(No Model.)

F. O. TUCKER.

Stop Motion for Looms.

No. 239,354. **Patented March 29, 1881.**

Fig. 1.

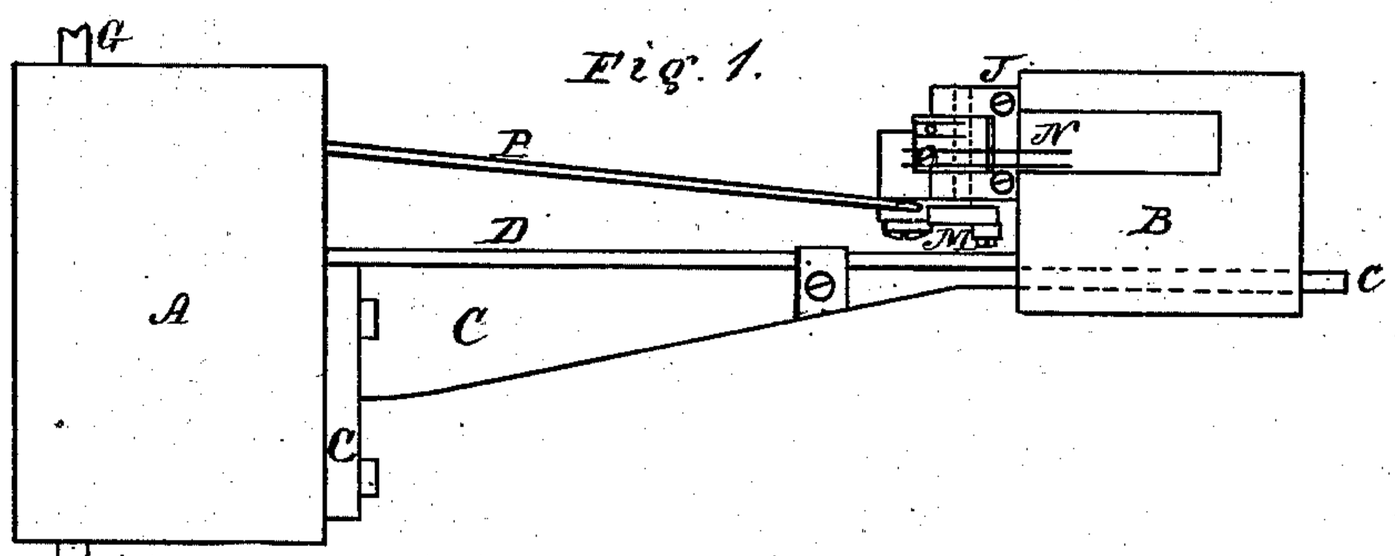


Fig. 2.

