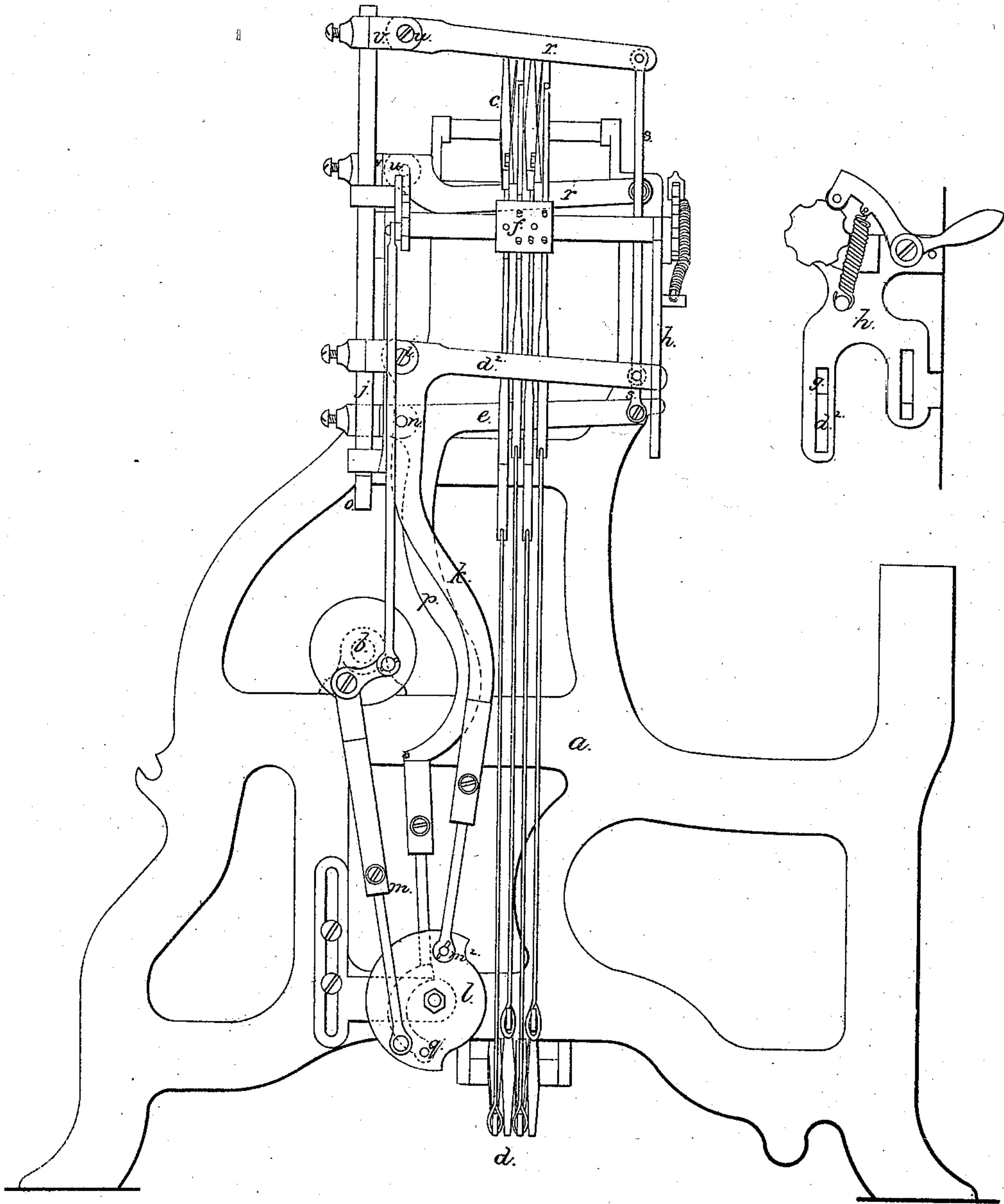


G. Crompton.
Loom.

N^o 80,608.

Patented Aug. 4, 1868.



Witnesses,

J. B. Ridder
M. W. Frothingham.

Inventor,

Geo Crompton
by his atty
Crook Halsted & Fowler

United States Patent Office.

