

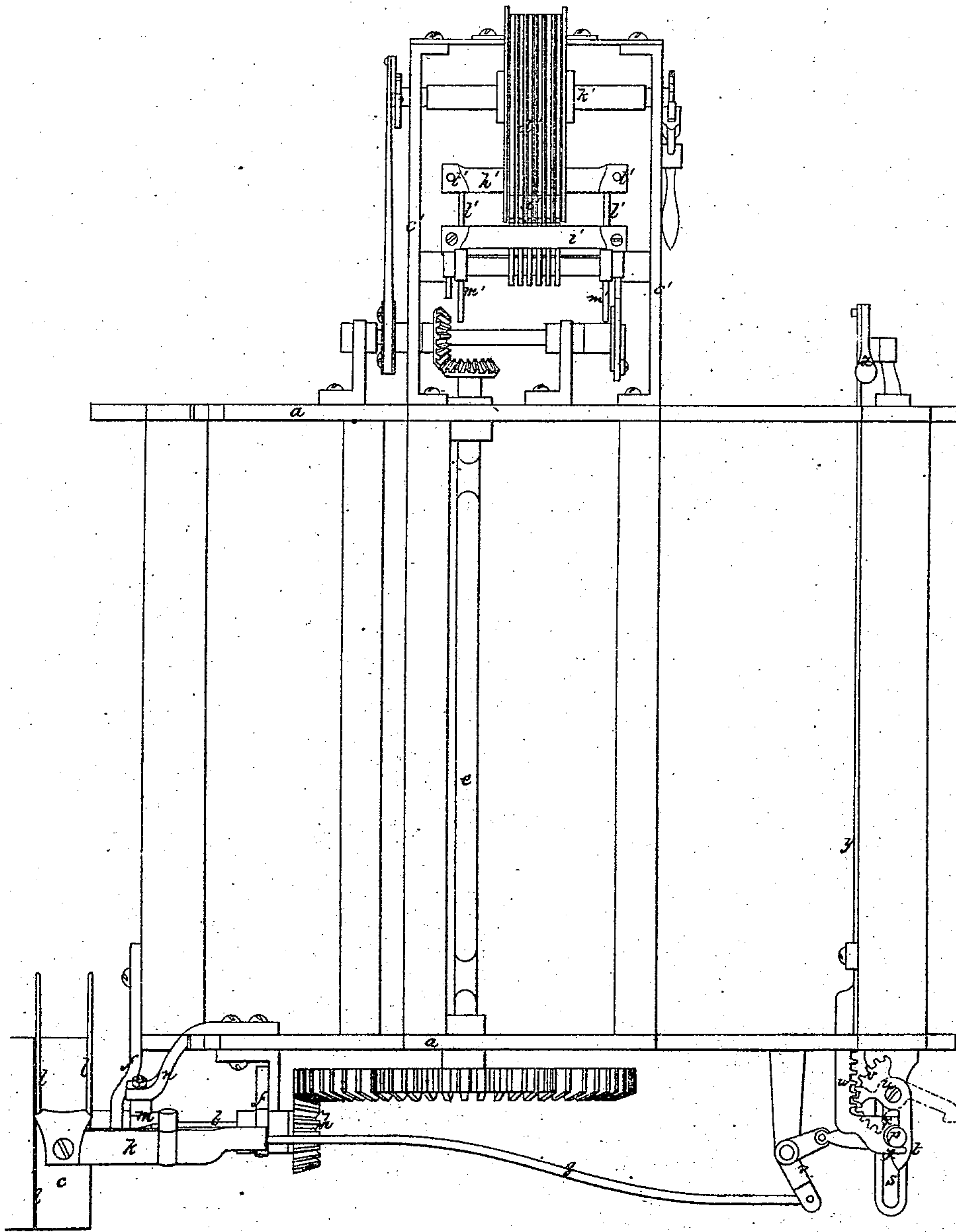
G. Crompton.

Loom

N^o 77361

Patented Apr. 28, 1868

Fig. 1.



Witnesses.

