

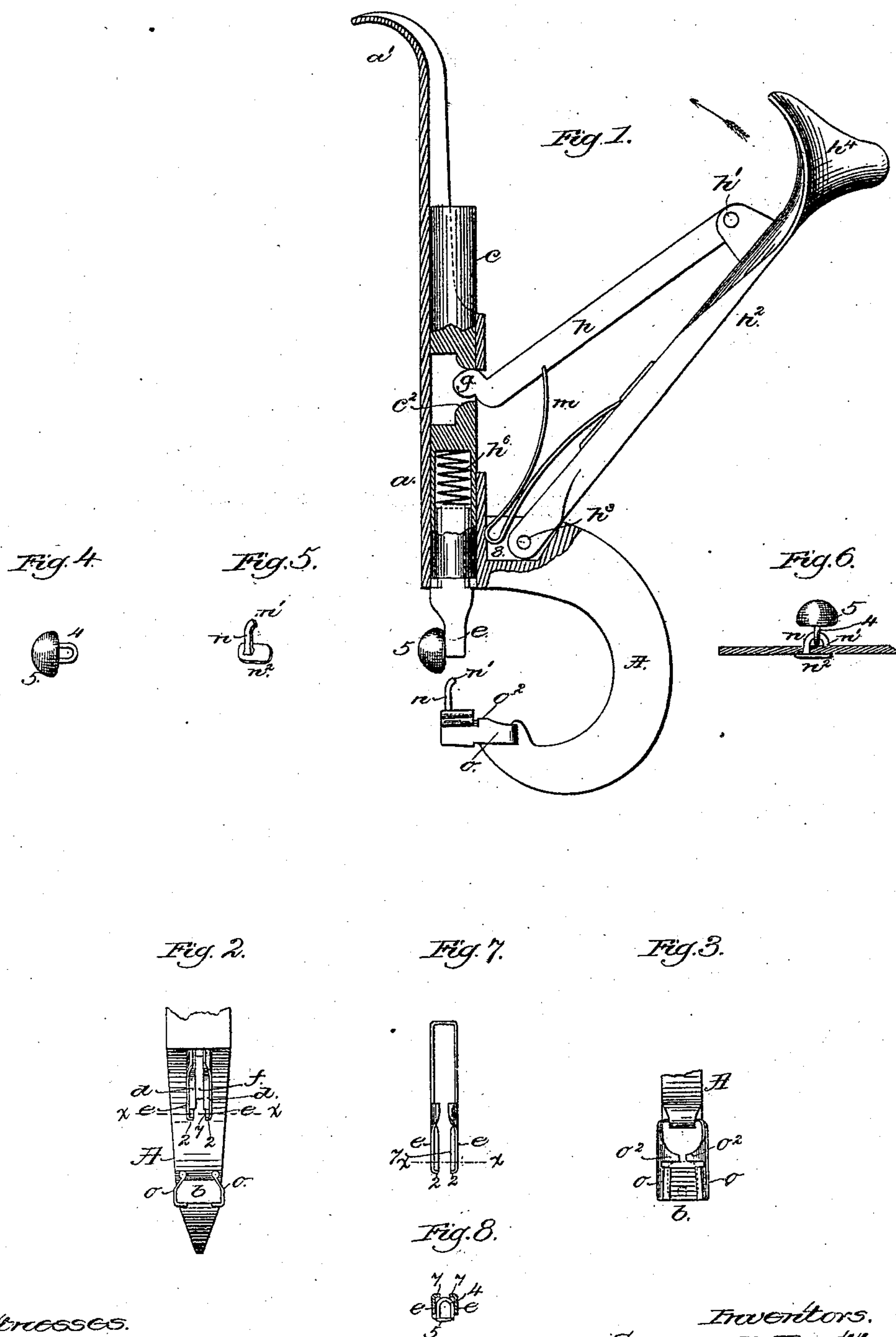
(No Model.)

S. L. PRATT & A. M. ENGLISH.

BUTTON SETTING INSTRUMENT.

No. 287,389.

Patented Oct. 23, 1883.



WITNESSES.

John F. C. Prengle
Arthur Lipperlen.

Inventors.

Samuel I. Pratt, and
Arnaldo M. English
by Crosby Gregory
attys

UNITED STATES PATENT OFFICE.

SAMUEL L. PRATT, OF HINGHAM, MASS., AND ANALDO M. ENGLISH, OF PROVIDENCE, R. I.; SAID ENGLISH ASSIGNOR TO SAID PRATT.

BUTTON-SETTING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 287,389, dated October 23, 1883.

Application filed August 13, 1883. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL L. PRATT, of Hingham, county of Plymouth, State of Massachusetts, and ANALDO M. ENGLISH, of Providence, county of Providence, and State of Rhode Island, have invented an Improvement in Button-Setting Instruments, 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 a novel instrument by which to set buttons upon boots and shoes and other articles in a rapid and simple manner, the fastening employed being substantially such as shown in United States Patent No. 278,734, to which reference may be had.

In our present invention the button-shank is grasped and held by or between spring-jaws carried by and made movable with a reciprocating plunger held in a suitable case or guide, and adapted to be operated, preferably, by a lever and a link. A portion of the frame of the instrument below the guide in which the plunger reciprocates is provided with clamping-jaws to grasp the head of the metallic fastening and hold it in place, so that the point of the said fastening, when passed through the material, will properly enter the eye of the button-shank, the said jaws being provided with a suitable gage, against which may be placed the head of the fastener.

