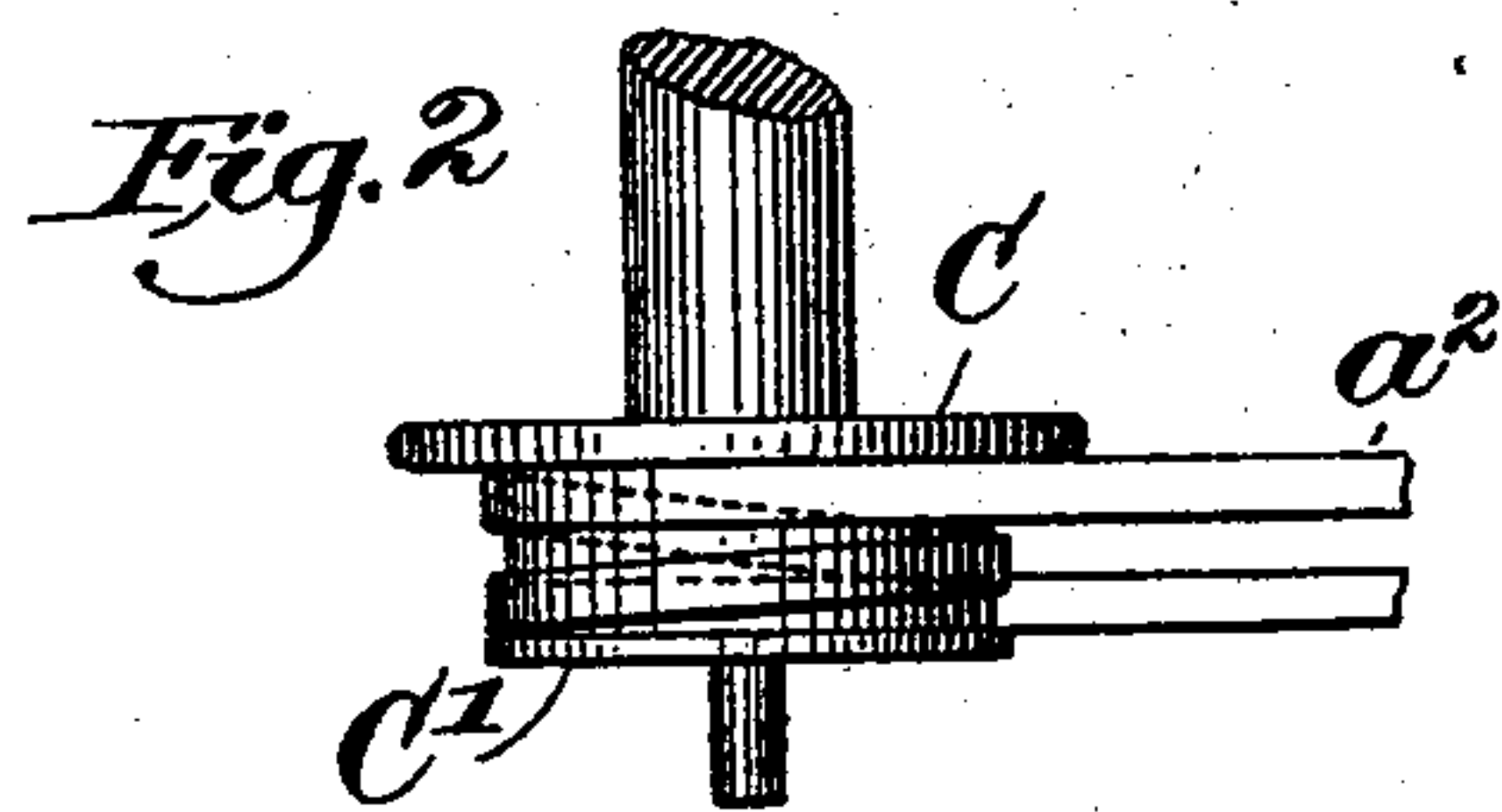