J. B. Hilder.
A. W. Frothingham.

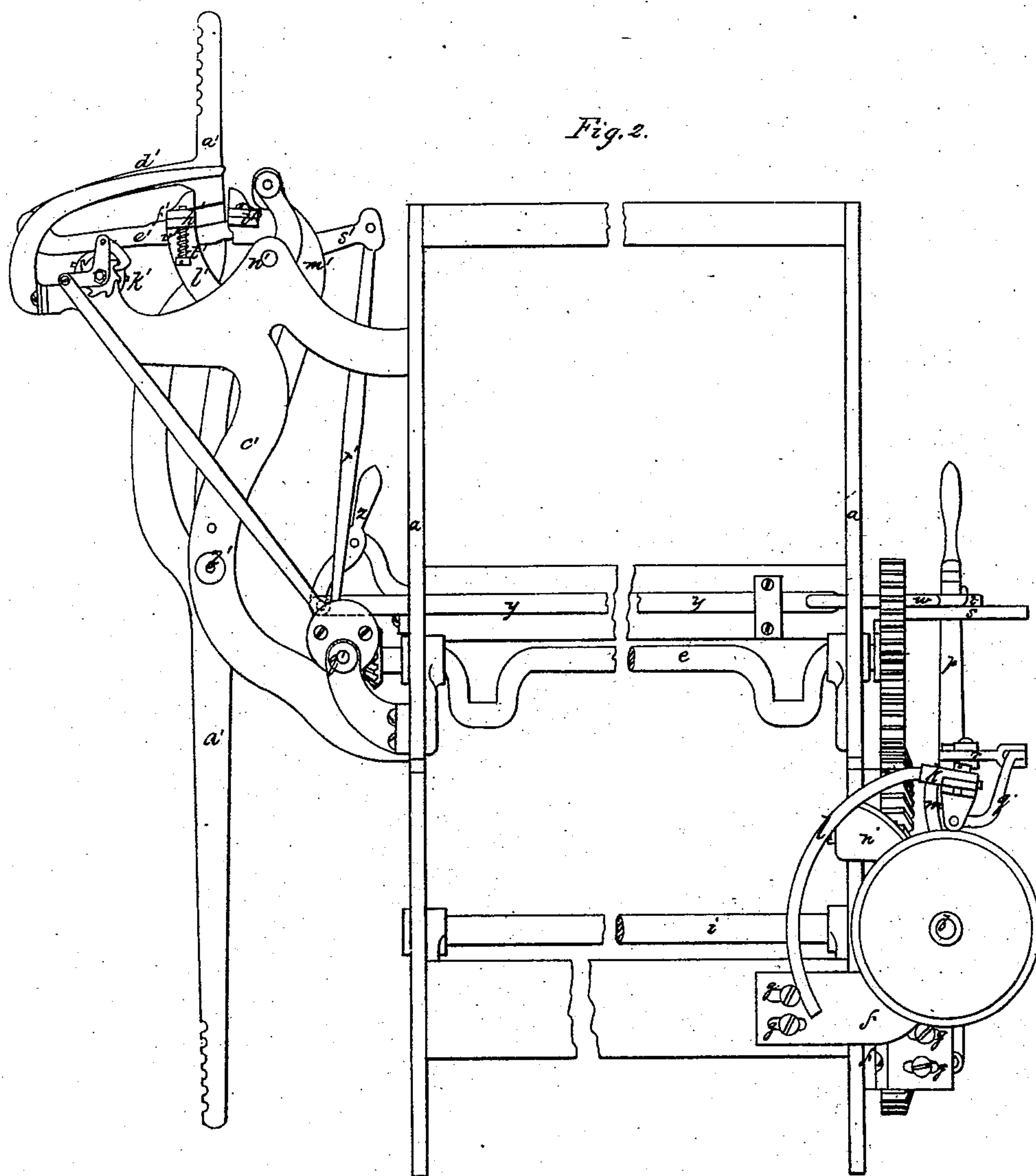
Inventor

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Loom.

N^o 77361.

Patented Apr. 28, 1868



Witnesses.

