

(No Model.)

W. B. MERRITT.
BUTTON SETTING APPARATUS.

No. 517,758.

Patented Apr. 3, 1894.

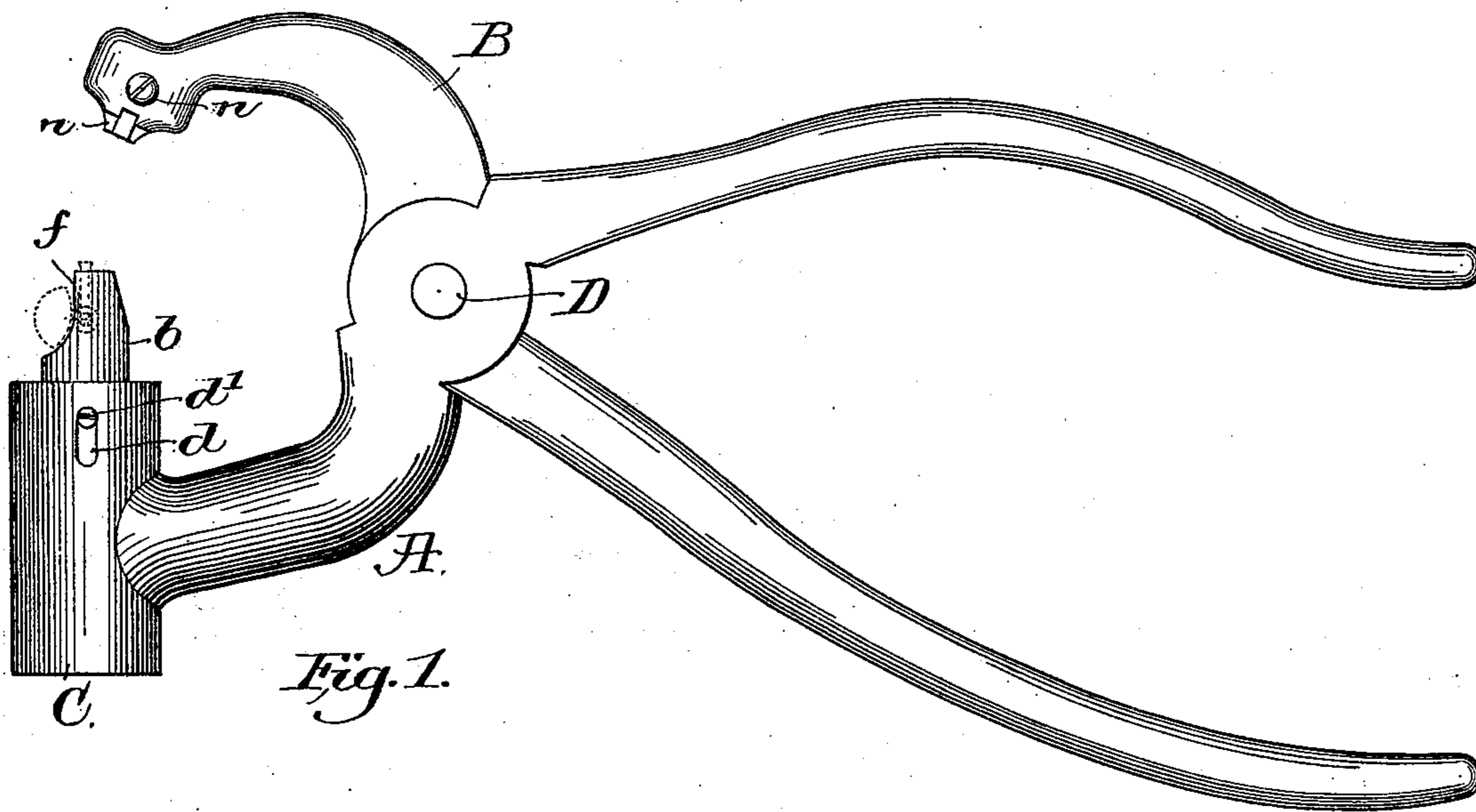


Fig. 1.

Fig. 2.

