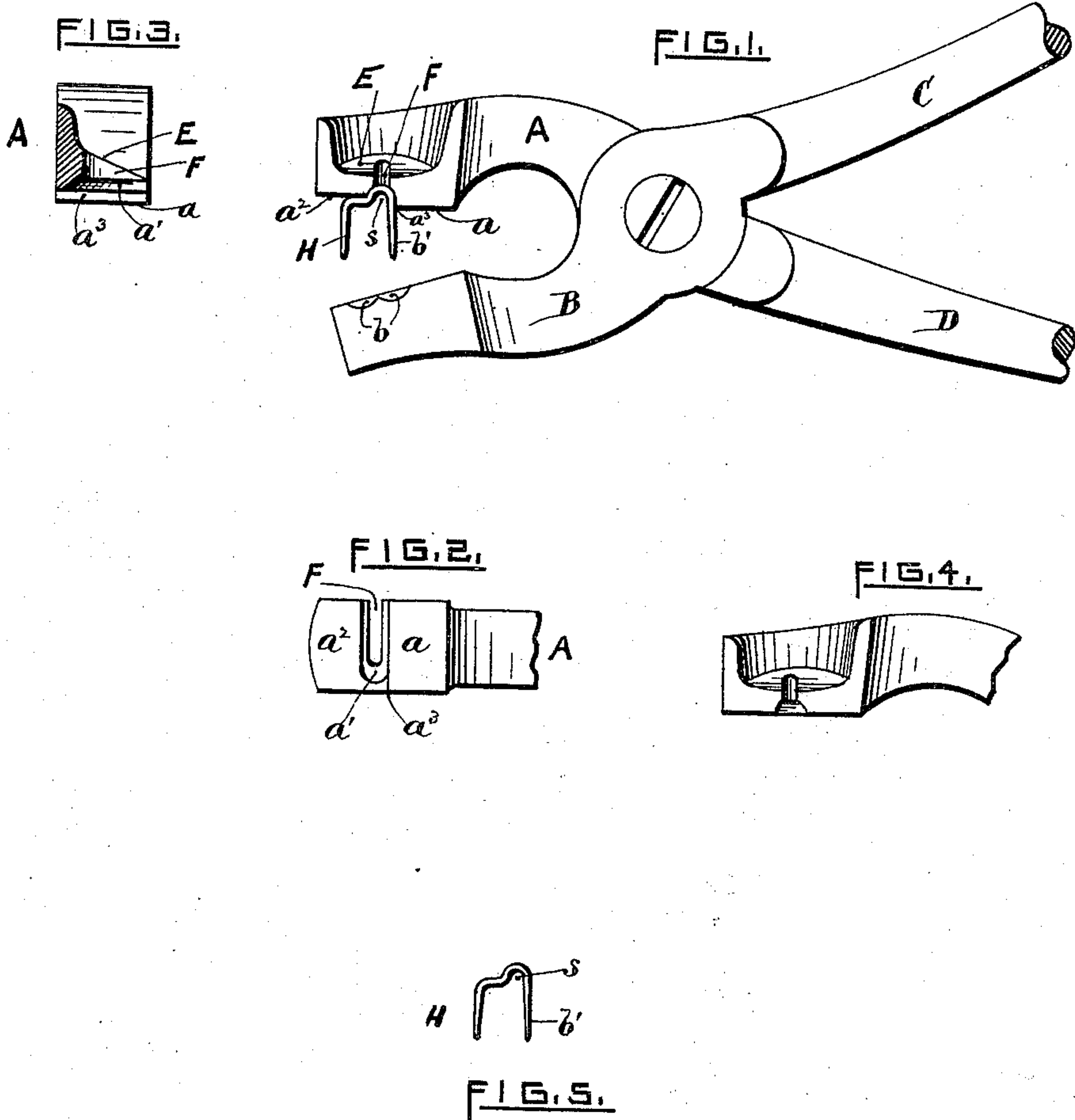


(No Model.)

F. A. SMITH, Jr.
BUTTON SETTING INSTRUMENT.

No. 344,012.

Patented June 22, 1886.



WITNESSES.

W. Fisher.

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INVENTOR.

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FRANKLIN A. SMITH, JR., OF PROVIDENCE, RHODE ISLAND.

BUTTON-SETTING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 344,012, dated June 22, 1886.

Application filed February 12, 1886. Serial No. 191,716. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN A. SMITH, Jr., a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Button Setting Instruments; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention is designed as an improvement applicable to that class of setting-instruments patented to David Heaton, October 19, 1875, No. 168,994, for securing buttons to fabric by means of a metallic fastener, consisting of a table provided with penetrating-prongs bent at right angles thereto, one of said prongs being bent near its junction with the table to form a side loop-staple to engage the eye of a button in attachment.

In the patent to Heaton, referred to, the upper or button and fastener holding member of the instrument is constructed with a recess having a wedge shaped bottom, provided with a slot, which is arched at the lower portion for the reception of the side loop-staple of the button-fastener, the lower surface of the member being smooth and unbroken. When the fastener is placed in said holding member, it is liable not to stand square and straight in a proper position for attachment to fabric, but will tip and render its attachment uncertain, unless the fastener is straightened, which is accomplished by the fingers alone, and even then the fastener will tip upon a slight contact with fabric.