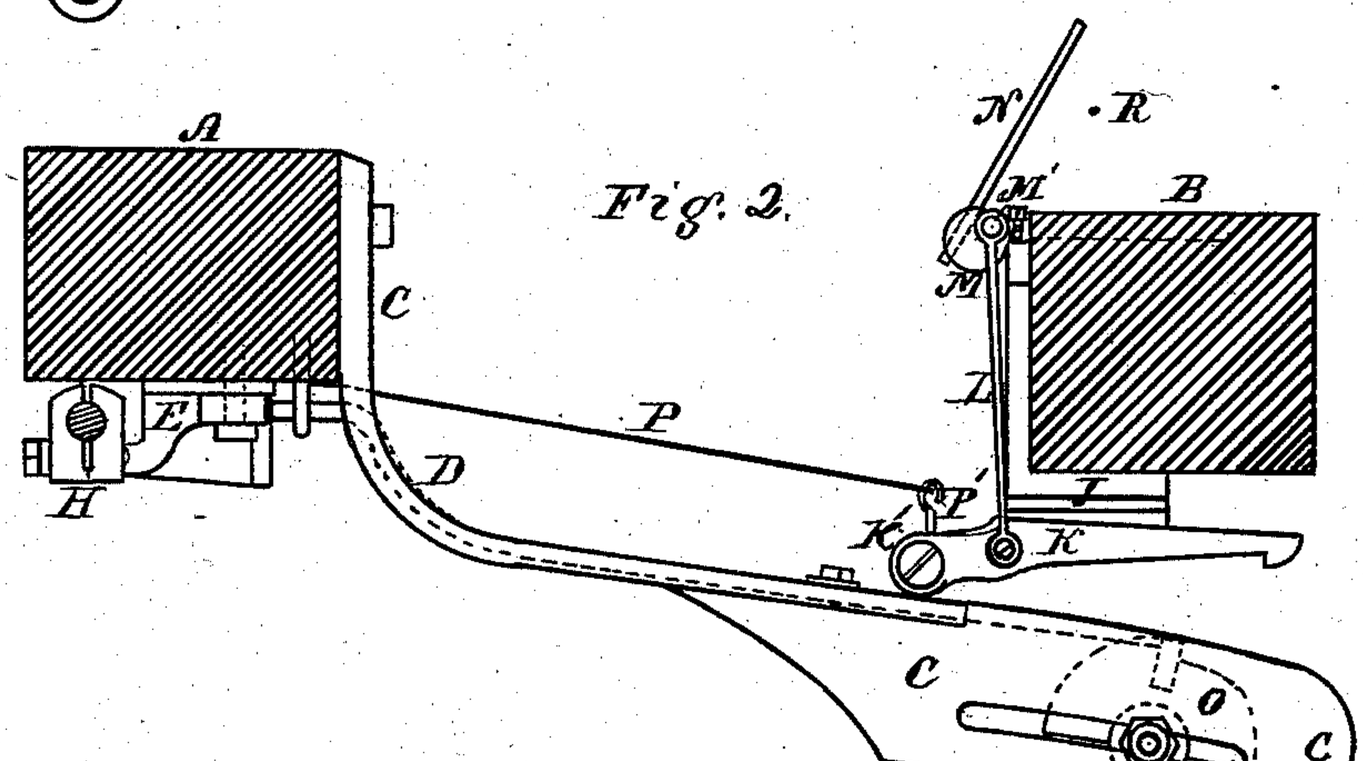
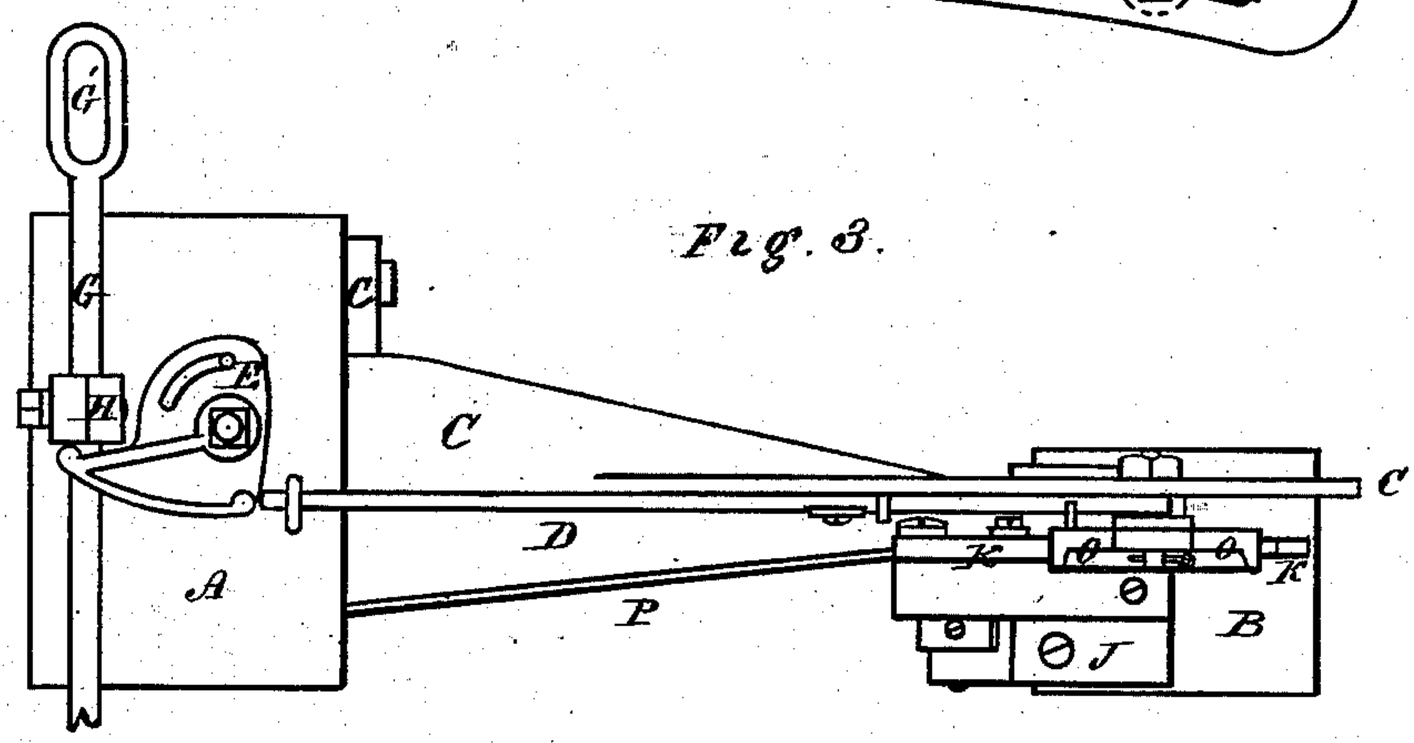


Fig. 3.