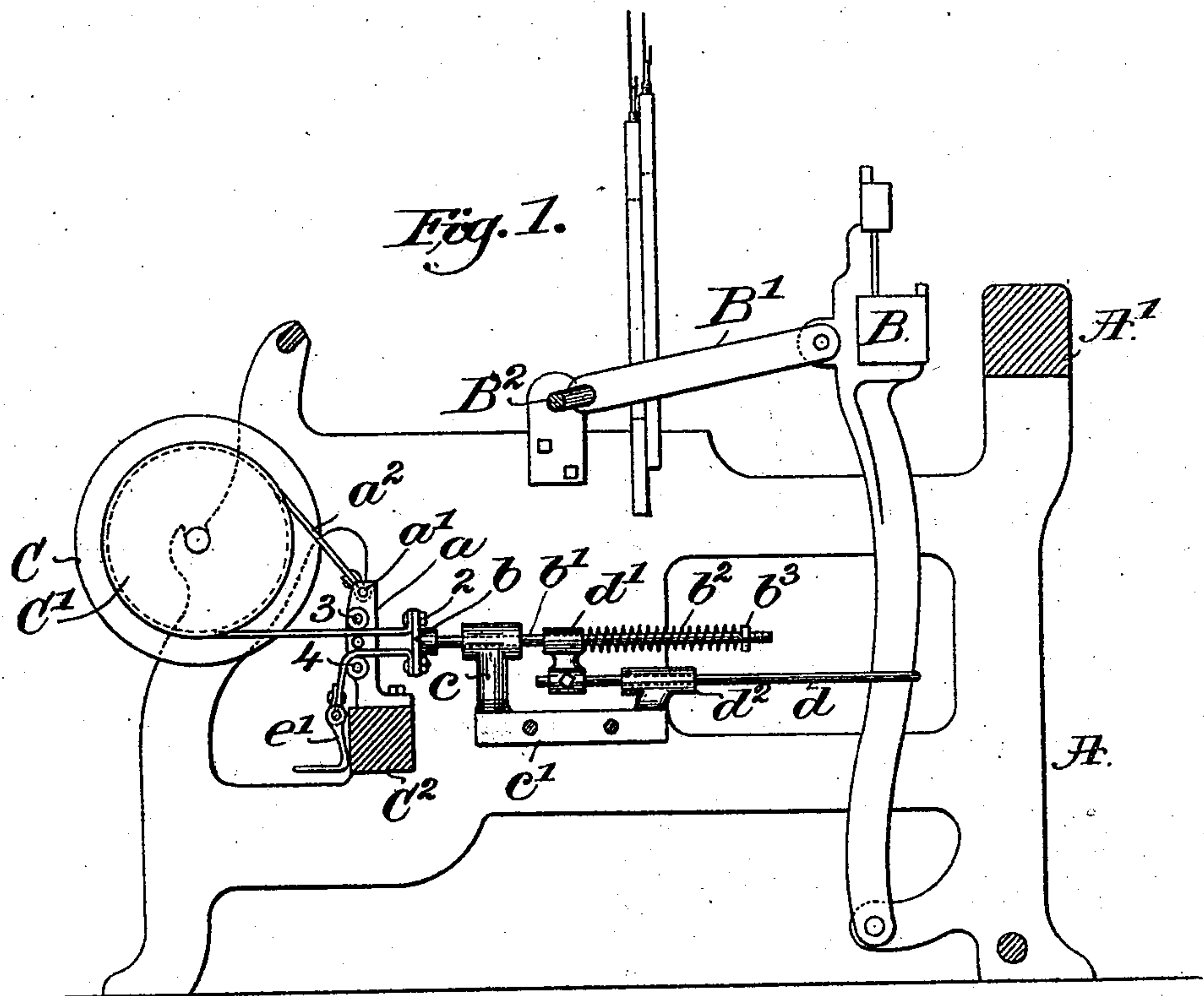


