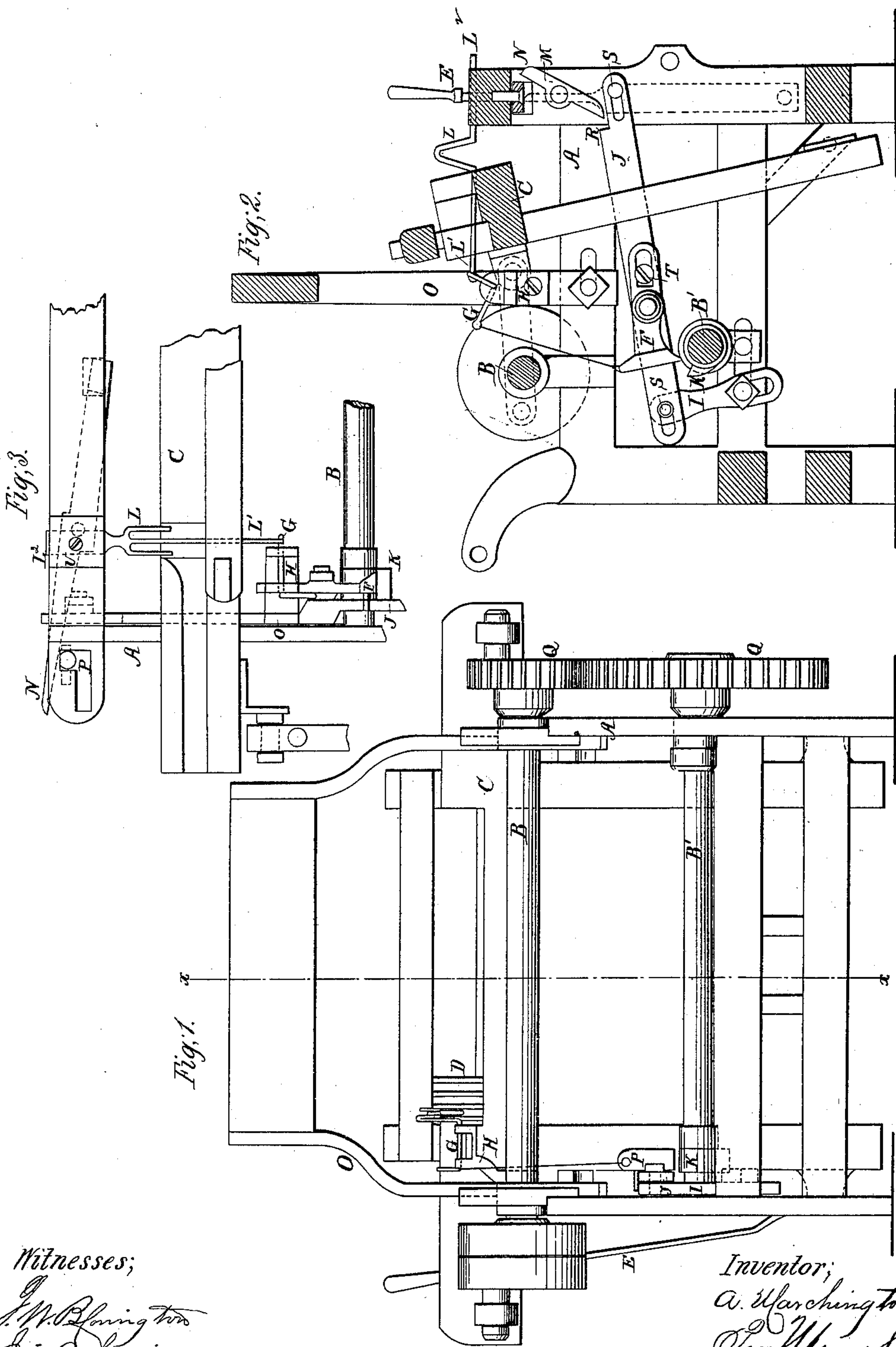


A. Marchington. Stop Motion.

N^o 57,350.

Patented Aug. 21, 1866.



Witnesses;
J. W. Blount
Geo. A. Service.

Inventor;
A. Marchington
Per Wm. L. ...

UNITED STATES PATENT OFFICE.

ADAM MARCHINGTON, OF UPLAND, PENNSYLVANIA.

IMPROVEMENT IN STOP-MOTIONS OF LOOMS.

Specification forming part of Letters Patent No. 57,350, dated August 21, 1866.

