

No. 606,964.

Patented July 5, 1898.

S. FIELD.
EYELETING MACHINE.

(Application filed June 1, 1897.)

(No Model.)

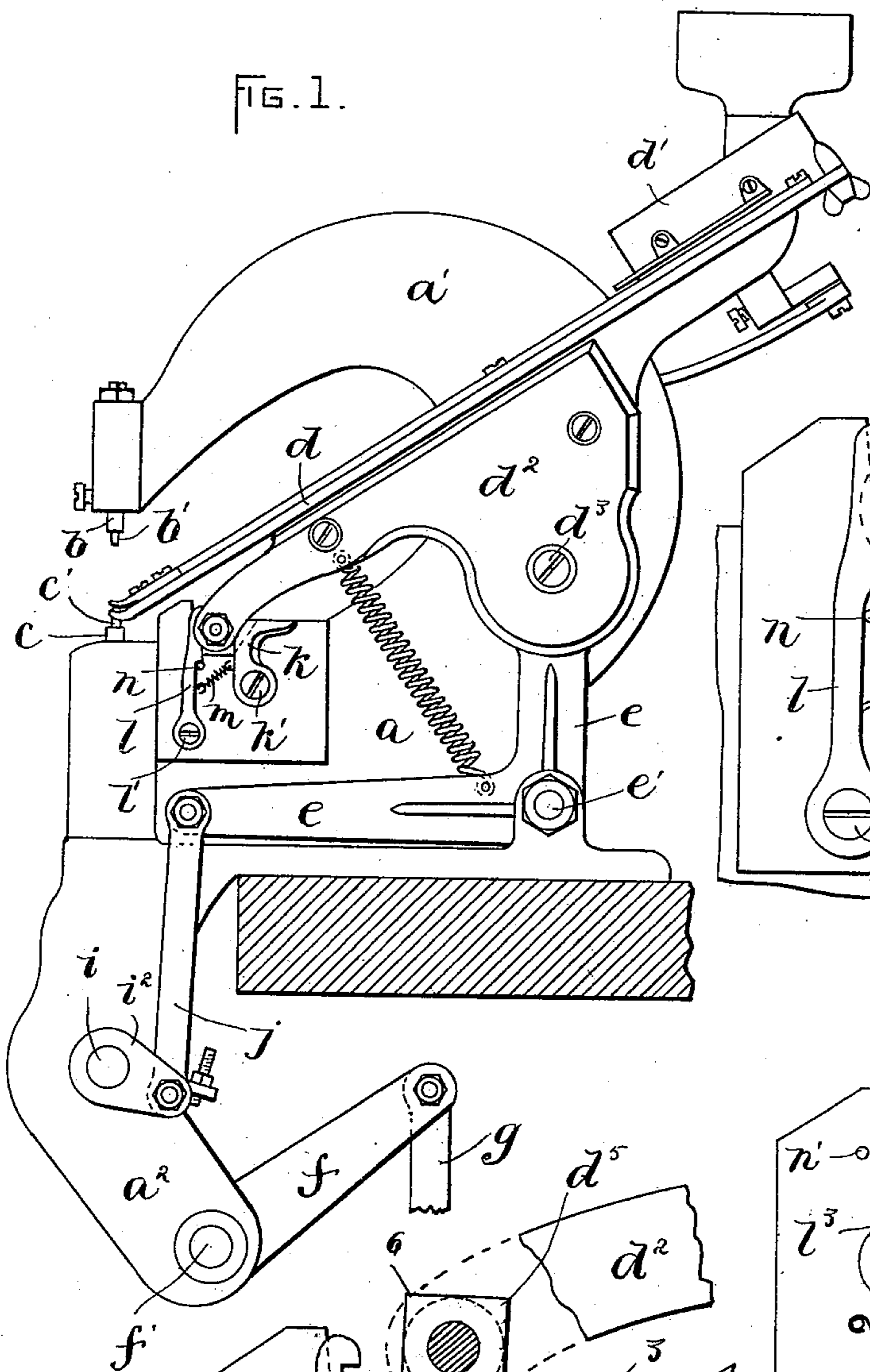


FIG. 1.