GEORGE CROMPTON, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 80,608, dated August 4, 1868.

IMPROVEMENT IN LOOMS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE CROMPTON, of the city and county of Worcester, in the State of Massachusetts, have invented an Improvement in Looms; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

My improvements relate to the arrangement of the lifter, depresser, and evener-levers of fancy-loom, and the mechanism for operating such levers, the invention being particularly applicable to that class of fancy-loom in which the harness-frames are suspended to and between the inner ends of horizontal levers, the outer ends of which levers are connected by the harness-jacks or jack-plates, (jointed directly to the outer ends of the upper levers,) and the cording which strings the lower ends of the jack-plates to the front ends of the lower horizontal levers.

My invention consists in lifting and depressing the jack-plates (to form the shed) by means of lifter and depresser-bars, which maintain a horizontality during most of their movements in forming the shed, but which are thrown into inclined positions to give the proper inclination to the shed at the end of each movement, or just before the shuttle is thrown, and in giving to the evener-levers a corresponding movement.

The drawings represent in end elevation a loom-frame, embodying my improvement.

a denotes the frame; *b*, the lathe-shaft; *c*, the upper, and *d* the lower horizontal harness-levers, between and to the inner ends of which the harness-frames are suspended, the outer ends of the upper levers being jointed to upright hooked harness-jacks or jack-plates, the lower ends of which jacks are corded to the outer ends of the lower harness-levers.

The hooks upon the opposite edges of these jacks are thrown into connection (respectively) with a lifter-bar, *a'*, in front of them, or a depresser-bar, *e*, in rear of them, by a pattern-cylinder or chain, *f*, or are so strung by inclined cording as to engage normally with the lifter-bar, engaging with the depresser-bar only when thrown inwards by the pattern-cylinder or chain.

The lifter-bar *a'* is a horizontal bar, having one end free, and working vertically in a slot, *g*, in a bracket, *h*, and being jointed at its other end by a fulcrum-pin, *i*, to an arm fixed upon a slide-rod, *j*. This end of the lifter has a curved leg, *k*, projecting down from it, (making of the lifter a bent lever,) said leg being jointed to a rocker-wheel or segment, *l*, which has a rocking or reciprocating movement imparted to it by a link, *m*, jointed to the rocker-wheel, and to a crank-pin on the lathe-shaft *b*.

When the lifter is in its lowest or normal position, (to take the jack-hooks,) the pin *m*, which connects its leg *k* to the rocker-wheel, is on a horizontal centre. As the wheel rocks, this pin moves from a horizontal centre to or nearly to a vertical centre, as seen in the drawing. During the first half of this quarter rotation, it maintains a nearly vertical position, thereby causing the lifter-bar to maintain its horizontality; but during the latter half of its motion its movement is nearly lateral, which causes the lever or lifter-bar to rock on its joint-pin, *i*, thereby inclining the bar, as seen in the drawing, and effecting the proper inclination of the adjacent harness-frames.

The depresser-bar *e* is similarly hung, by a fulcrum-pin, *n*, to an arm on a slide rod, *o*, and has a vertical leg, *p*, jointed to the opposite side of the rocker-wheel *l* by a pin, *q*, the depresser being drawn down and then inclined, the same as the lifter is thrown up and then inclined.

The evener-bars are seen at *r*, one being connected to the lifter-bar, and the other to the depresser-bar, by the slide-rods *j* and *o*, at one end, and links *s* at the other end, and each being jointed to its slide-rod by a pin, *u*, in an arm, *v*, projecting from the slide.

By these means, the motion of each evener is coincident with the movement of the lifter or depresser to which it is attached.

I claim, in combination with hooked jacks, the angular lifter and depresser-bars or levers, the inclination of which is effected by means substantially as set forth.

I also claim, in combination with lifter and depresser-bars, the inclination of which is effected as and by means substantially as set forth, the evener-bars or levers, connected to the lifter and depresser-bars by the slide-rods and the links *s*, substantially as described.

I also claim the rocker-wheel or segment *l*, for imparting movement to the lifter and depresser-bars or levers, substantially as shown and described.

GEO. CROMPTON.

Witnesses:

HORACE WYMAN,
J. A. WARE.