Figure 1, in side elevation and partial section, represents a button-setting instrument embodying our invention, the button and fastening being each held by its proper jaw, ready for the insertion between them of the material upon which the button is to be fastened. Fig. 2 is a detail showing the lower end of the button-holding plunger and the fastening-clamp, looking at Fig. 1 from the left. Fig. 3 is a detail showing the upper side of the clamp and support for the fastening. Fig. 4 represents a button; Fig. 5, a fastening such as herein employed. Fig. 6 shows a button attached to a piece of material by means of a fastening such as shown in Fig. 5. Fig. 7 is a detail of the button-clamp alone; and Fig. 8, a section on the dotted line *x x*, Figs. 2 and 7.

The lower part of the frame-work or head

A is made somewhat like a letter **G** reversed, has forming part of it a guide, *a*, the upper end of which is preferably curled over, as at *a'*, to form a loop to assist in sustaining the instrument in the hand of the operator. The lower part of the frame-work or head is provided with a rest, *b*, in line with and directly under the guide *a*. This guide *a* contains within it a plunger, *c*, chambered at its lower end to receive a combined button-clamp and an anvil. The clamp is composed of two plates, *d d*, and a spring-jaw, *e e*, having lips 2, turned toward each other, and substantially parallel with the lower ends of the plates *d d*, to grasp the shank 4 of the button 5. The anvil is composed of a steel plate, *f*, located between the plates *d d*, but fixed to the plunger. The spring-jaw *e* is composed of a piece of sheet-steel bent as shown in Fig. 7, and extended around and connected to the plates *d d*, which are placed at opposite sides of the anvil *f*, which latter is fixed in the chamber, at the lower end of the plunger *c*. The button-clamp is free to slide for a short distance in the chamber of the plunger *c*, a spiral spring, *h*, located in the said chamber, bearing upon the upper end of the said clamp and acting to press it down, so that the button-receiving recess between the parts *e e* will be held so far below the end of the anvil *f* that the clamp holding the button-shank may act upon the material and force the latter down upon and below the point of the fastening and the point of the latter through the eye of the button-shank before the spring *h*, which acts upon the button-clamp, yields; but as soon as the point of the fastening has been forced through the material and the eye of the button-shank the further movement of the button-clamp is arrested, and the movement of the plunger is continued until the anvil *f* meets the point *n'* of the fastening or hook *n* (already partially turned by reason of the shape given it when made) and turns the said point over about the wire shank until the end of the fastening or hook meets the material, against which it remains firmly clamped.

As herein shown, the jaw *e* is provided at its rear edge with a flange, as at 7, (see Fig. 8,) to form stops, against which the end of the

button shank 4 strikes to properly position the eye of the said shank with relation to the plunger *c*, notwithstanding the shape of the eye. The plunger is slotted at one side, as at *c*², to receive the end *g* of the link *h*, connected by pivot *h'* with a small ear of the hand-lever *h*², pivoted at *h*³ on the head A. The upper end of the lever *h*² is provided with a spoon-like or concave end, *h*⁴, to receive the thumb of the operator near its junction with the hand. A spring, *m*, preferably of flat steel, interposed between the link *h* and lever *h*², bent substantially as shown, and with its bent end inserted into a recess, 8, of the head A, acts to keep the plunger elevated and the lever and link in substantially the position represented in Fig. 1. Placing the bent end of the spring *m* in the recess 8 prevents it from being moved laterally.

The fastening or hook composed of the shank *n*, having a point, *n'*, thrown off from the center of the shank or body of the fastening, and of a head, *n*², has its head placed upon the rest or support *b*, between the jaws of the clamp *o*, composed of a metal spring, bent as shown, secured to the head A and made to embrace the support *b*, the upper edges of the clamp forming side guides for the opposite edges of the head of the fastening or hook, while the projections *o*² of the jaws or clamp *o* serve as a back-stop for the head of the fastening or hook, as shown in dotted lines, Fig. 3.

A button-shank having been inserted between the jaws connected with the plunger *c*, as in Fig. 1, and a fastening having been placed between the jaws *o*, with the shank of the fastening in line with the opening in the eye of the button-shank, all as in Fig. 1, the operator, with his right hand about the guide and curved part *a a'* and the lever *h*², will shut his hand and move the lever *h*² in the direction of the arrow, Fig. 1, nearly up to the guide *a*, which will cause the plunger *c* to descend, carrying down with it the jaws *e* and button until they strike the material *p* and force the latter upon the point of the fastening, and consequently the latter through the material and through

the said button-eye, and the point of the fastening as it meets the anvil *f* is turned or deflected thereby, as described.

The openings or eyes of button-shanks differ materially in size; but the wire from which the shanks are composed is of substantially the same diameter, and therefore by gaging the position of the eye from the end of the shank it is possible to place the open eye of the shank always in correct position with relation to the plunger and the fastening or hook.

We claim—

1. In an apparatus for setting buttons, a rest or support for the fastening or hook, and a plunger provided with an anvil, combined with a spring-clamping jaw to grasp the shank of a button, and with a spring, *h*⁶, to permit the movement of the plunger and anvil after the clamp and plunger have acted to press the material upon the shank of the fastening or hook below its point, substantially as and for the purpose described.

2. In an apparatus for setting buttons, a plunger combined with a button-holding clamp composed of plates, substantially as described, to form shoulders or rests to act upon one face of the shank, and a spring-jaw having its ends turned inwardly to bear against the opposite face of the said shank, substantially as described.

3. In an apparatus for setting buttons, the frame-work or head A, provided with the guide *a*, and the button-carrying plunger therein, combined with a lever and a link, arranged substantially as described, whereby the operator, to actuate the plunger to set a button, may grasp in one hand the said guide and lever, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL L. PRATT.
ANALDO M. ENGLISH.

Witnesses:

WALTER MOTT,
OSCAR LAPHAM.