

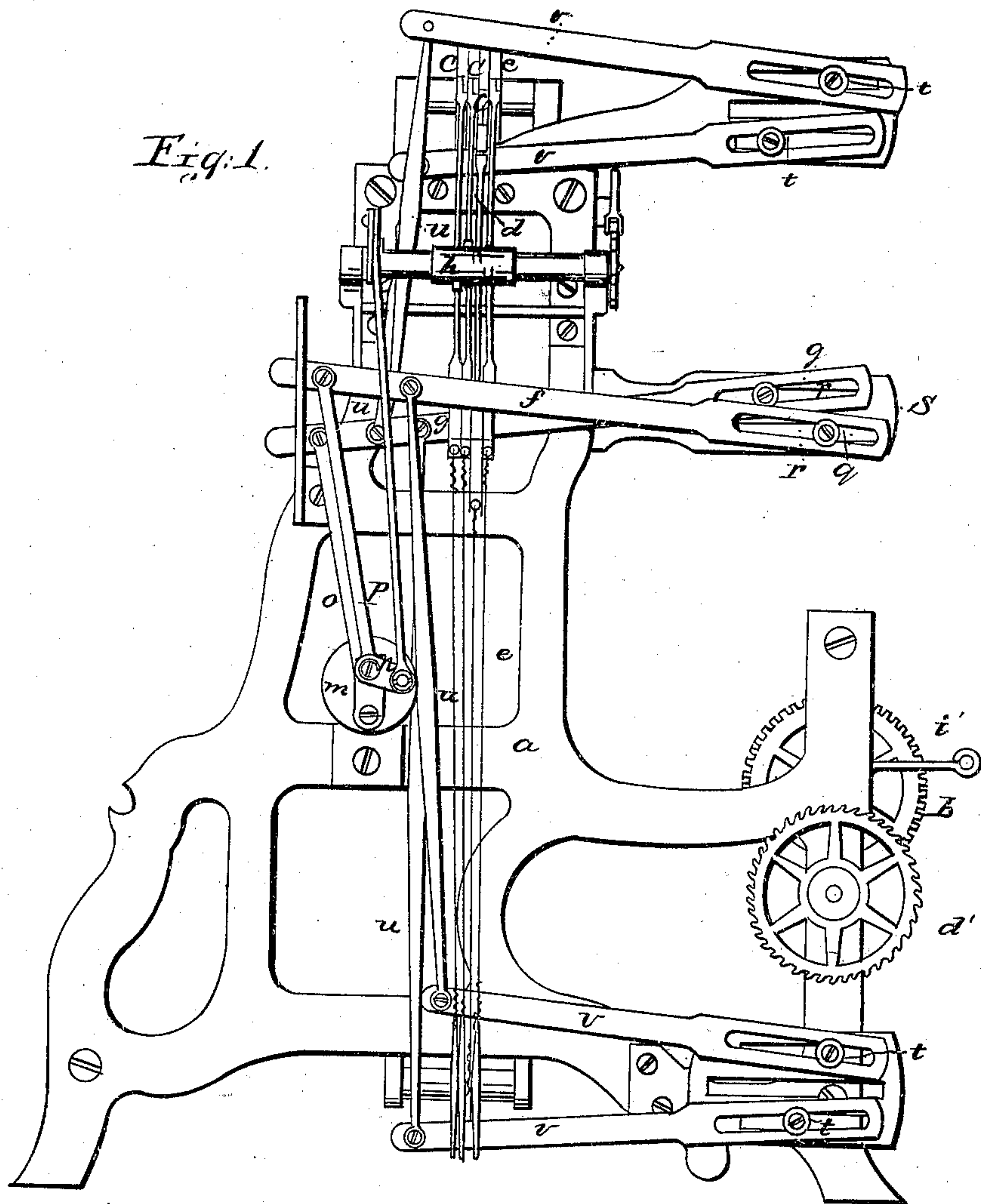
G. Crompton. Loom.

Sheet 1-2 Sheets.

N^o 66,682.

Patented Jul. 16, 1867.

Fig. 1.