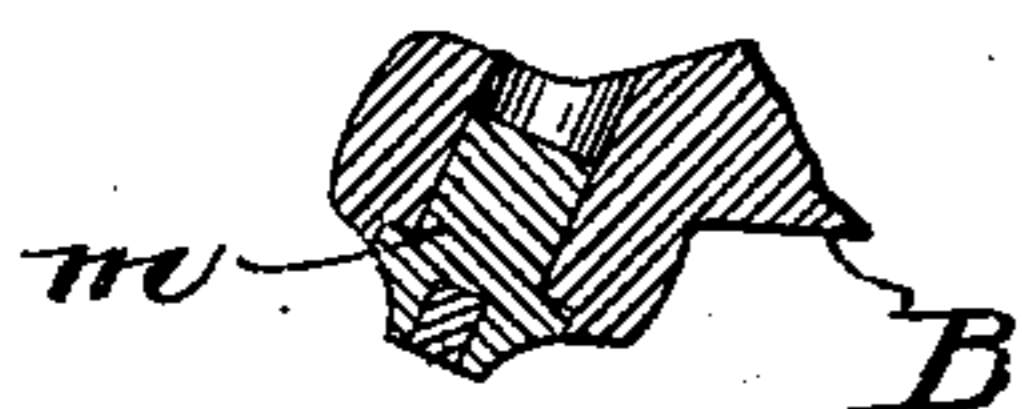


Fig. 3.