To all whom it may concern:

Be it known that I, ADAM MARCHINGTON, of Upland, in the county of Delaware and State of Pennsylvania, have invented a new and useful Improvement in Power-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 back elevation of a loom to which my improvement has been applied. Fig. 2 is a cross-section in the plane of the line *x*, Fig. 1. Fig. 3 is a plan of a portion of the loom.

Similar letters of reference indicate like parts.

The object of this invention is to stop the loom when the weft is broken or runs out; and it consists in a novel arrangement of devices for unlocking the shipper and moving the belt onto the loose pulley to stop the loom. The lower shaft has an arm or wiper on it near one end, which, under certain circumstances, strikes the rear end of a lever which is pivoted to a sliding bar that is mounted on pins or guides on the inside of one end of the loom-frame, the forward end of the bar, when it is pushed forward, coming against the lower end of a vertical lever whose upper end strikes a horizontal lever that rests always against the front face of the shipper. The lever, which is struck by the wiper is held up out of its way so long as the weft is unbroken, but when it is broken the lever is allowed to drop in the way of the wiper, when the shipper will be moved so as to bring the belt onto the loose pulley.

The letter A designates the frame of a power-loom. B is the driving-shaft which drives the lower shaft, B', by suitable gearing Q Q. The lower shaft has a wiper, K, on it near the inside of that end of the frame where the shipper is placed.

J is a sliding bar, which is supported at its ends by screw-pins S S, one of which is secured to the inside of one of the front posts of the loom-frame and the other to the top of a standard, I, which is fastened to the lower end rail. The standard I has an elongated slot in the direction of its length, by means of

which it can be adjusted on the rail, and the bar J has elongated slots at its ends, so that it can have endwise motion on its supports. Guides can be substituted for holding the bar, if preferred.

At a suitable point on the inside of bar I is pivoted a drop-lever, F, on whose rear end is placed a broad right-angled plate, the lower end of which is made square, so as to present a suitable surface to be acted on by the wiper K, as hereinafter mentioned. The other end of the drop-lever is weighted so as nearly to balance the rear end, its weight T being adjustable in an elongated slot made in the lever.

The upper edge of the vertical end of the lever F is connected by a cord to the horizontal arm of an elbow-lever, G, whose other arm is vertical and is connected by a joint to the rear end, L', of the weft-fork. The axis of the elbow-lever G has its bearings in the lugs which rise from the top of a bracket, H, that extends from the adjacent post of the heddle-frame O.

The weft-fork L may be made in any convenient way, and in this example it has a fork of three tines, whose backs are bent upward, as seen in Fig. 2, the middle tine being continued toward the rear to form the part L', which is connected to elbow-lever G, and that by cord to lever F, and also toward the front, where it is formed into a flat loop, L², which slides on the top of the breast-beam beneath a plate, U, whose confining-screw is embraced by the loop, and consequently limits the movement of the weft-fork both in a forward and a backward direction. The ends of the two lateral tines are brought into a horizontal line so as to allow the lay to move beneath without interfering with them. Their ends project far enough backward to pass between the bars of the cage D when the lay beats up, the part L' of the fork going between the middle bars. The raised portion of the fork is drawn constantly toward the cage by the gravity of the rear end of lever F, but with so light a pull as to be stopped by the weft-thread, whose tension is supposed to be always sufficient to prevent the fork from going through the bars of the cage, and also sufficient to allow the loop L² to slide forward when the lay beats up, thereby also

causing the vertical part of lever F to be raised out of the way of the wiper K of the cam-shaft B'. When, however, the weft-thread is broken, the bars of the cage are allowed to pass the fork and the lever F remains in a position so low that its vertical end is struck by the wiper, which pushes it, with the bar J, forward until the shoulder R of the bar strikes the lower end of lever M, whose upper end strikes the forward edge of a horizontal lever, N, which is pivoted to the under side of the breast-beam, as shown in Fig. 2 and partly in dotted outline in Fig. 1, and by pushing that lever backward unlocks the shipper E from the forward portion of the right-angled slot, into which it is sprung when the belt is moved onto the fast pulley, thereby allowing the elasticity of the shipper to move the belt onto the loose pulley and so letting the loom stop.

When the loom is in operation and the filling is unbroken the lever F will be vibrated on its fulcrum with each movement of the lay.

What I claim as new, and desire to secure by Letters Patent, is—

1. The vibrating lever F, in combination with the wiper K on the shaft B, all arranged and operating substantially as described.

2. Placing the vibrating lever F on a sliding bar, J, substantially as described.

3. In combination, the wiper K, the lever F, the sliding bar J, and the levers M and N, substantially as described.

ADAM MARCHINGTON.

Witnesses:

JOSEPH HOLT,

JAMES BUCKLEY.