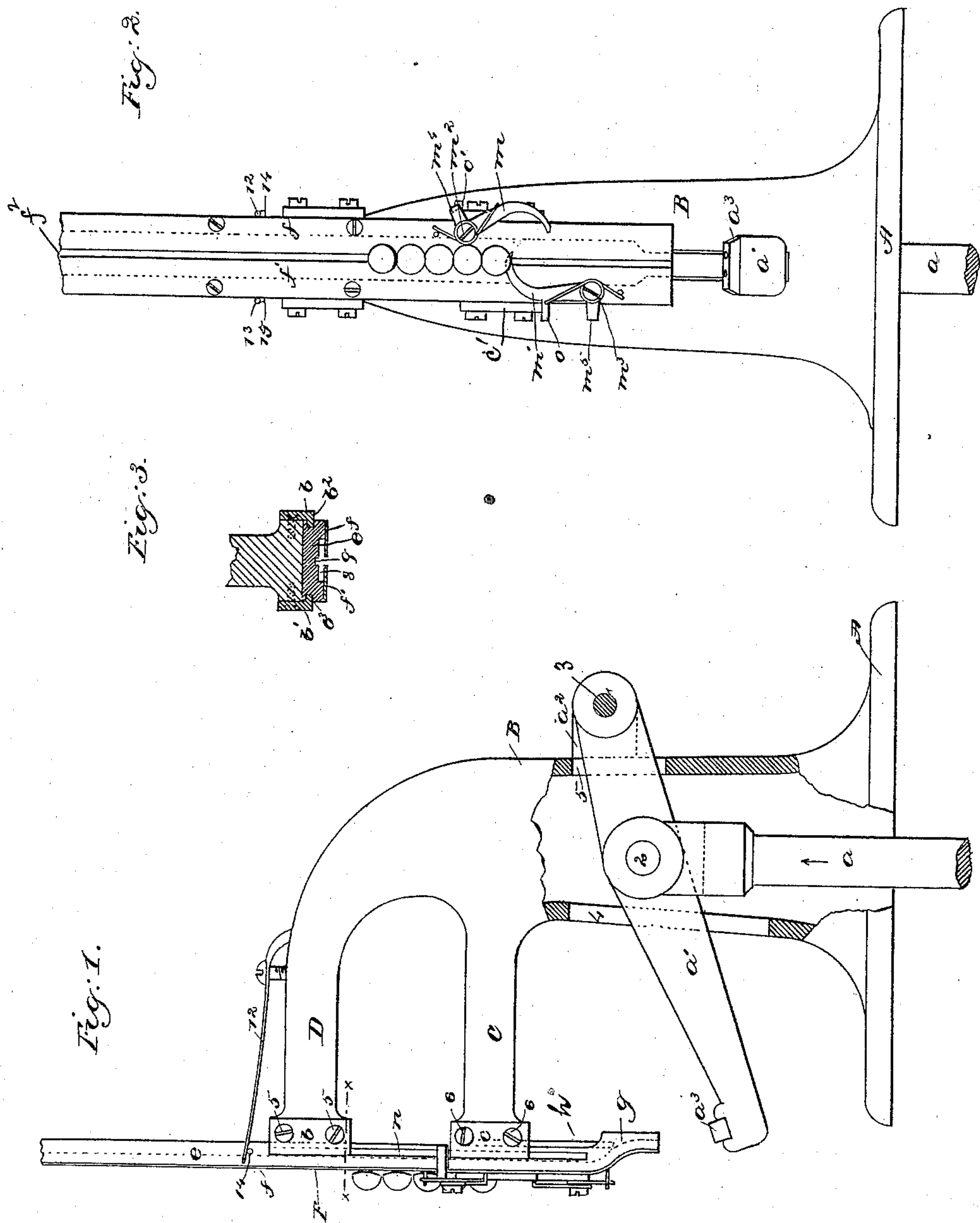


(No Model.)

E. H. TAYLOR.  
BUTTON SETTING MACHINE.

No. 368,625.

Patented Aug. 23, 1887.



Witnesses  
Thomas Holiday  
Fred L. Emery

Inventor.  
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# UNITED STATES PATENT OFFICE.

EUGENE H. TAYLOR, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE PENINSULAR NOVELTY COMPANY, OF GRAND RAPIDS, MICHIGAN.

## BUTTON-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 368,625, dated August 23, 1887.

Application filed April 13, 1886. Serial No. 198,662. (No model.)

*To all whom it may concern:*

Be it known that I, EUGENE H. TAYLOR, of Lynn, county of Essex, and State of Massachusetts, have invented an Improvement in Button-Setting Machines, 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 to construct a button-setting machine wherein the staples are first passed through the eyes of the buttons, and are then fed into a slotted carrier or chute, through which they pass by gravity, to be acted upon at a certain point by a driver, which forces the staple and its attached button from the chute, and, co-operating with a suitable anvil, forces the prongs of the staple through the material.

In another application filed by me April 3, 1886, Serial No. 198,661, to which reference may be had, a movable carrier or chute was shown, such as herein employed, and a movable driver was also shown, which, together with the carrier or chute, co-operated with a stationary anvil to drive the fasteners.

In this my present invention the driver is stationary, the anvil movable, and the carrier or chute also movable vertically, so that when the anvil is raised against the lower end of the carrier the latter may be raised sufficiently to permit the driver to force the staple from its lower end.