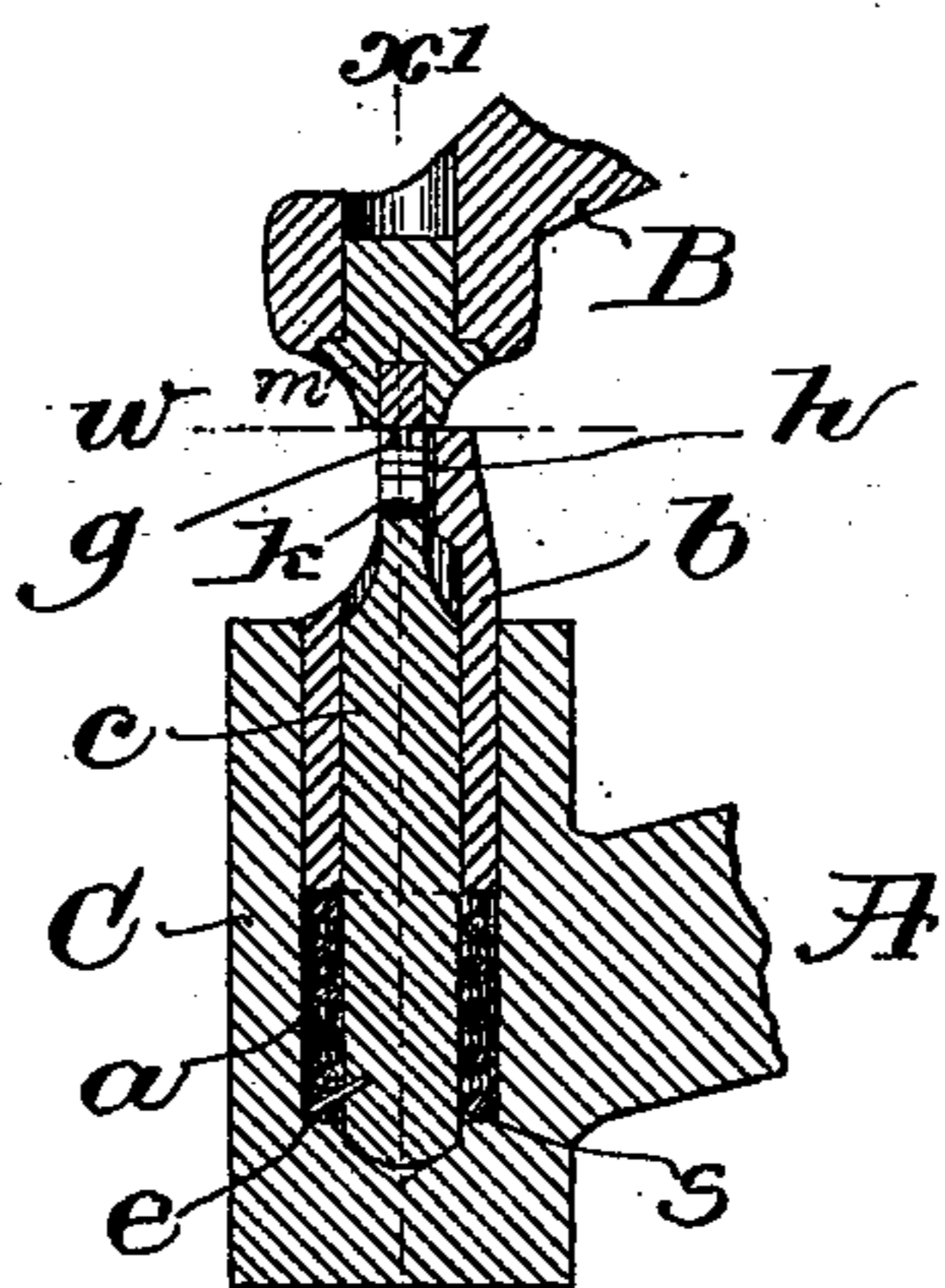


Fig. 4.

