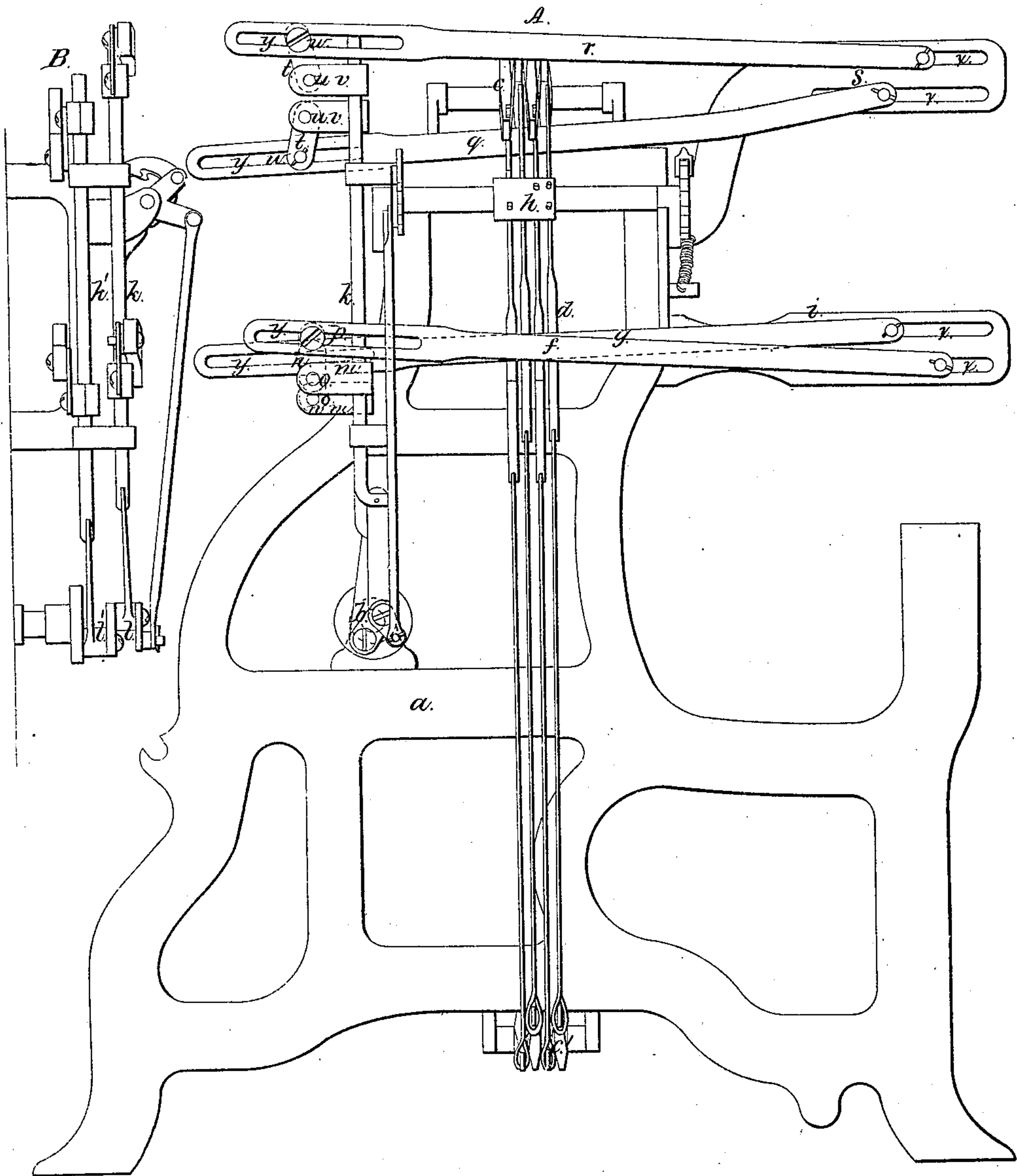


# *C. Crompton.* *Loom.*

*N<sup>o</sup> 81,070.*

*Patented Aug. 18, 1868.*



*Witnesses.*  
*S. A. Kidder.*  
*M. W. Fotheringham.*

*Inventor.*  
*Geo Crompton*  
*by his Atty.*

# United States Patent Office.

GEORGE CROMPTON, OF WORCESTER, MASSACHUSETTS.