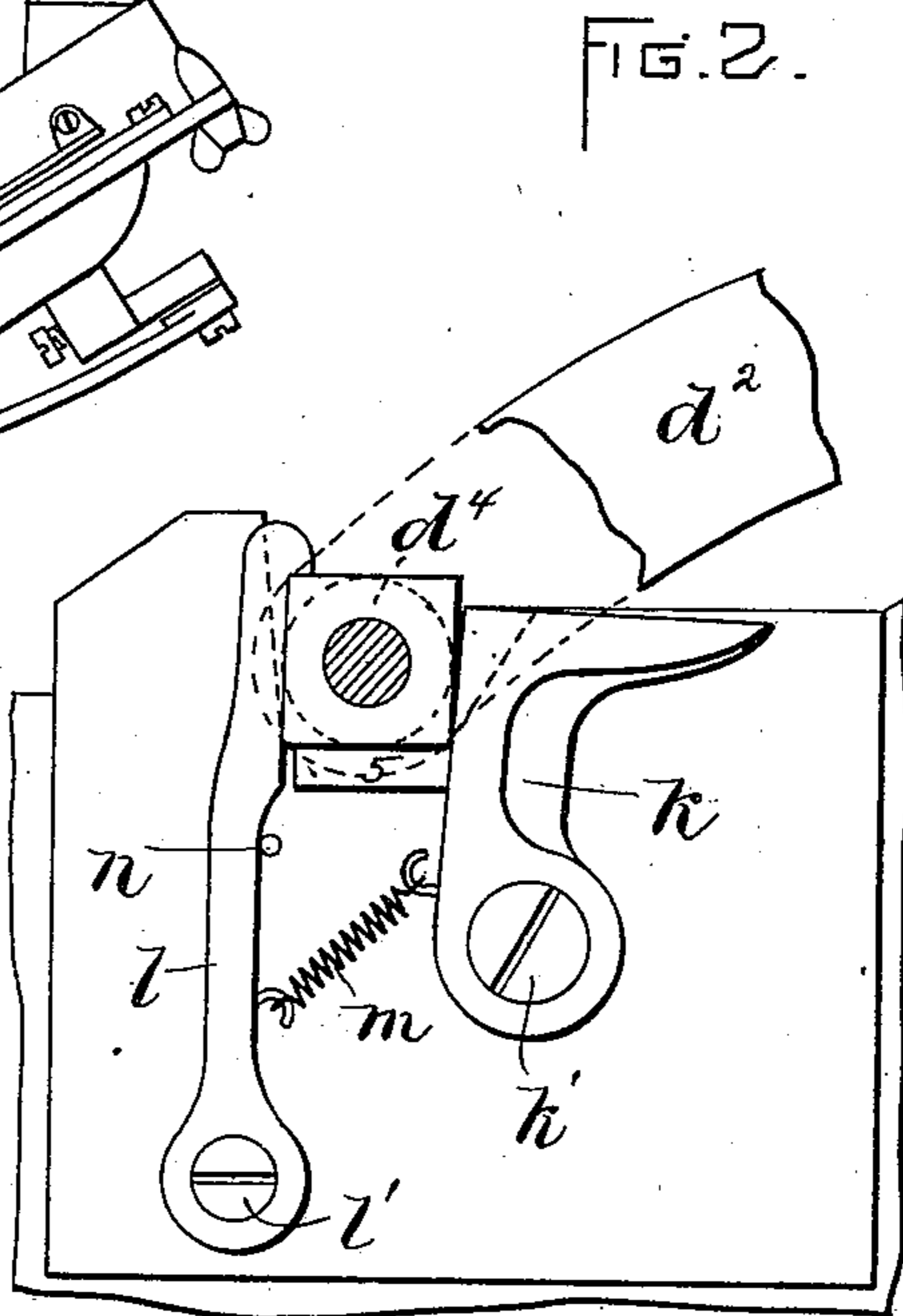


FIG. 2.