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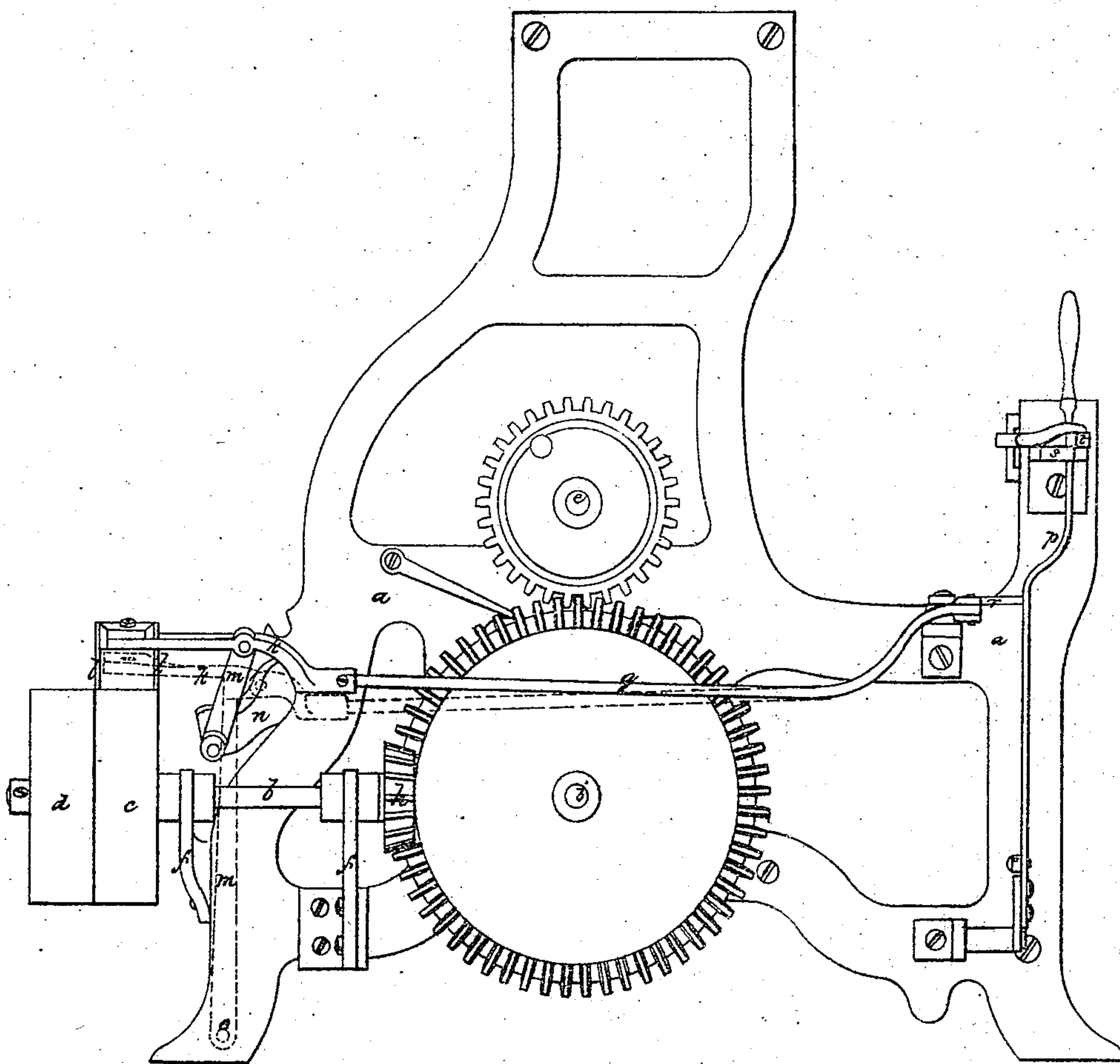
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Patented Apr. 23, 1868

Fig. 3.



Witnesses.

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A. W. Frothingham.

