressing out the end of one of the tongues, *e*, against one or the other of the arms on the ends of the protection-rod G.

At the right-hand end of the reed is the upright slotted guide J, which is fixed to the lay in line with the fork K, which is pivoted to the end of a slotted holder, L, and is constructed with a hook on its longest arm. (Shown in Fig. 2.) The holder is applied between guides on a block, *f*, which is secured rigidly to the breast-beam A', and it is attached to a hook formed on the upper end of an arm, *i*. The arm *i* is free to vibrate forward and backward, and it is secured to a shaft, *j*, under the breast-beam. One end of the shaft *j* is extended through the right-hand cheek of the frame A, and is formed with a crank on its end, as shown in Fig. 3, and in front of this cranked end is an arm, I, which is acted on by a spring to throw it outward. This arm is extended up through an L-slot in a plate, *k*, and it has combined with it, in a suitable manner, means for shifting the main driving-belt.

When arm I is in the position shown in Fig. 3, the driving-belt will be on the fast pulley *a*, and the block *f* will be advanced toward the lay. Should anything occur to press the block

with its fork in the opposite direction, the cranked end of shaft *j* will cause arm *I* to shift the belt and stop the motion of the loom.

The curved finger *h* is vibrated as the shuttles enter and leave the boxes, and it moves back and forth with the lay. When a shuttle leaves a box during the back stroke of the lay, the finger *h* rises, so that on the return of the lay this finger is in a suitable position for breaking a thread on the fork.

A bent lever, *N*, which has its fulcrum on a stud fixed to the right-hand cheek of the frame *A*, engages with the hooked end of the fork *K* at a proper time, and moves back the block *f* with its fork. Lever *N* is actuated by means of a single-throw cam, *m*, on the shaft *D*.

The operation of my fork-clearer is as follows: The curved finger is placed on the protection-rod, between the edge of the web and the weft-fork, moving back and forth with the lay. The end of the finger is a little higher than the edge of the cloth when the shuttle is out of the box, and, when the weft has caught

on the fork and the reed is close to the cloth, the finger will be near the breast-beam. As the lay is thrown fully back, the finger passes under the thread that has been caught on the fork and is just back of it, while the shuttle has left the box. The end of the finger is then caused to rise high enough to catch the thread and break it, the lay then returning to beat up the weft.

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

The combination, in a loom having a single shuttle-box on one side and two or more on the other, of the protector-rod *G*, having the finger or fork clearer *h* and swell-fingers, with the fork *K*, and mechanism for operating the same, as and for the purpose specified.

JOHN MEGSON.

Witnesses:

JOHN FIRTH,
CHARLOTTE MEGSON.