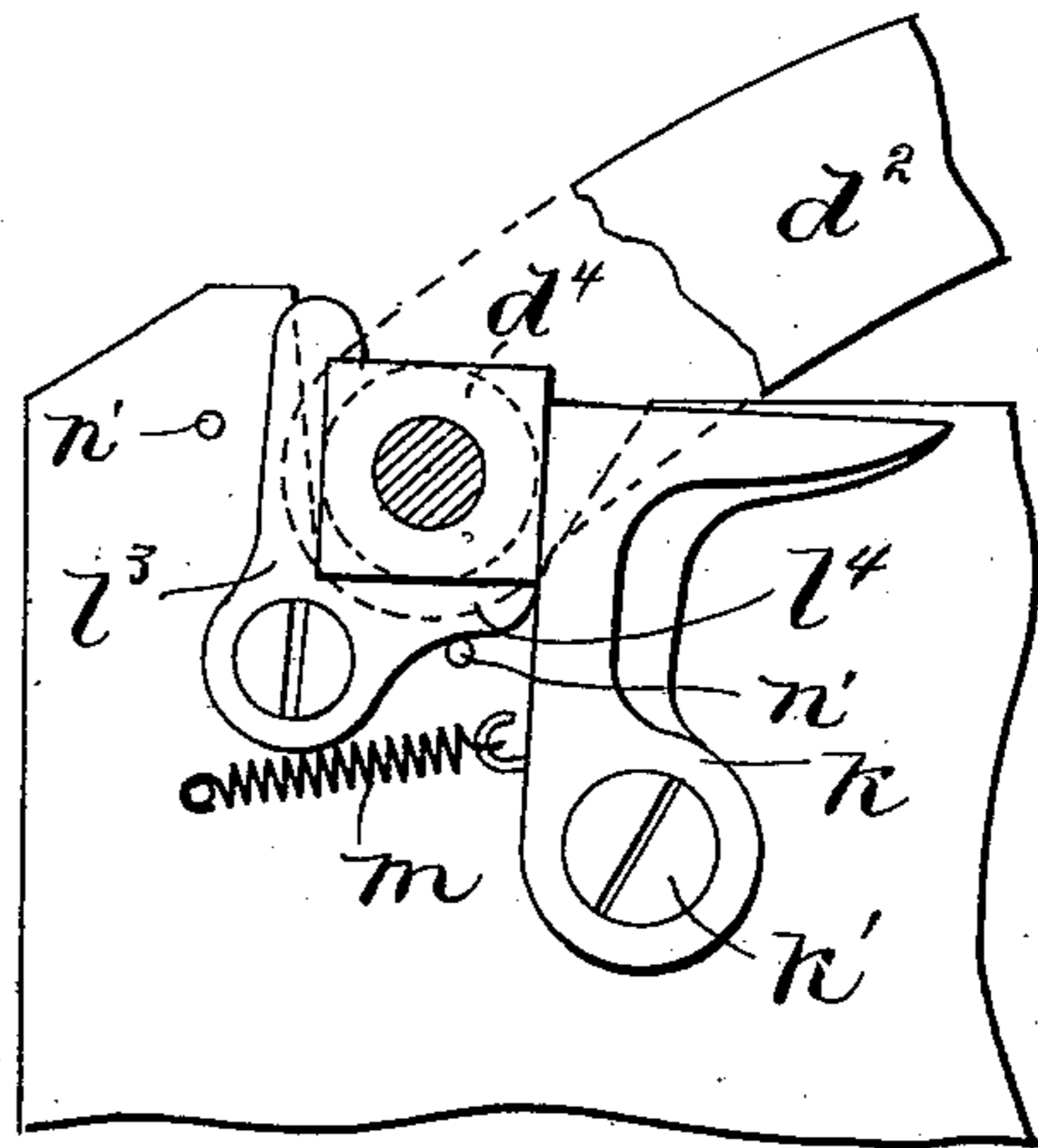


FIG. 4.

