

(No Model.)

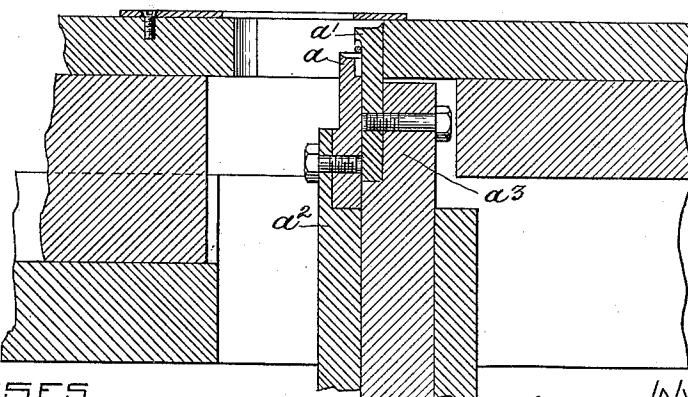
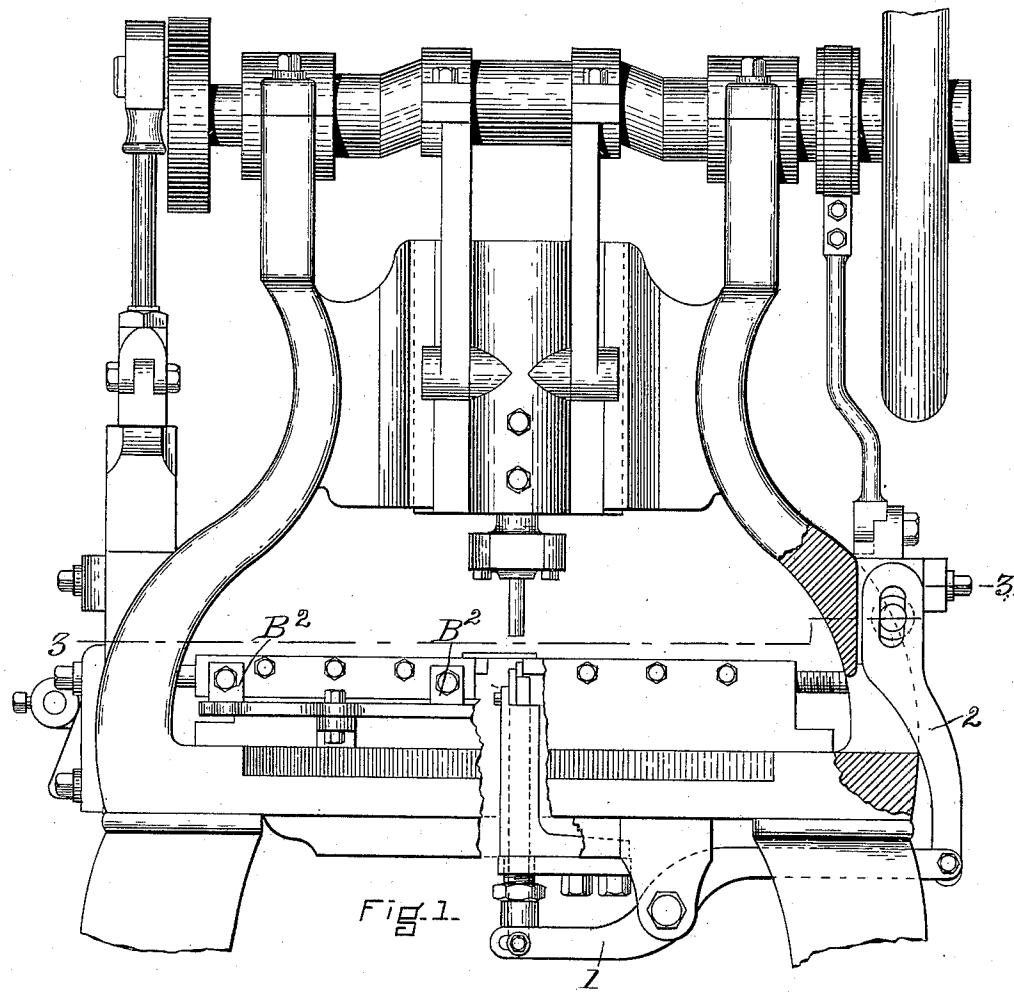
3 Sheets—Sheet 1.