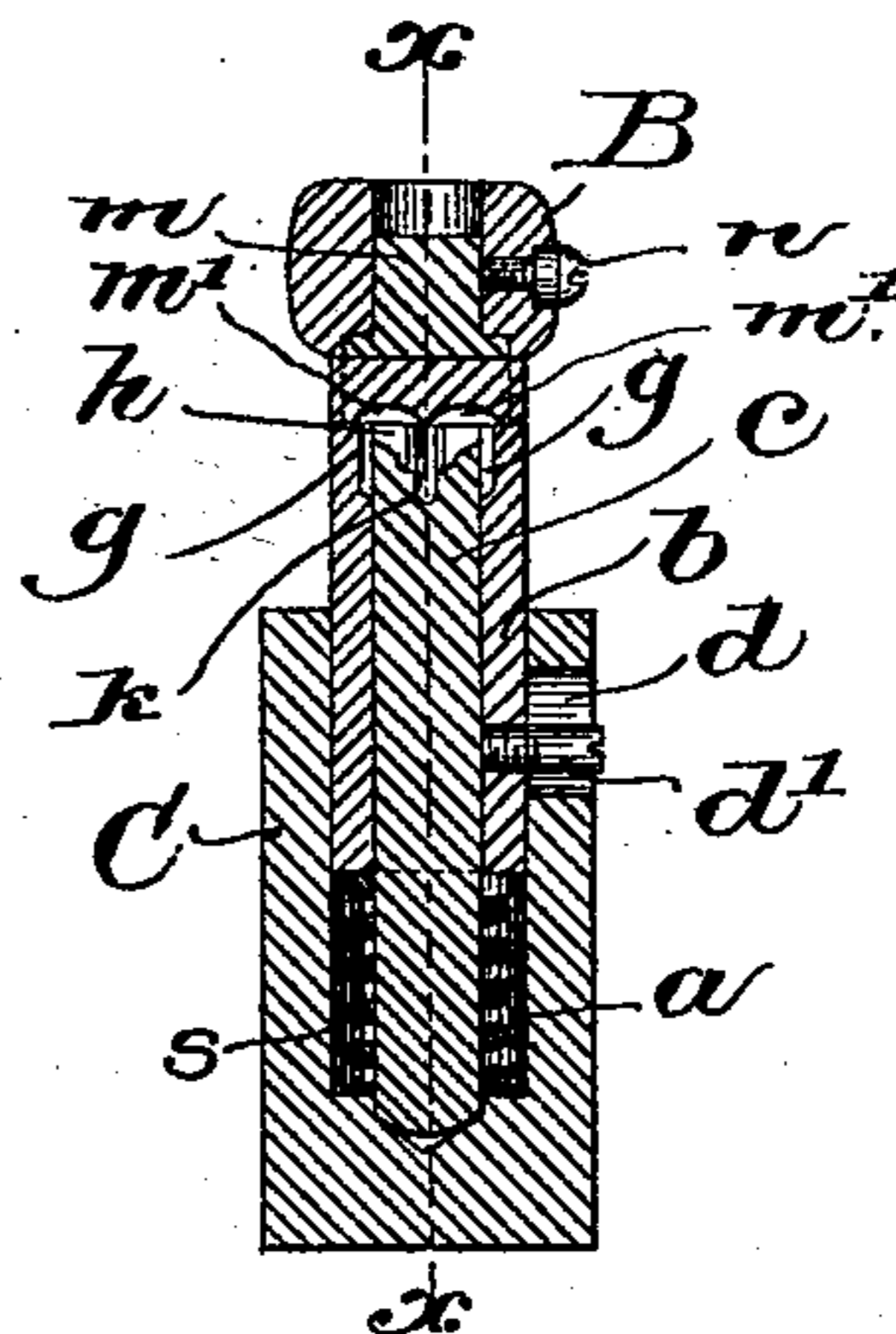
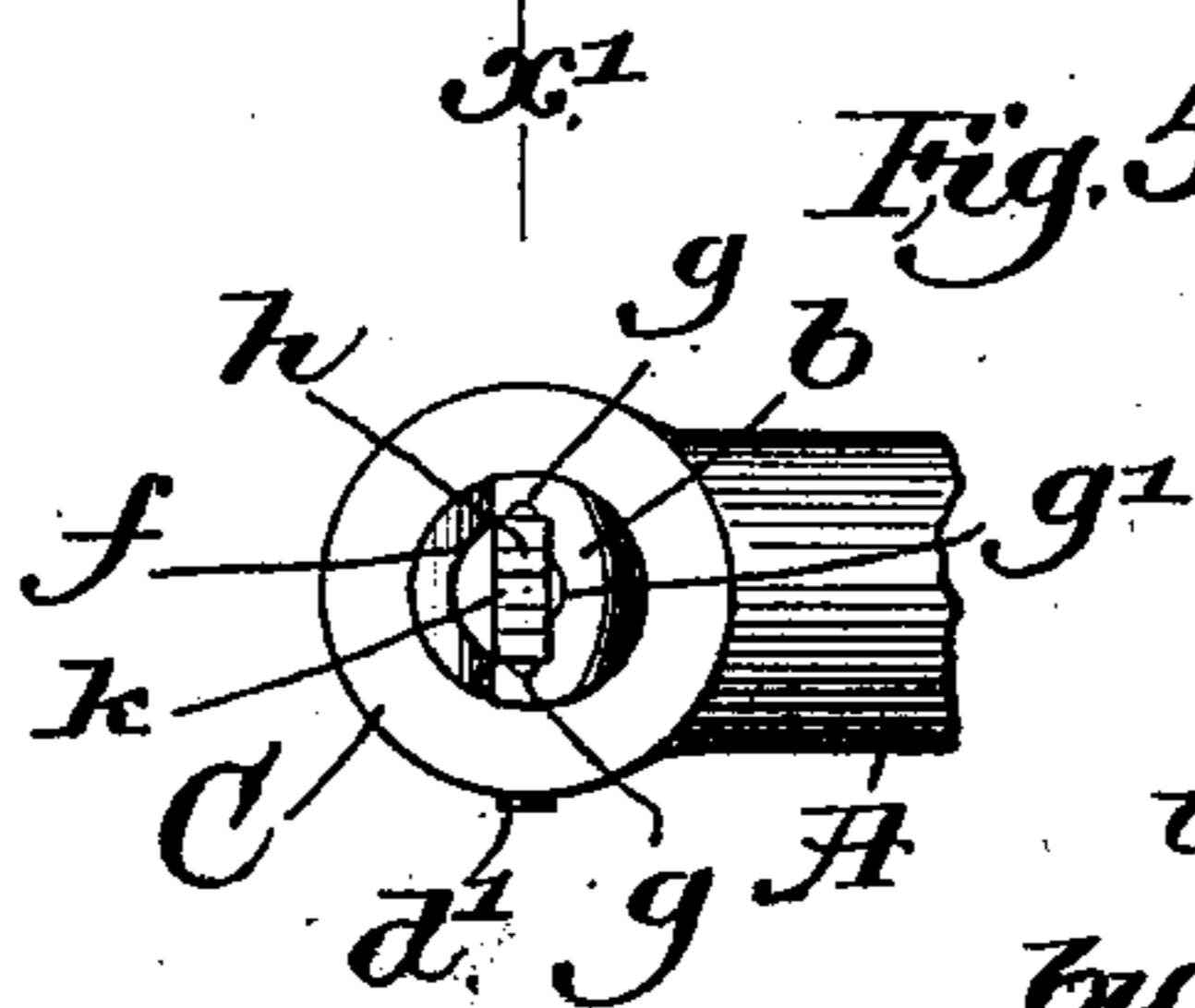


Fig. 5.



Witnesses,
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BUTTON-SETTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 517,758, dated April 3, 1894.

Application filed August 24, 1892. Serial No. 444,011. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MERRITT, of Braintree, county of Norfolk, State of Massachusetts, have invented an Improvement in Button-Setting Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to that class of devices used in clinching metallic staples or fasteners which engage the eye of the button and have prongs which pass through the fabric and are clinched on the side of the fabric opposite the button, and has for its object the production of a button setting apparatus consisting of a small number of parts, of simple and cheap construction, yet possessing great strength and durability.