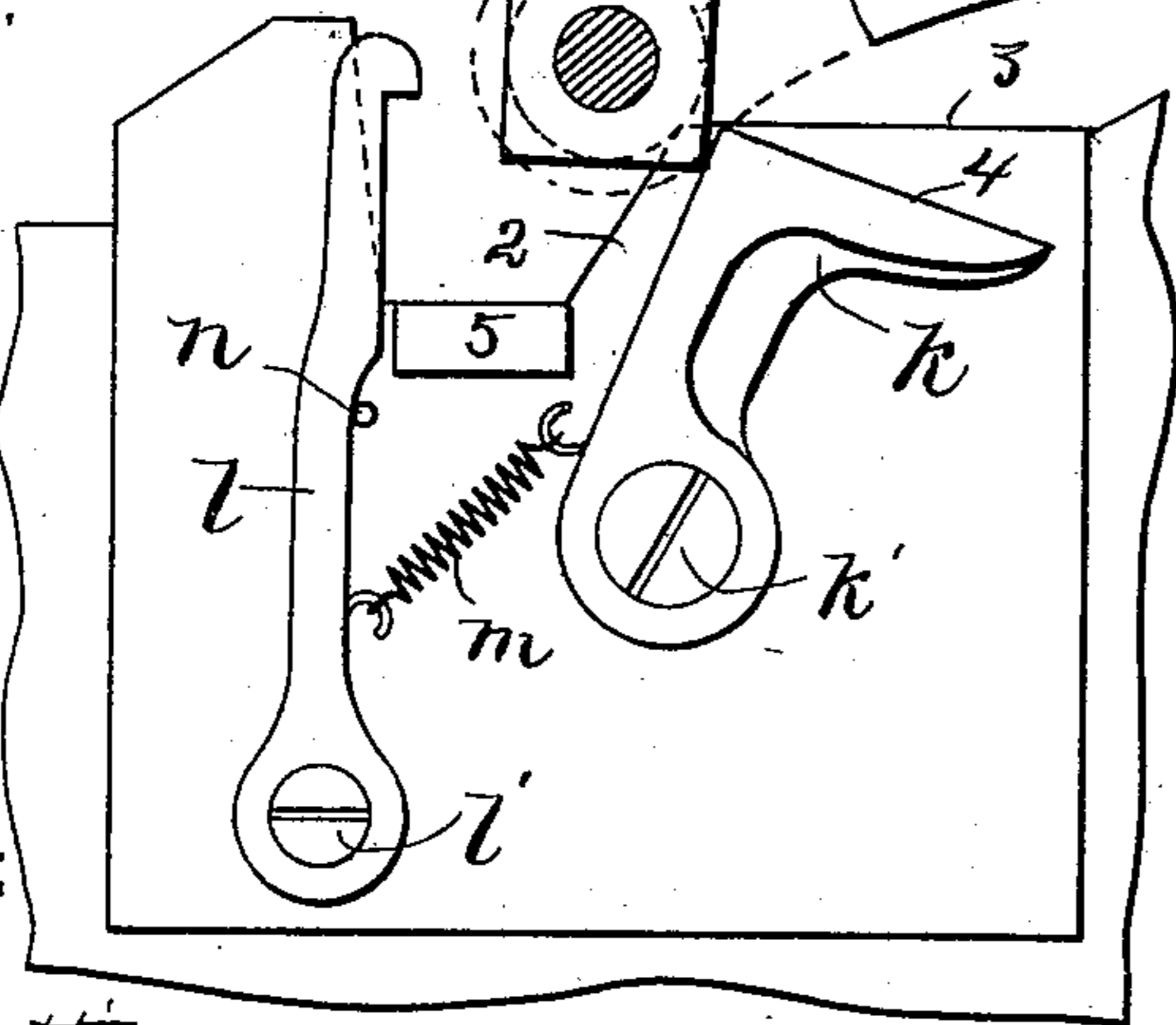


Fig. 3.

