J. BULLOUGH, Dec'd.

J. A. WARE, Adm'r.

Stopping-Mechanism for Looms.

No. 159,983. Patented Feb. 16, 1875.

Fig 1

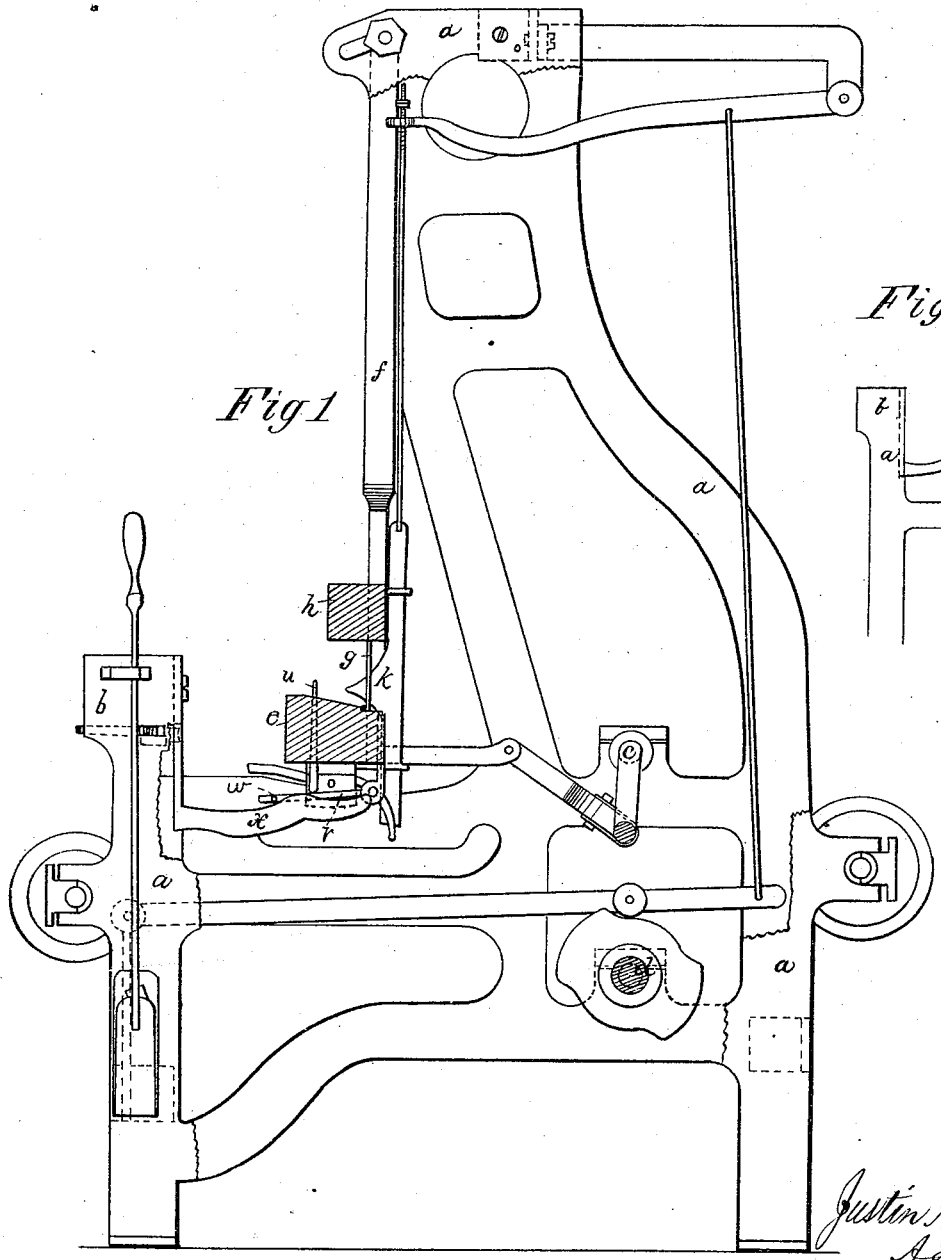
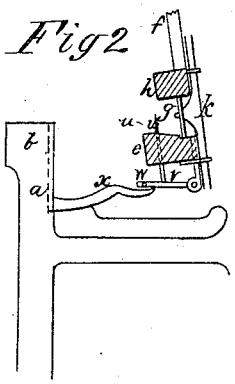


Fig 2



Witnesses
Geo. T. Smallwood Jr.
John Roby.