The invention therefore consists of a movable anvil combined with a movable carrier or chute slotted to receive one or more staples having buttons pendent therefrom, and a driver to force the staple from the carrier or chute as the latter is raised by the anvil; also, of a movable anvil combined with a moving or yielding carrier or chute slotted to receive one or more staples having buttons attached thereto, and feeding devices controlled by the movement of the carrier to permit one staple and its attached button to drop at a time into position to be acted upon by the driver; also, in other combinations to be hereinafter set forth.

Figure 1 shows in side elevation and partial section a button-setting machine constructed in accordance with this invention; Fig. 2, a

front view of the machine; and Fig. 3, a section of Fig. 1, taken on the dotted line *x x*.

The base A and upright B, having two arms, C D, comprise the main frame-work of the machine, and may be of suitable shape to support the operating parts.

The upright B is hollow or tubular to receive a rod or shaft, *a*, to the upper end of which the anvil-carrying arm *a'* is pivotally connected at or near its center by a pin, 2.

One end of the anvil-carrying arm *a'* is pivoted to a lug or ear, *a''*, projecting from the upright B by a pin, 3, while the opposite end carries the anvil-block *a'''*, thus forming a lever of the third order working in slots 4 5 in opposite sides of the upright B.

To each side of the ends of the arms D C are secured by screws 6 6 cheek-pieces *b b'* *c c'*; having flanges, as at *b'' b'''*, which form guides for the carrier or chute F.

The carrier or chute F consists of a vertical bar, *e*, slotted, as at 8 9, to receive a staple and the end of the eye of a button through which the said staple is passed. Two metal strips, *f f'*, are secured upon each side of the face of the carrier or chute F, being placed a sufficient distance apart to leave an intervening space, *f''*, in which the eye of the button passes. The bar *e* is grooved upon each side, as at *n*, in which the flanges of the cheek-pieces enter. The lower end of the bar *e* is bent inwardly or offset, as at *g*, to convey the staple and its attached button into proper position to co-operate with the anvil *a'''*. Upon the side pieces, *f f'*, suitable feed-dogs, *m m'*, are pivoted by pins *m'' m'''*, the engaging ends of the said feed-dogs lying adjacent to each other. Each feed-dog is provided at that end opposite the engaging end with a bent arm, *m'' m'''*, passing around the side of the carrier or chute, and projections *o o'* are so located upon the sides of the arm C as to be alternately struck by the bent arms of the feed-dogs *m m'* as the carrier or chute F rises and falls. The co-operation of the two feed-dogs serves to permit one staple and its attached button to drop at a time into the lower end of the carrier or chute F, the slot 8, in which the staple passes, being somewhat reduced in width at its lower end to prevent the staple falling from the chute.



The carrier or chute F, above described, is similar to that described in the application referred to; but the feed-dogs in that application were arranged to operate in a reverse order.

5 Therefore such devices are not herein claimed.

The driver-bar *h* is fixed to the arm C, the block resting adjacent to the rear side of the carrier or chute F, and is of such length that as the carrier or chute is raised by the anvil  
10 it may enter the inwardly-bent lower end of the said carrier, forcing the staple therefrom and co-operating with the anvil to force the prongs of the staple through the material.

Suitable flat springs, 12 13, secured to the  
15 top of the frame-work of the machine, bear upon fixed studs 14 15, projecting from opposite sides of the carrier or chute F, normally keeping the same in its lowermost position.

The operation of the machine is as follows:

20 The staples, having buttons attached thereto, as described, are fed into the carrier or chute F. The rod *a* is raised by any suitable treadle, (not shown,) causing the anvil *a*<sup>3</sup> to strike the lower end, *g*, of the carrier or chute F, the lat-  
25 ter thereby yielding against the tension of the springs 12 13 until the anvil comes in contact with the driver *h*, or nearly so, when the treadle is released and the rod *a* permitted to fall. During this movement of the machine  
30 the feed-dogs *m m'* alternately strike the rotating projections and permit one staple and its attached button to fall into the lower end of the carrier or chute F. The rod *a* is then again raised by the treadle, and the anvil *a*<sup>3</sup>,  
35 carrying the material, strikes against the lower end of the carrier or chute F, raising the latter, that the driver may enter its lower end and force the staple therefrom, thence setting the button.

40 I claim—

1. In a button-setting machine, a moving

anvil, combined with the movable or yielding carrier or chute F, slotted its entire length to receive a series of staples having buttons pendent therefrom, and a driver to force the lower-  
45 most staple and button from the chute, substantially as described.

2. In a button-setting machine, a movable anvil, combined with a moving or yielding carrier or chute, F, slotted to receive a series  
50 of staples having buttons pending therefrom, and a driver to force the lowermost staple and button from the chute, and feeding devices, substantially as described, for permitting one staple at a time to be brought into position to  
55 be acted upon by the driver, substantially as and for the purposes set forth.

3. In a button-setting machine, a movable anvil and stationary driver, combined with a movable or yielding carrier or chute, F, slotted  
60 to receive a staple having a button pendent therefrom, and bent inwardly at its lower end to receive a staple and attached button between the driver and anvil, substantially as described.

4. In a button-setting machine, a movable  
65 anvil and stationary driver, combined with a movable or yielding carrier or chute, F, slotted to receive a staple having a button pendent therefrom, and bent inwardly at its lower end to receive a staple and attached button between  
70 the driver and anvil, and having feeding devices, substantially as described, to permit one staple at a time to enter the said inwardly-bent lower end of the carrier or chute, substantially as described.  
75

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

EUGENE H. TAYLOR.

Witnesses:

BERNICE J. NOYES,  
F. CUTTER.