L. E. CHACE.

MACHINE FOR MAKING BUTTONS.

No. 372,011.

Patented Oct. 25, 1887.



WITNESSES.

Edward S. Beach.

John R. Snow.

INVENTOR.

Lincol E. Chace

W. J. Maynard  
Atty.

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3 Sheets—Sheet 2.

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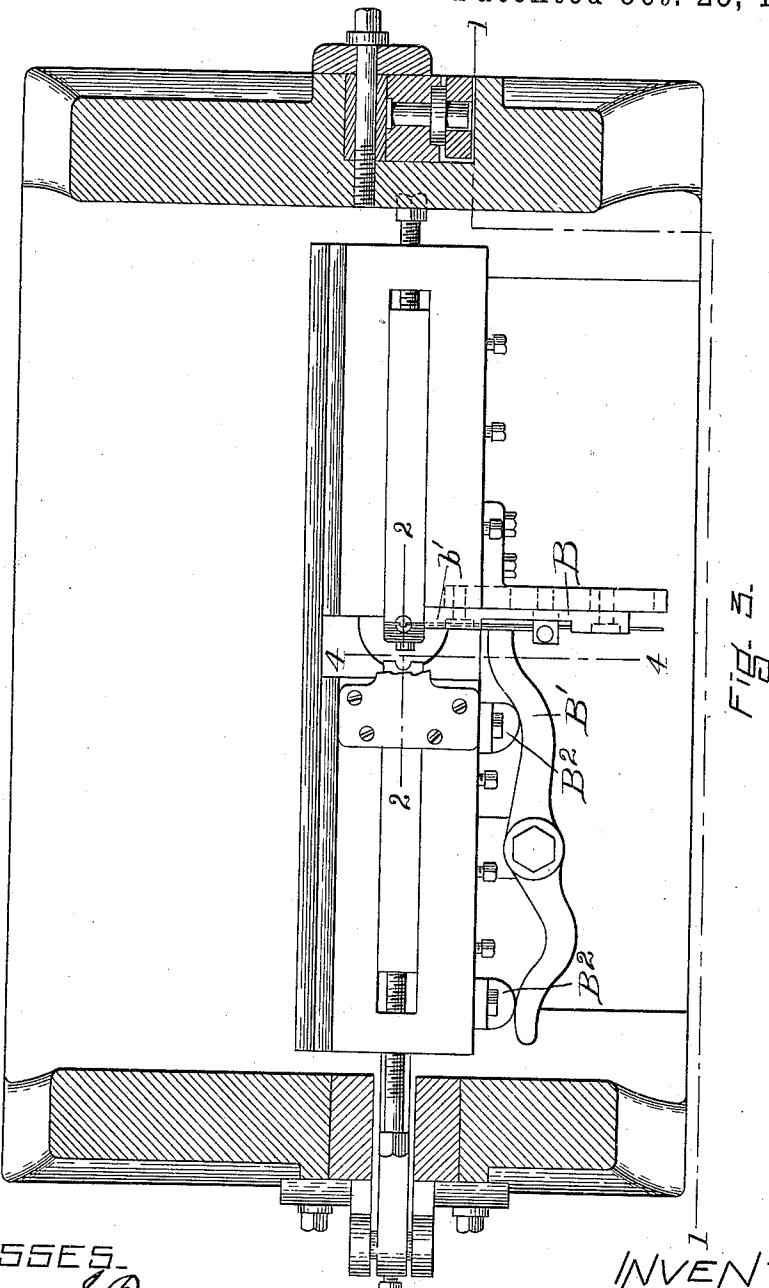


FIG. 2.

WITNESSES.

Edward S. Beach

John R. Snow.

INVENTOR.

Lester E. Chace  
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(No Model.)