The object of my present invention is to overcome this difficulty and to produce an instrument with which it is impossible to place the fastener in an improper position, by reason of the peculiar construction of the lower surface of the holding member, rendering the proper reception of the fastener an absolute certainty in every case.

To this end my invention consists, essentially, in forming the lower surface of the holding member of a button-setting instrument in two parallel planes, the inner edge of

the lower plane being formed square with said plane and adjacent to the lower inner edge of the groove in the lower surface of said holding-member, said groove being adapted to receive the side loop-staple of the fastener in position for attachment to a fabric.

In the accompanying drawings, Figure 1 is a side elevation of a button-setting instrument embodying my improvement; Fig. 2, a bottom plan view of the upper or button and fastener holding member of the instrument. Fig. 3 is an end view, in partial section, of the same. Fig. 4 is a side elevation of the upper or holding member of the instrument shown in the patent to Heaton, referred to. Fig. 5 is a side elevation of the fastener used with my improved instrument.

In the drawings, A represents the upper or button and fastener holding member, and B the lower or clinching member, of my improved instrument, the two members operated by the handles C and D in the usual manner.

The member A is formed, in the present instance, with a recess, E, opening from one side for the reception of the button-head, the bottom of the recess being of an inclined or tapering shape from the rear to the front of the same, and is provided in the center with a slot, F, extending through the bottom of said recess, and having an arched groove, a' , in the face of the member. The lower surface of this member is formed in two parallel planes, a^2 and a , the inner edge of the plane a being made square with said plane, forming a perpendicular shoulder, a^3 , located adjacent to the arched groove a' , as fully shown in Figs. 1 and 2 of the drawings.

The member B is provided in its upper surface with suitable clinching-dies, $b b$, in the present instance two concaved grooves running crosswise of said member, and which operate on the prongs of the fastener to secure the same to fabric.

The fastener designed for use with my improved instrument is shown in Fig. 4, H, and consists of a table provided with penetrating-prongs, the prong b' being bent to form the side loop-staple, s , for the reception of the eye of the button.

In securing a button to fabric the eye of the button is passed over the prong b' into the staple s , the combined button and fastener is

then placed in the member A, the bottom of the button resting in the recess E, and the side loop-staple, s, in the arched groove a' , the prong b' resting against the perpendicular shoulder a^3 of the plane a , the prongs of the fastener standing straight, square with said plane, the upper surface of the table of the fastener resting against the plane a^2 , as fully shown in Fig. 1. The fastener being in position as described, it is secured to material in the usual manner by passing the prongs through the material and clinching them on the under surface by contact with the dies in the member B.

I have shown and described my improvement as applied to a hand-instrument. It is evident that without departing from the spirit of my invention it may be employed in connection with an organized machine to be operated by treadle or other power, with which a fastener like the one shown is used, the object sought being to provide the under surface of the fastener-holding member with a perpendicular shoulder located adjacent to the arched groove, so that when the side loop-staple of the fastener is placed in said groove the perpendicular shoulder will prevent the fastener from tipping in the direction of the staple-prong, and this result to be attained without the aid of a movable mechanical appliance.

The view shown in Fig. 4 represents the form of the lower surface of the holding member of the instrument in the patent to David Heaton, referred to, there being absolutely nothing to prevent the fastener from tipping when placed in said member, as the lower surface is smooth and unbroken, while with my improvement it is impossible to tip the fastener, and it must of necessity stand straight and square, ready for attachment.

My improvement greatly facilitates the attachment of the fastener, as the shoulder forming a bearing back of the staple-prong holds

said prong firm against any lateral movement, thereby causing it to be forced through the material straight, and to follow the contour of the clinching-die more closely, and prevents the prong from bulging or bending outward during the clinching operation. The lower plane of the member being substantially of the same thickness as the table of the fastener, prevents the two members from being brought too closely together, and thereby saves the fastener from being injured by a too close pressure in attachment.

Having described my invention, I claim—

1. In an instrument for attaching buttons to fabric, a slotted button and fastener holding member having its lower surface formed in two planes, the inner edge of the lower plane forming a perpendicular shoulder located adjacent to the slot in said member and adapted to retain a fastener in vertical position for attachment, while the staple of the fastener remains in said slot, substantially as described, and for the purpose specified.

2. In a button-setting implement, a slotted button and fastener holding member having a perpendicular shoulder on the face of and located adjacent to the slot in said member, and adapted to hold a fastener and support it in an upright position for attachment, substantially as described.

3. In an instrument for attaching buttons to fabric, the member A, constructed with a recess, E, provided with a slot, F, having the perpendicular shoulder a^3 located adjacent to said slot, and the member B, provided with the clinching-dies b , combined and arranged substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

FRANKLIN A. SMITH, JR.

Witnesses:

E. FISHER,

CHARLES GREENE.