Witnesses.

Clarence K. Wooster.

Wilmot Horton

Inventor.

Frederick O. Tucker

by Thos. G. Ellis, attorney

UNITED STATES PATENT OFFICE.

FREDERICK O. TUCKER, OF HARTFORD, CONNECTICUT.

STOP-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 239,354, dated March 29, 1881.

Application filed August 21, 1880. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK O. TUCKER, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Stop-Motions for Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My improvement relates to mechanism to be applied to a loom for the purpose of stopping its movement whenever the weft-thread is absent or for any cause fails to pass through the warp.

The object of my invention is to provide a simpler and more effective stop-motion than has heretofore been in use.

In the accompanying drawings illustrating my invention, Figure 1 shows a top view of my improved mechanism as applied to a loom. Fig. 2 shows a side view of the same with the breast-beam and lay shown in section. Fig. 3 is a bottom view of my improved mechanism embracing the same parts that are shown in Fig. 1.

A represents a part of the breast-beam of a loom.

B represents a part of the lay, which moves back and forth in the customary manner. Along the top of the lay the shuttle moves from end to end and carries the weft-thread through the warp.

C is an arm, generally of cast-iron, extending out from the breast-beam and reaching under the lay. It is firmly bolted to the breast-beam, and supports the connecting-rod D, which can slide in its bearings, but which is moved only when the absence of the weft-thread stops the loom.

E is a rocking lever attached to the under side of the breast-beam by means of a bolt, forming a pivot upon which it turns. Its purpose is to change the direction of the thrust given by the rod D to the shifting-rod G. The rod G has a longitudinal motion in suitable bearings, and is moved by the pressure of the lever E upon the dog H. At the end of G there is a loop, G′, for shifting the belt, or any other usual contrivance for stopping the machine.

J is a plate attached to the lay for supporting the working parts of the stop-motion.

K is a hooked lever, serving the same purpose as the dagger commonly employed in stop-motions. It is hinged at K′ to a projecting part of the plate J.

L is a connecting-rod extending from a pin in the lever K to a crank-pin, M′, upon the end of the shaft M, which turns in bearings upon the plate J.

N are the feelers attached to the shaft M, and extending over the top of the lay in the usual manner. The parts K L M N are so arranged that when the feelers are held up by the weft-thread the hook upon the end of K is likewise held up; but when, through the absence of the weft-thread, the feelers fall down upon the top of the lay, the hook likewise drops down.

O is a rocking cam or jack, over which the hook on K latches when it is allowed to fall by the absence of the weft-thread. This cam also operates against the end of the rod D to push it forward when the lay moves forward with the hook dropped.

P is a flexible strap or cord reaching from the breast-beam, to which it is attached, to the short arm P′ upon the lever K. This strap serves the purpose of lifting the hook, and also the feelers, at each rearward movement of the lay. It should be slightly elastic.

The operation of my invention is as follows: The drawings represent the lay in its extreme rearward position. In this position the shuttle is thrown through the warp, leaving the thread in the position shown at R in Fig. 2. As the lay moves forward, the feelers drop upon the thread, which sustains them and the lever K, so that the hook does not fall. When the thread is absent, however, the feelers are not held up, and they, with the hook, fall down, so that the hook catches upon the cam O, and as the lay moves forward, the hook carries the rod D with it, and thus stops the loom. As the lay again moves back, the strap P raises the hook and feelers for the shuttle to pass, as before described.

What I claim as my invention is—

1. The combination of the hooked lever K and support for carrying the same, adapted

to be secured to the lay, the rocking cam O and arm for supporting said cam, the rod D, and the rocking lever E with the feeling device L M N, substantially as described.

2. The strap P, adapted to be attached to the breast-beam, in combination with the lever K and support for carrying the same, adapted to be secured to the lay, substantially as described.

3. The combination of the rod D and the cam O, and means for supporting the same, with the lever K, its supporting-plate, the strap P, the rod L, the shaft M, and the feelers N, substantially as described.

FREDERICK O. TUCKER.

Witnesses:

THEO. G. ELLIS,

WILMOT HORTON.