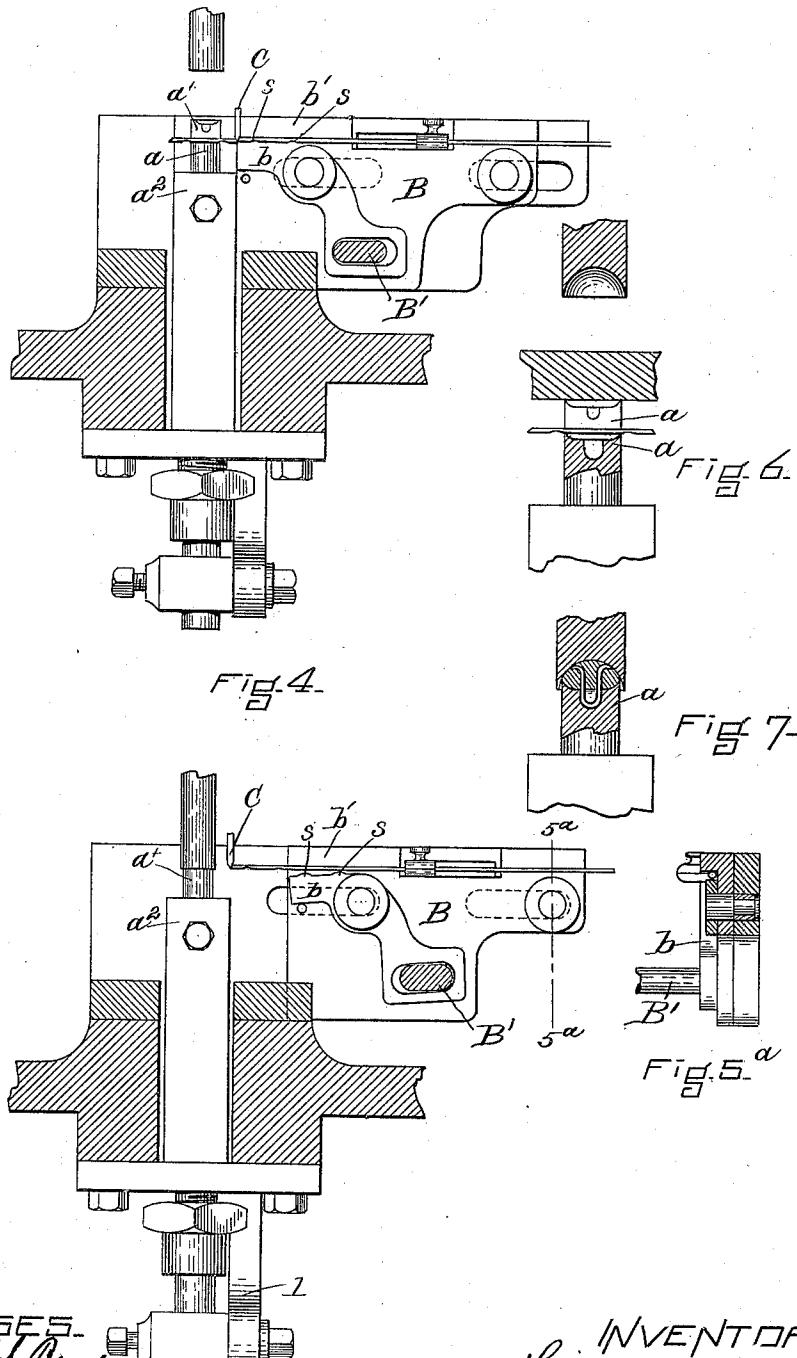
3 Sheets—Sheet 3.

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MACHINE FOR MAKING BUTTONS.

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Patented Oct. 25, 1887.



WITNESSES.

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FIG. 5.

INVENTOR.

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# UNITED STATES PATENT OFFICE.

LINCOLN E. CHACE, OF FREETOWN, ASSIGNOR OF ONE-HALF TO FRANCIS E. FULLER, OF TAUNTON, MASSACHUSETTS.

## MACHINE FOR MAKING BUTTONS.

SPECIFICATION forming part of Letters Patent No. 372,011, dated October 25, 1887.

Application filed July 7, 1887. Serial No. 243,640. (No model.)