*Letters Patent No. 81,070, dated August 18, 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 invention relates to that class of fancy-loom having upright harness-jacks, jointed at their upper ends, and strung at their lower end to upper and lower sets of horizontal levers, between the inner ends of which levers the harness-levers are strung, the jacks being raised or lowered (or distributed) by angular lifter and depresser-levers, (in accordance with the position into which each is thrown by the pattern-chain or cylinder,) and being evened or brought into correct position for redistribution by angular evener-levers.

My invention consists primarily in combining with horizontal harness-levers, jointed directly to the jacks, and with angular evener-levers operating directly upon the harness-levers to bring them into line, and with the slide-rods, which operate the evener-levers, rocker-links, for connecting the evener-levers to the slide-rods, these links allowing the evener-levers to rise and fall without end-movement of the joint-pins, through which the connections are made, or the fulcrum-pins upon which the levers are hung.

The drawing represents a loom-frame embodying my invention—

A showing an end elevation thereof.

B, an end view of the lifter, depresser, and eveners, and the mechanism which actuates them.

*a* denotes the frame; *b*, the lathe-shaft; *c c'*, the upper and lower sets of harness-levers, between and to the inner ends of which the harness-leaves are to be strung in the ordinary manner, while between their outer ends the jacks *d* are mounted, each jack being jointed at its upper end directly to one of the upper levers, *c*, and being strung from its lower end to the corresponding lever *c'*, as seen at A. Each jack *d* has on its front and rear edges (respectively) a hook, by which the jack is thrown into engagement with a lifter-lever, *f*, or a depresser-lever, *g*, for each new shed, accordingly as it is drawn outwardly by the cords or pressed inwardly by the pins of the pattern-cylinder *h*, or the equivalents thereof.

The lifter and depresser-levers are "angular" levers, each being fulcrumed at one end in a bracket or plate, *i*, and having motion communicated to them at their opposite end, to raise and depress them, by their connection with a slide-rod, *k k'*, jointed to a crank, *l l'*, on the end of shaft *b*.

The connection of each slide-rod to the lifter or depresser-lever is made by means of an arm, *m*, fixed upon the rod, and a link, *n*, this link *n* being jointed to the arm *m* by a screw or pin, *o*, upon which it loosely rocks, and to the lever by a pin, *p*, upon which it also loosely rocks.

As before observed, the jacks *d* are jointed at their upper ends to the upper horizontal harness-levers *c*, and after each throw of the shuttle the jacks are evened (or their hooks are brought into horizontal line to disengage them from the lifter or depresser-levers, and allow them to assume their normal position for redistribution) by two angular evener-levers, *q r*, fulcrumed at one end to a plate or bracket, *s*, and connected at their opposite ends to the slide-rods *k k'*, the movement of each being coincident with the movement of the lifter or depresser-lever, to which it is connected by its slide-rod.

When the lifter and depresser separate or open to raise and lower the jack to form the shed, the evener-levers also separate or open to allow movement of the harness-levers; and when the lifter and depresser return, the evener-levers take the harness-levers, and by raising or depressing them, bring them into horizontal line and clamp them, leaving the jacks freed from the lifter and depresser, so that they swing back into line for redistribution by the pattern-cylinder.

Each evener-lever is connected to the slide-rod, which operates it, by a link *t*, rocking loosely at one end on a pin, *u*, which joints it to an arm, *v*, projecting from the slide-rod, and at its other end on a pin, *w*, which joints it to the evener-lifter.

The levers *f g* and *q r* are made adjustable, by means of the fulcrum-slots *x* at one end, and the slots *y* at the opposite end.



The arrangement of the connections between the angular lifter and depresser-levers and the angular evener levers, allows the horizontal harness-levers to move and operate in concert with the lifter, depresser, and eveners, without the liability to play, caused by friction and wear consequent upon connecting the levers directly to the slide-rods or arms projecting therefrom.

I claim, in combination with angular evener-levers and horizontal harness-levers, operated upon by such eveners, (to bring the jack-hooks into line,) the rocker-links *t*, which connect such eveners with the slide-rods, substantially as set forth.

I also claim, in combination with jacks operating upon horizontal harness-levers, and with angular lifter and depresser-levers operating such jacks, the angular lifter and depresser-levers connected to the slide-rods by which they are operated, by the rocker-links *n*, substantially as described.

GEO. CROMPTON.

Witnesses:

HORACE WYMAN,  
J. A. WARE.