(No Model.)

D. DURKIN.  
LOOM.

No. 501,001.

Patented July 4, 1893.



*Witnesses:*  
*Edward F. Allen*  
*Louis N. Howell*

*Inventor:*  
*Daniel Durkin*  
*by Crosby & Gregory Attys.*

# UNITED STATES PATENT OFFICE.

DANIEL DURKIN, OF WOONSOCKET, RHODE ISLAND, ASSIGNOR TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

## LOOM.

SPECIFICATION forming part of Letters Patent No. 501,001, dated July 4, 1893.

Application filed February 6, 1893. Serial No. 461,227. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL DURKIN, of Woonsocket, county of Providence, State of Rhode Island, have invented an Improvement in Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the addition to a loom of devices actuated by or through the lay as the reed in the forward stroke of the lay meets the weft, to effect the locking of the let-off beam carrying the warps, to thus prevent the rotation of the beam as the reed beats the weft into the fell.

Figure 1, in section, represents a sufficient portion of a loom with my improvements added to enable my invention to be understood; and Fig. 2, a detail showing one end of the pulley on the warp beam with the friction or check strap.

The loom frame A; the breast beam A'; lay B; connecting links B'; crank shaft B<sup>2</sup>; and warp beam C, are and may be all as usual.

The head of the beam C has co-operating with it a friction pulley C', about which is wound a strap or friction check a<sup>2</sup> connected at one end to a stud a' attached to a stand a, secured to the cross girth C<sup>2</sup>. The opposite end of strap a<sup>2</sup> is attached by a suitable bolt 2 to the head b of a slide rod b', adapted to slide in a bearing c erected on a stand c'. The rod b' is extended loosely through a draw block d' connected to the inner end of a rod d operatively connected to the lay and adapted to actuate the block d'. The rod b' is also surrounded by a spiral spring b<sup>2</sup>, and the spring is acted on at one end by a nut b<sup>3</sup> which may be rotated from time to time as when it is desired to increase the strain of the band on the pulley C'.

The head b has connected to it a strap e passed over a sheave 4 and having attached to it a stirrup e'. The attendant may put her foot on the stirrup and draw the head to the left in Fig. 1, and thus slacken the friction strap or band a<sup>2</sup>, whenever it is desired to rotate the warp beam by hand.

In operation, each time the lay moves forward toward the fell, and just as the reed beats the filling into the shed, the draw block d' acting on the spring b<sup>2</sup> draws the rod b' and head to the right, and draws the strap or band a<sup>2</sup> snugly about the pulley C, thus pre-

venting any accidental rotation of the warp beam during the time that the reed beats the filling into the shed at the fell.

By the term strap I intend to cover a rope, or a leather or metal or other band, all being common.

The stirrup and strap e constitute a releasing device.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A let-off beam, a friction pulley and strap, combined with checking devices consisting of a stand, a slide-rod b', a spring, and a slide-rod d to act against one end of said spring, the latter slide-rod being operatively connected with a moving part of the loom, whereby it may be actuated intermittently to increase the friction of the strap on the friction pulley and prevent rotation of the warp beam, as and for the purposes stated.

2. In a let-off for looms, a warp beam, a co-operating friction pulley, and a surrounding friction strap, combined with a slide-rod b' having a surrounding spring made adjustable by a suitable nut, and a slide-rod d actuated by or from the lay and having a projection to engage one end of the said spring, and by acting thereon to move the slide-rod b' to increase the friction of the strap upon the friction pulley, for the purposes set forth.

3. A let-off beam, its friction pulley and strap; checking devices consisting of a stand, a slide-rod b', a spring, and a slide-rod d to act against one end of said spring, the latter slide-rod being operatively connected with a moving part of the loom whereby it may be actuated intermittently to increase the friction of the strap on the friction pulley and prevent rotation of the warp-beam, combined with a releasing device connected with said slide-rod and adapted to relieve the friction of the strap of the checking devices on the friction pulley when it is desired to rotate the warp-beam by hand, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL DURKIN.

Witnesses:

WILLIAM HAWORTH,  
FRANK H. ROBERTS.