To all whom it may concern:

Be it known that I, LINCOLN E. CHACE, of Freetown, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Machines for Making Buttons, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of a portion of a machine embodying my improvements sectioned on line 1 1 of Fig. 3. Fig. 2 is an enlarged section on line 2 2 of Fig. 3. Fig. 3 is a plan, partly in section, on line 3 3 of Fig. 1. Fig. 4 is a section enlarged on line 4 4 of Fig. 15 3. Fig. 5 is a like section with the feed-slide in a different position. Fig. 5<sup>a</sup> is a side view, partly in section, on line 5<sup>a</sup> of Fig. 5.

My invention relates to machines of the class described in my Letters Patent No. 20 359,997, dated March 29, 1887; and it consists, mainly, in a new construction of the forming-die, by which it not only serves its own function as a forming-die, but also forms a shank and presents it properly to the button-blank.

25 The other features of my invention relate to mechanism for feeding and severing the wire and indenting it to form an anchor fastening.

The machine shown in the drawings is in 30 all respects substantially like my patented machine, except so far as concerns the construction and operation of the die and the mechanism for feeding the wire to form the eyes or shanks of the buttons, and I have not lettered those parts, which are the same as 35 those shown in my patent above referred to.

The die is formed in two parts,  $a$   $a'$ , as shown 40 in Figs. 2, 4, 6, and 7. The part  $a$  is fast to a die-holder,  $a^2$ , which is rigidly attached to the frame-work of the machine. The other part,  $a'$ , is fast to the reciprocating die-holder  $a^3$ , which is reciprocated by the lever 1 and slotted link 2, the link 2 being connected by a stud through the slot in link 2 with a slide, which 45 is slide L of my patent above mentioned. When the wire is fed forward by the feed mechanism, it is carried under the projection from one side of the part  $a'$  of the die and across the top of the die, as indicated in Figs. 50 2 and 6, and under the projection from the re-

ciprocating die  $a'$ . This die  $a'$  is then forced to place to make a complete die of  $a$   $a'$ , and that bends the piece of wire into the form of the shank or eye of the button, with its legs projecting up from the bottom of the die, to receive the button-blank when it is punched out and forced by the punch into the die in the well-known manner.

55 It will be seen that the projection from the part  $a'$  enters a recess in the part  $a$ , as shown in Figs. 6 and 7, this projection and recess making a shank-forming or eye-forming mechanism; and it is this split die with this recess and projection which is the main feature of my invention, and which makes a more positive, 60 simple, and compact contrivance for forming the shank or eye and holding it in proper relation with the die than any other known to me.

65 The feed mechanism shown is also a feature of my invention; and it consists in a clamp,  $b$   $b'$ , mounted upon a slide, B, which slide is reciprocated by the lever B'. This lever passes through one end of the clamping-lever  $b$ , so that during the first part of the motion of the 70 lever B' the clamping-lever  $b$  clamps the wire between the other end of the clamping-lever  $b$  and the clamping-jaw  $b'$  upon the slide B. This not only clamps the wire firmly, but also 75 enables me to indent the wire by means of small projections on the clamping-face of the lever  $b$ , as shown in Figs. 4 and 5, and these indentations serve to make the prongs diverge, as shown in Fig. 7, giving the shank a firm and secure hold upon the body of the button.

80 The slide is moved forward by the motion of the lever B' until it is stopped by contact with the die-holder  $a^2$ , (or some other suitable stop,) when the further motion of the lever B' moves the lever  $b$  slightly and causes it to force the 85 wire against the cutter C; (see Fig. 4,) which is firmly fastened to the frame of the machine, the projections on the rubbing-face of lever  $b$  at the same time being forced into the wire to indent it, as shown in Fig. 4. The back-stroke 90 of the lever B' opens lever  $b$ , so that it and slide B are carried back to the position shown in Fig. 5 without moving the wire. The lever B' is actuated by wiper B<sup>2</sup>, which is fast to the reciprocating part of the machine, as will be 95 100

clear, without further description, to all skilled in the art.

What I claim as my invention is—

1. The split die  $a a'$ , having the shank-forming projection and recess, substantially as and for the purpose specified.
2. The wire-feed mechanism consisting of

the clamping-lever  $b$ , clamping jaw  $b'$ , and slide B, combined and operating substantially as described.

LINCOLN E. CHACE.

Witnesses:

J. E. MAYNADIER,  
F. E. FULLER.