WITNESSES:

J. B. Hiddes
W. W. Trothingham

INVENTOR:

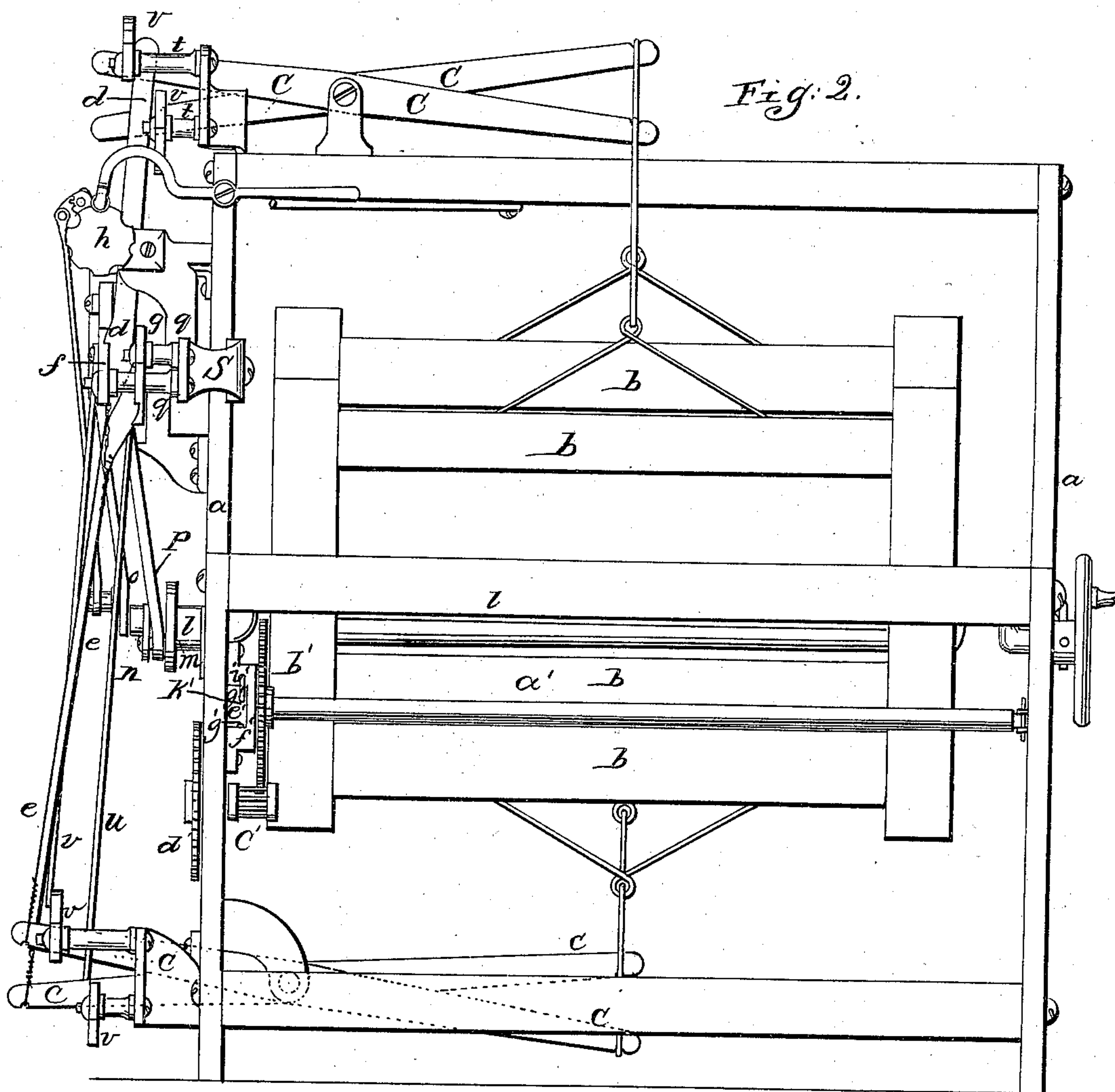
Geo Crompton
by C. C. C. C. C.
Atty

G. Crompton. Loom.

Sheet 2 of 2 Sheets

No. 6,6682.