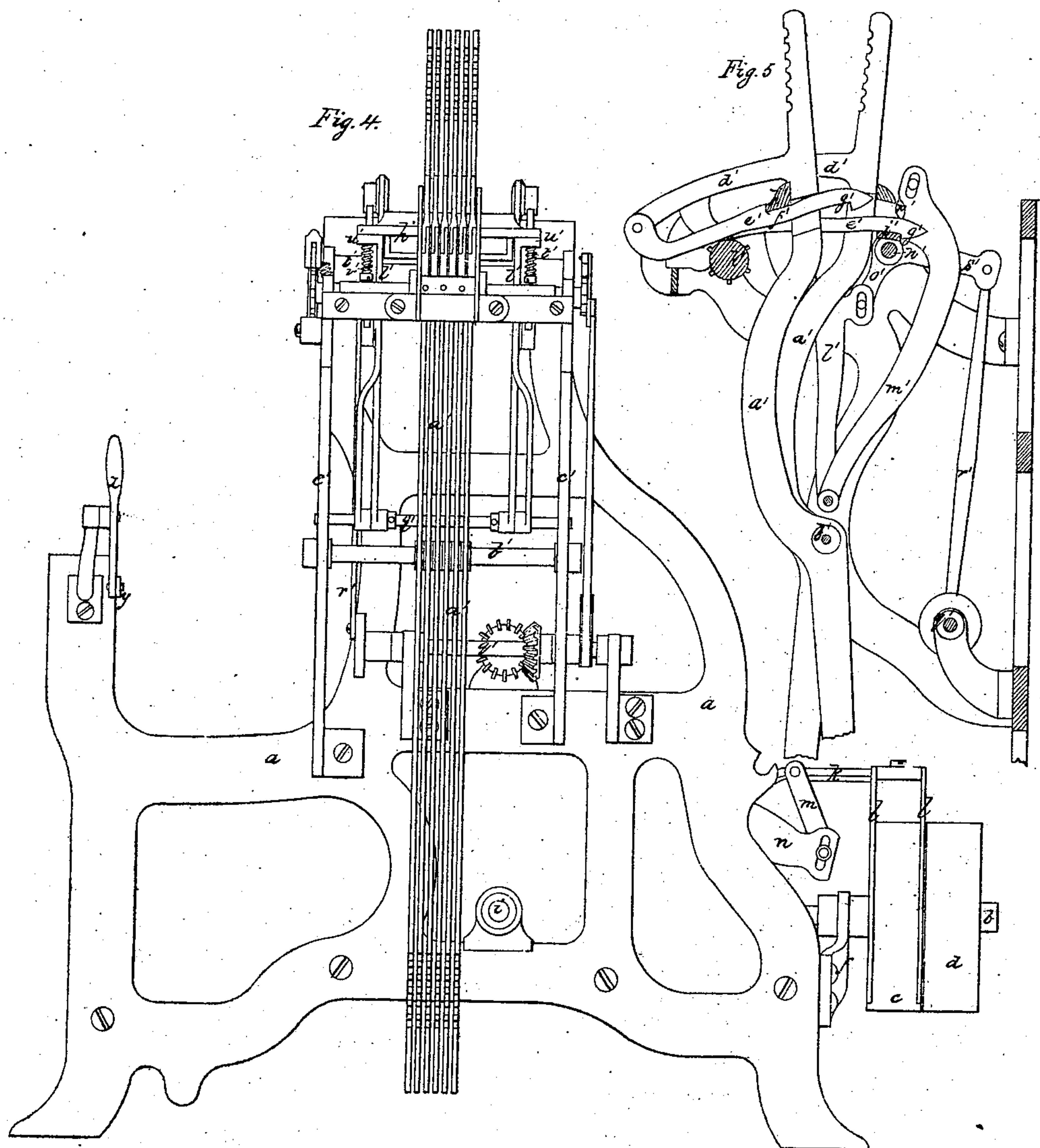
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UNITED STATES PATENT OFFICE.

GEORGE CROMPTON, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN LOOMS.

Specification forming part of Letters Patent No. 77,361, dated April 28, 1868.

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 certain new and useful 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 practice it.

My invention has reference chiefly to improvements in the details of construction of fancy looms, these improvements consisting partly in the construction and arrangement of mechanism for "throwing off" the loom by shipping the belt, and partly in the manner of mounting the shipper-fork and connecting it to the frame.