Figure 1, is a view in side elevation of a button setting apparatus embodying my invention, a button and its fastener being shown in dotted lines in position to be set. Fig. 2, is a longitudinal sectional view of a portion thereof taken in the line $x-x$, Fig. 4, showing the jaws open; Fig. 3, a like sectional view, showing the jaws closed; Fig. 4, a section taken in the line $x'-x'$, Fig. 3, and Fig. 5, is a detail to be referred to.

The jaws A, B, each provided with a handle, are connected by a suitable bolt or rivet D, in usual manner. The jaw A is provided with an enlarged head C, as shown, preferably recessed longitudinally at a , to receive the work support b , herein shown as a sleeve adapted to slide longitudinally with relation to the shank of the plunger c and the head C. A spring s is interposed between the inner end of the sleeve b and the bottom of its inclosing recess, said spring supporting the sleeve in a yielding manner. The head C is slotted, as at d , and a stud d' is screwed into the sleeve b , see Figs. 1 and 4, its end projecting into the slot keeping the sleeve and plunger in correct alignment with the anvil, and also acting as a limiting stop to retain the sleeve in the head when the jaws are separated. A lug or stud e , see Figs. 2 and 3, at the inner end of the plunger is acted upon by the spring s and keeps the plunger in place. By taking out the stud d' the work support, plunger and spring can be removed bodily.

The outer end of the work supporting sleeve is cut away at one side, as at f , and longitudinal parallel grooves g, g , are formed in the interior of the sleeve, at opposite sides thereof, to receive the legs of the fastener, preparatory to clinching the same. The plunger is recessed at its outer end at h , best shown in Figs. 2, 3 and 4, to receive the back of the fastener, and a deeper central recess k is provided to accommodate the button eye. As shown in Figs. 2 and 3, the end of the plunger is flattened to co-operate with the cut-away portion of the sleeve, in properly setting the fastener. A slight longitudinal depression g' in the sleeve obviates any jamming of the button eye when the fastener is moved forward, as will be described.

The jaw B is provided with a clinching anvil m , held in place by a suitable screw n , and having in its face depressions m', m' , to receive and clinch the fastener points. In operation the fastener having been passed through the button eye, will be placed in the grooves g, g , with the points uppermost, the button resting on the cut-away portion of the sleeve b , as clearly shown by dotted lines, Fig. 1. The material is then placed between the jaws, and the handles brought together, thus moving the jaws toward each other and clamping the material between them, or more exactly between the anvil m and the end of the yielding work support b .

Referring to Fig. 3, in which the material is designated by the broken line w , the spring s is shown as slightly compressed by the pressure of the anvil upon the support, and as greater pressure is brought to bear upon the jaws the plunger will be forced outwardly along the cut-away portion of the sleeve, the latter remaining substantially stationary as the spring is compressed, and the button with its fastener is moved forward and the legs thereof, guided by the grooves g, g , are forced through the material w until the points enter and are clinched by the depressions m', m' , in the anvil. As the fastener is being forced outwardly, its back resting in the recess h , the button eye enters and is held by the central recess k of the plunger, steadying the button until the fastener is clinched in place, the bottom of the eye moving freely along the de-

pression g' of the sleeve as it is pushed forward. When the pressure on the handles is relaxed the spring s expands, the effect of which is to withdraw the plunger from the material, and the latter can be removed from between the work support and anvil. In its normal expanded condition the spring s keeps the sleeve pressed out to its fullest extent beyond the outer end of the plunger, which latter moves at all times in unison with the head C , the plunger and outer end of the sleeve thereby being in condition to receive the fastener and button whenever the jaws are separated.

15 Having described my invention, what I claim, and desire to secure by Letters Patent, is—

In a button setting tool, the pivoted jaws,

the anvil, and the head C , a hollow yielding work-support connected thereto, a limiting stop for said support, the cut-away portion f , and fastener guides g, g , adjacent to the cut-away portion, combined with a plunger longitudinally movable in said work-support, and having a flattened outer end provided with recesses h, k , and a spring confined between the head and the work-support, substantially as described.

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

WILLIAM B. MERRITT.

Witnesses:

AUGUSTA E. DEAN,
JOHN C. EDWARDS.