Patented Jul. 16, 1867.



WITNESSES:

J. B. Alder.
M. W. Frothingham

INVENTOR:

Geo. Crompton
by
Crosby & Gould
Atty

United States Patent Office.

GEORGE CROMPTON, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 66,682, dated July 16, 1867.

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 Worcester, in the county of Worcester, and State of Massachusetts, have invented Improvements 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.

The invention relates principally to the construction and arrangement of the harness mechanism of fancy looms, and more particularly to the relative arrangement of the eveners, lifters, and depressers for working the heddle-levers.

The drawings represent as much of the mechanism of a loom embodying my invention as is necessary to a clear and full understanding of the invention—

Figure 1 showing an end view, and

Figure 2 a side elevation of the same.

a denotes the frame; *b b* the harness-leaves attached to the inner ends of the pairs of heddle-levers *c*, whose outer ends are connected by the vertical jacks *d* and the connecting-wires *e*. The hooks upon these jacks are carried into connection with the respective lifter and depresser bars *f g* by the pattern-cylinder *h* in the ordinary manner, each being lifted or depressed to raise or lower the particular harness-frame connected to it, accordingly as it may be carried into connection with either the lifter or the depresser bar by the action of the pattern-cylinder; and the several hooks are all brought into line after each change by one or two pairs of eveners *v*. The lifters and depressers are worked from the shaft *l* by cranks *m n* and connecting-rods *o p*, and they are arranged as levers to work upon adjustable fulcrum *q*, secured in slots *r* in a stationary bracket or plate, *s*, projecting from the frame *a*, the fulcrum being arranged in or nearly in the same vertical plane with the line in which the cloth is made and the weft beaten up, this arrangement for working the lifter and depresser levers from these points effecting a uniformity or uniform inclination in the shed through all the harness-levers.

Such an arrangement is not new in itself, but in order to give a precisely corresponding movement to the eveners *v*, I hang each one of these upon an adjustable fulcrum, *t*, in vertical line with the respective lifter or depresser with which it is connected, and by which it is worked, (through the link *u*,) the respective eveners being thereby kept parallel with their respective lifters or depressers, and thereby exerting an equal stress upon all the heddle-levers together, all the hooks bearing with equal force upon the lifter or depresser with which they may be engaged.

Another part of the invention relates to a simple means of disengaging the cloth-roll from the gearing, through which movement is imparted to it to wind the cloth, this disengagement being desirable whenever the cloth is to be run off from the rolls, so that the roll may run free from any friction other than that of its journals in their bearings.

The improvement consists in mounting the journal at the geared end of the roll in a movable bearing, provided with means for locking it in gear with the pinion which drives it when the loom is in operation, and for locking it out of gear when the cloth is to be run off from the roll.

a' denotes the cloth-roll, carrying a gear, *b'*, driven by a pinion, *c'*, and ratchet-gear, *d'*, in the ordinary manner. The journal of the roll adjacent to the gear is mounted on a movable bearing, *e'*, sliding in a box, *f'*, this bearing having two holes, *g'*, for receiving a locking-pin, *i'*, the box *f'* being open at one side, as seen at *k'*, and being slotted at its inner side to allow movement of the journal. When the roll-gear is in connection with the pinion *c'* it is held in such connection by inserting the pin *i'* in the upper hole *g'*, thereby locking the bearing from ascent. When the cloth is to be run off, the pin is withdrawn, the geared end of the roll is raised, carrying with it the bearing *e'*, which is then locked in this raised position by inserting the pin in the lower hole *g'*, the gears being now out of connection.

I claim, in combination with the lifter and depresser levers, hung upon fulcrum in line with the cloth-making point, as described, the eveners levers, connected to and actuated by the lifter and depresser levers, when the eveners are hung upon fulcrum in line with the fulcrum of the respective lifter or depresser to which each is connected, substantially as set forth.

Also, in combination with the mechanism of a loom, a cloth-roll, having provision for locking it either in connection or out of connection with the mechanism through which it is driven, substantially as set forth.

GEO. CROMPTON.

Witnesses:

HORACE WYMAN,

J. A. WARE.