Justin A. Ware
Adm'r. of
Inventor
James Bullough, dec'd.
by John J. Halsted.
Atty.

UNITED STATES PATENT OFFICE.

JUSTIN A. WARE, OF WORCESTER, MASSACHUSETTS, ADMINISTRATOR OF JAMES BULLOUGH, DECEASED; SAID ADMINISTRATOR ASSIGNOR TO GEORGE CROMPTON, OF SAME PLACE.

IMPROVEMENT IN STOPPING MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **159,983**, dated February 16, 1875; application filed December 14, 1874.

CASE A.

To all whom it may concern:

Be it known that JAMES BULLOUGH, deceased, late of Baxenden, in the county of Lancaster, England, did invent Improvements in Looms for Weaving, of which the following is a specification:

The weft is held in a line parallel, or nearly so, with the reed, by employing two or more pins or slides, working vertically in holes or guides in the lay, the pins or slides being raised before the shuttle passes across the race of the lay, ready to hold the pick of weft when it has been thrown across by the shuttle, for enabling the weft-feeler to descend quickly upon it, and the pins or slides being depressed to clear the cloth before the reed beats up, by means of levers having bowls or pins working on or in cams or inclines fixed to the breast-beam.

This invention will be clearly understood by the following detail description thereof, reference being had to the figures and letters on the accompanying drawings, in which—

Figure 1 is an end elevation of the loom, with part of framing broken away, and Fig. 2 shows details.

In the figures, *a* represents the whole or part of the end frames of the loom; *b*, the breast-beam; *c*, the crank-shaft; *d*, the tappet-shaft; *e*, the lay or batten; *f*, part of one of the sword-arms; *g*, the reed; *h*, the reed-cap; and *k*, the weft-feeler.

The weft is held in a line parallel, or nearly so, with the reed, by employing two or more pins or slides, working vertically in holes or guides in the lay, the pins being raised before the shuttle passes across the race of the lay, ready to hold back the pick of weft for enabling the weft-feelers to descend quickly upon it, or detect its absence, and afterward depressed to clear the cloth before the reed is beating up. The pins or slides, which work vertically, are shown at *u*. They rest on levers *v*, jointed to brackets fixed to the lay, and are provided with horizontal pins or bowls *w*, working on cam-plates *x*, fixed to the breast-beam, and when the lay is moving back the pins or bowls *w* ride on the highest part of the cam-plates, and raise the pins *u* above the lay, before the shuttle passes across the race, as seen in Fig. 4, ready for holding back the pick of weft immediately after it has been thrown across by the shuttle. Just before the reed arrives at the beat-up, the pins or bowls *w* descend to the lowest part of the cam-plates, and place the tops of the pins *u* below the cloth. The pins *u* hold back the weft, the picks passing alternately in a diagonal direction from each end pin to the selvages for assisting the templing, and making better cloth; but it must be understood that the pins are placed at any desired position between the selvages according to the width of the fabric or the amount of assistance required to be given to the temples, the pins being in some cases at or near the center of the cloth.

Only one mode of raising and depressing the pins is shown; but it is evident they can be moved up and down by attaching cords or springs to the floor or frame-work of the loom, and working them in connection with the movement of the lay, or they may be worked by any other suitable contrivance.

The pins or slides may be made of round or flat wire; but it is preferable for them to be formed of thin flat spring-steel, having their edges facing the reed, so that if by accident the shuttle should strike them, they will yield and prevent any inconvenience.

I claim as the invention of the said JAMES BULLOUGH—

1. The combination, with the lay, of movable pins attached thereto, and adapted to be projected within the shed, and to retain or place the weft in the path of the weft-feeler, substantially as described.

2. The combination, with the lay and movable pins adapted to be projected within the shed and above the race of the lay, of a weft-feeler, substantially as described.

3. In combination, the lay, an arm or lever attached thereto, a pin or slide adapted to be moved above the race bottom and within the shed, and a projection attached to a stationary part of the loom, for operating the arm or lever, and pin or slide, substantially as described.

JUSTIN A. WARE,
Administrator of James Bullough, deceased.

Witnesses:
HORACE WYMAN,
JOHN B. LYME.