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SEYMOUR FIELD, OF QUINCY, MASSACHUSETTS.

EYELETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 606,964, dated July 5, 1898.

Application filed June 1, 1897. Serial No. 638,879. (No model.)

To all whom it may concern:

Be it known that I, SEYMOUR FIELD, of Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and
5 useful Improvements in Eyeletting-Machines, of which the following is a specification.

This invention relates to eyeletting-machines in which the operations of advancing the chute to present an eyelet to the bottom
10 set, and of raising the bottom set to carry the lowest eyelet upwardly to the top set, and at the same time withdrawing the chute, are performed by a mechanism actuated by a treadle, said machines being typified in that illus-
15 trated in my former patent, No. 545,468, dated September 3, 1895, in which the eyelet-chute is guided toward and from the lower set by a fixed track and a movable track. I have found that in some cases when the chute is
20 moved forward beyond the movable track and is dropped into place on its seat there is danger of a rebound or backlash which prevents the machine operating with the greatest efficiency. Hence this invention has for its ob-
25 ject to add such improvements to a machine of the character specified as will prevent any rebound or backlash of the chute after it has once been dropped into place; and it consists of those features which I shall hereinafter pro-
30 ceed to describe in detail and then point out in the claims hereto appended.

Reference is to be had to the annexed drawings, and to the letters and figures marked thereon, forming a part of this specification,
35 the same letters and figures designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side elevation of an eyeletting-machine equipped with
40 my improvements. Figs. 2 and 3 represent in side elevation a portion of the machine, showing it at different stages of operation. Fig. 4 illustrates a different form of my in-
45 vention.

In the drawings, *a* represents the fixed frame of the machine, having an overhanging arm *a'*, to which is affixed the top set *b*, the latter having a downwardly-projecting yield-
50 ing finger *b'*, which engages the work by entering the hole provided therein, as usual.

c represents the bottom set, which is provided with the yieldingly-supported eyelet-

engaging finger *c'*. The bottom set is vertically reciprocated by mechanism of any desired sort—such, for instance, as that illus- 55 trated and described in my former patent, No. 545,468. It engages the lowest eyelet in the chute and raising it to the top set inserts it in the work held upon the top set and co-operates with the latter in upsetting and se- 60 curing it, all in a manner common to eyeletting-machines and requiring no detailed description.

d represents the eyelet-chute, which is formed in a well-known manner to guide the 65 eyelets from a reservoir *d'* at the upper end of the chute and present the lowest eyelet to the fingers *c'*, said chute being affixed to a carrier *d''*, which is pivoted at *d'''* to an operating-lever *e*, said lever being pivoted at *e'* to the frame 70 of the machine.

f represents the operating-lever, which is pivoted at *f'* to a downwardly-projecting arm or extension *a''* on the supporting-frame, one of the arms of the lever *f* being connected 75 with a treadle, (not shown,) while the other arm of said lever is connected by means (not shown) with the bottom set and with a rock-shaft *i*, mounted in the said arm *a''*. The rock-shaft is connected by an arm *i'* and a link *j* 80 with the chute-supporting lever *e*. When the lever *f* is elevated or raised, the bottom set is depressed, and when it is lowered the bottom set is raised.

The chute-carrier *d''*, which, as already 85 stated, is pivoted to the lever *e*, is provided at its lower end with a trundle-roll *d'''*, which is adapted to move on a fixed track which comprises the oblique edge 2 and the hori- 90 zontal edge 3 of a plate *a'''*, affixed to the frame *a*, said track coöperating with the trundle-roll *d'''* in raising the lower end of the chute in its backward movement, as hereinafter described.

k represents an arm pivoted at *k'* to the 95 plate *a'''* and having its upper end formed as a movable track 4, which when the arm is in one position constitutes a continuation of the horizontal portion 3 of the fixed track and overlaps the oblique portion 2 of said track. 100

The object of the arm *k* and its track 4 is to support and guide the lower end of the chute during its forward movement and cause said end to move forward horizontally to a

position over the finger *c* of the bottom set and then drop vertically onto said finger.