The drawings represent a loom mechanism embodying my improvements.

Figure 1 shows a plan; Fig. 2, a front elevation; Figs. 3 and 4, end elevations of the loom; Fig. 5, a vertical section between the heddle-levers.

a denotes the frame; *b*, the pulley-shaft, carrying the fast and loose pulleys *c* *d*, and connected with and driving the lathe-shaft *e* by a train of gears, in the usual manner.

The pulley-shaft is mounted in bearings on brackets *f* *f*, and instead of making these brackets or bearings integral extensions from the frame *a*, they are made movable relatively to the frame, and are secured thereto by screws or screw-bolts passing through slots *g*, by which means I am enabled to apply a larger or smaller gear, *h*, for connecting the pulley-shaft with the gear on the driving-shaft *i*, and am also enabled to adjust the shaft and pulleys relatively to the frame, as may be desirable.

The arm *k*, to which the shipper-fork *l* is fixed, is mounted on a rocker, *m*, upon which it swings loosely, while said rocker is hung so as to swing freely, being jointed to a bracket, *n*, or turning on a pin or shaft, *o*, as may be desirable.

Usually the shipper-rod, by which the shipper-fork is moved, runs through a slot in a guide and supporting-plate, and dust, waste, and other matters soon collect upon the rod at this slot, and obstruct its free movement,

to remedy which I support the rod, at or near its connection with the shipper-fork, upon a rocker, as shown.

The arm of the shipper-fork is connected to the shipper lever or handle *p* by a rod, *q*, and bent lever *r*, and the shipper-fork is made to transfer the driving-belt from pulley to pulley, by movement of this lever or handle toward or from the frame, as will be readily understood. Instead of retaining the lever in position, and the belt upon the fast or loose pulley, by means of a notch or notches in the guide-piece *s*, I make use of a swing-latch mechanism, made and arranged as follows: *t* denotes a latch, turning horizontally on a pin, *u*, (which is in line with the guide-groove *s*,) and having at its inner end a segment-gear, *v*, the teeth of which mesh into the teeth of a gear-rack, *w*, which rack has at its outer end a fork, *x*, straddling the shipper-lever *p*. (See Fig. 1.)

When the shipper-lever is thrown out in front of the latch and springs, or is thrown down to the end of the guide-groove *s*, the arm drags down the fork *x*, and thereby moves the rack *w*, the teeth of which, operating upon the latch-segment *v*, cause the latch to swing back, as seen by dotted lines at Fig. 1.

When the shipper-lever is thrown back by hand, the rack throws back the latch, and as the latch-bar comes in line with the groove, the outward stress of the lever, when it is released, will bear it directly against the face of the latch (with no tendency to swing the latch back, the guide-groove *s*, the face of the latch, and the pin *u* being in the same line) and the lever, and through its connection with the shipper-fork, the belt will be locked in position, as will be readily seen.

To enable the shipping and unshipping of the driving-belt to be effected at either end of the loom, the rack-bar is connected by a rigid bar, *y*, to a hand-lever, *z*, placed at the opposite end of the frame *a*. By inward movement of the lower end of said lever, the bar *y* is slid endwise, and carries with it the rack *w*, whose teeth, operating upon the segment-gear *v*, throw back the latch, and release the shipper-lever from it, said lever being then thrown out by the action of its spring and shifting the belt. By opposite movement of said lever *z*,

the lever *p* is drawn in, and the latch is thrown forward and latches over the lever, as before set forth.

I claim—

1. In combination with the shipper-lever, the swing-latch *t*, arranged to hold the lever in position, substantially as set forth.

2. In combination with a swing-latch for holding the shipper-lever, the fork *x*, rack-gear *w*, and segment-gear *v*, operating together, substantially as described.

3. Combining the shipper-lever-latch mechanism with the hand-lever *z*, at the opposite end of the loom, substantially as and for the purpose set forth.

4. The shipper-fork, mounted on the rocking arm, and connected, substantially as described, with the shipper-lever.

GEO. CROMPTON.

Witnesses:

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