

(No Model.)

I. J. SAUNDERS.

MECHANISM FOR SETTING SPRING BUTTONS.

No. 303,668.

Patented Aug. 19, 1884.

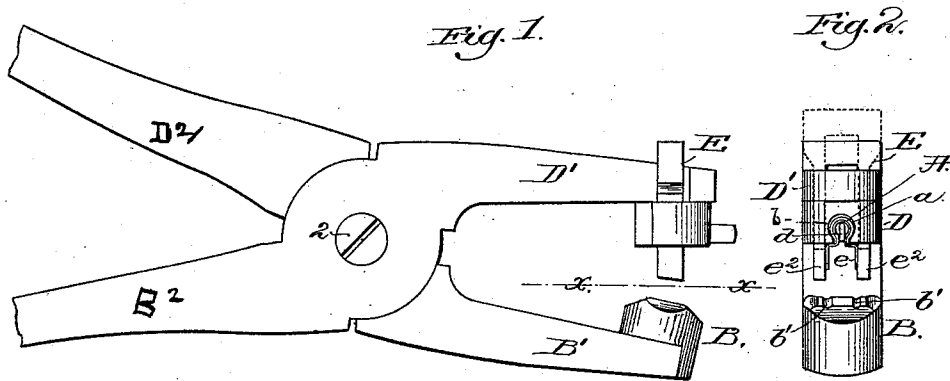


Fig. 3.

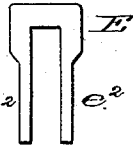


Fig. 4.

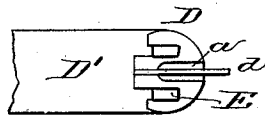


Fig. 5.

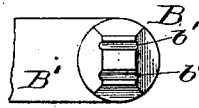


Fig. 6.

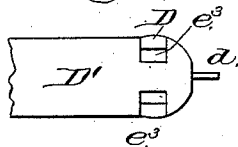


Fig. 7.



Witnesses,

John F. C. Forster
Henry Mark.

Inventor,

Ira J. Saunders
by Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

IRA J. SAUNDERS, OF UNION CITY, MICHIGAN.

MECHANISM FOR SETTING SPRING-BUTTONS.

SPECIFICATION forming part of Letters Patent No. 303,668, dated August 19, 1884.

Application filed June 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, IRA J. SAUNDERS, of Union City, county of Branch, State of Michigan, have invented an Improvement in Mechanism for Setting Spring-Buttons, 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 production of mechanism for setting spring-buttons, such as described in my application No. 136,359, filed June 20, 1884, to which reference may be had.

In this my invention I employ an anvil, and co-operating with it a receiver for the spring-button to be set, and a prong directing and steadying device, the latter traveling longitudinally with relation to the prongs as the anvil and receiver are made to approach each other in the act of setting the spring-button in a boot or shoe or other article, and clinching its prongs. The spring-button receiver is shown as provided with a saddle, on which the spring-buttons are placed to be moved into proper position in the receiver to be set, and from which, as herein shown, they are drawn after the button has been set or its prongs clinched, the said saddle remaining within the eye of the spring-button while its prongs are being set, thus preventing bending or forcing the eye out of shape.

Figure 1 in side elevation represents the main part of a mechanism embodying my invention, the same being represented as a tool to be actuated by hand; Fig. 2, a right-hand end view of Fig. 1. Fig. 3 shows the prong directing and steadying device separate from the other parts; Fig. 4, a view of Fig. 1 above the line *xx*; Fig. 5, a view of Fig. 1 below the lever *xx*; Fig. 6, a top view of the right-hand end of Fig. 1 with the prong directing and steadying device removed, and Fig. 7 shows one of the spring-buttons set into a piece of leather.

The anvil B has clinching grooves or recesses *b'*, into which enter the prongs *e* of the spring-button A after passing through the material *m*, the said recesses acting to turn the said prongs in and clinch them, as in Fig. 7.

The spring-button receiver D is made as a

block, having a recess, *b*, corresponding in cross-section with the rounded head of the spring-button to be set, and as herein shown I have placed a saddle, *d*, in the longitudinal center of the said receiver, one end of the saddle being shown in Fig. 4 as connected with the said receiver.

The spring-button to be set is placed upon the saddle, and is then slid thereon into the receiver, as shown in Fig. 2, the walls of the receiver embracing the head of the spring-button, and the saddle entering the eye thereof and extending into the open neck of the spring-button, keeping the two parts of the neck at the proper distance apart, so as to permit the same after the buttons have been set and the saddle withdrawn to spring together slightly as an eyelet is forced down over the head of the button, as described in my application referred to.

The die is shown as connected rigidly with an arm or support, *B'*, while the receiver is connected with or carried by an arm or support, *D'*, the said arms or supports being herein shown as forming part of a hand implement, consisting of two levers pivoted at 2, and having arms, as shown at *B'D'*; but it will be understood that if the said parts should be used in a power-machine that the anvil would be secured to some fixed part of the machine and the receiver be attached to some movable part, such as a lever or bar.

Co-operating with the receiver is a prong directing and steadying device, *E*, having legs *e' e'*, which are fitted to slide up and down in the recesses *e'*. (See Fig. 6 of the receiver.) After the spring-button has been placed in proper position in the receiver, the prong director and steadying device is moved in the receiver to rest against the outer sides of the spring-button, as in Fig. 2. In such position of the parts the material *m* of the boot, shoe, or other article is placed between the anvil and receiver, and the receiver is moved toward the anvil to cause the prongs *e* of the spring-button to penetrate the said material. The ends of the legs *e' e'* first meet the material, and then the prongs *e e*, and as the prongs kept straight by the prong directing and steadying device enter the material the said prong directing and steadying device slides longitudi-

nally in the opening e^2 of the receiver D, and by the time that the said prongs e have been clinched, as shown in Fig. 7, the said device E has been moved up into the dotted-line position, Fig. 2. While the prongs e are being clinched, the saddle d in the eye of the spring-buttons and in the space between the side of the neck c thereof prevent the said neck from being closed together. The prongs having been clinched, the material is pulled in the direction to draw the button from the receiver and saddle.

I claim—

1. In an apparatus for setting spring-buttons, a receiver provided with a groove for the reception of the head of the button, and a prong directing and steadying device to rest against the sides of the prongs of the buttons while they are being clinched at the side of the material, combined with the anvil and arms or supports for the said anvil and receiver, substantially as described.

2. In a machine for setting buttons, a re-

ceiver provided with a recess for the reception of the head of the button, combined with a saddle placed in line with the recess in the said receiver and receiving upon it the button to be set, the saddle resting in the eye of the button while its prongs are being clinched, substantially as described.

3. In a machine for setting buttons, a receiver provided with a recess for the reception of the head of a button, a saddle to receive upon it the button to be set, and a movable or sliding prong steadying and directing device, combined with an anvil and with arms or supports for the said anvil, receiver, and steadying and directing device to operate substantially as described.

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

IRA J. SAUNDERS.

Witnesses:

G. W. GREGORY,
W. H. SIGSTON.