Thus far the machine is not different from that illustrated and described in my former
5 patent, No. 545,468.

I shall now proceed to describe my improved lock for preventing a rebound of the block *d*⁵ after it drops upon its seat or rest 5 at the lower end of the inclined portion 2 of the fixed
10 track.

l represents a latch-arm pivoted at *l'* to the plate *a*³ and having in its upper end a projection *l*² to take over the upper edge 6 of the block *d*⁵ when the latter rests upon its seat 5
15 and lock it temporarily in position. The latch or lock *l* is normally held rearward by a spring *m*, which for the sake of convenience I also attach to the arm *k* and which operates to hold the latter forward normally.

20 *n* is a pin or stop which prevents the latch *l* from swinging too far forward under the stress of the spring *m*.

I sometimes dispense with the fixed seat 5 for the block *d*⁵ and prefer to form it as a
25 part of the latch *l*³, as shown in Fig. 4. In this event the latch is much shorter and is provided with an arm *l*⁴, which forms a seat or rest for the block *d*⁵ when it drops from the movable portion of the track.

30 No spring is needed to throw the latch portion of the arm rearward, as the weight of the chute is sufficient. Two stops or pins *n'* are employed to limit the movement of the latch and seat combined.

35 When the chute is raised and is in its retracted position, as shown in Fig. 4, the arm *k* stands with its track 4 forming a continuation of the portion 3 of the fixed track, so that the under side of the block or shoe *d*⁵ will be
40 supported and guided by the track 4 after leaving the portion 3 of the fixed track and so that when the chute and its carrier are moved forward the lower end of the chute will be supported by the track 4 until the
45 block *d*⁵ drops and rests upon the seat 5. This movement brings the eyelet-chute to the position shown in Fig. 1 and deposits the lowest eyelet in the chute upon the finger *c* of the bottom set. As the block *d*⁵ drops
50 upon its seat 5 or *l*⁴, as the case may be, the latch swings forward and then moves back immediately upon the block, reaching its seat, and locks it there so as to prevent any rebound or backlash. When the chute is

55 moved back to its retracted position, the trundle-roll moves up on the inclined portion 2 of the track and frees itself from engagement with the latch.

I do not herein claim, broadly, mechanism for guiding the chute horizontally and verti- 60 cally and preventing a rebound thereof at the end of its forward movement, as that is made the subject-matter of claims in my co-pending application, Serial No. 638,880, filed concurrently herewith. 65

I claim—

1. In an eyeleting-machine, the combination with an eyeleting device, an eyelet-chute, mechanism for operating said parts, and a track for guiding the chute in its movement, 70 of a latch for engaging it when it is in its lowermost position to prevent a rebound of the same.

2. In an eyeleting-machine, the combination with an eyeleting device, an eyelet-chute, 75 and mechanism for operating said parts, of the fixed track formed to raise the chute during its backward movement, the movable track adapted to guide the chute horizontally during its forward movement, and a latch or 80 lock for said chute to prevent its rebound when it has reached the limit of its forward movement.

3. In an eyeleting-machine, the combination with the eyeleting device, the eyelet- 85 chute, and mechanism for operating said parts, of the fixed track for the chute, a swinging arm formed to constitute an extension of a part of the fixed track and a latch for engaging the forward end of the chute. 90

4. In an eyeleting-machine, the combination with the eyeleting device, the eyelet- 95 chute, and mechanism for operating said parts, of the fixed track for the chute, a swinging arm formed to constitute an extension of a part of the fixed track, and a latch for engaging the forward end of the chute and having a portion to act as a seat for said chute when it has reached the limit of its forward and downward movement. 100

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of September, A. D. 1896.

SEYMOUR FIELD.

Witnesses:

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A. D. HARRISON,