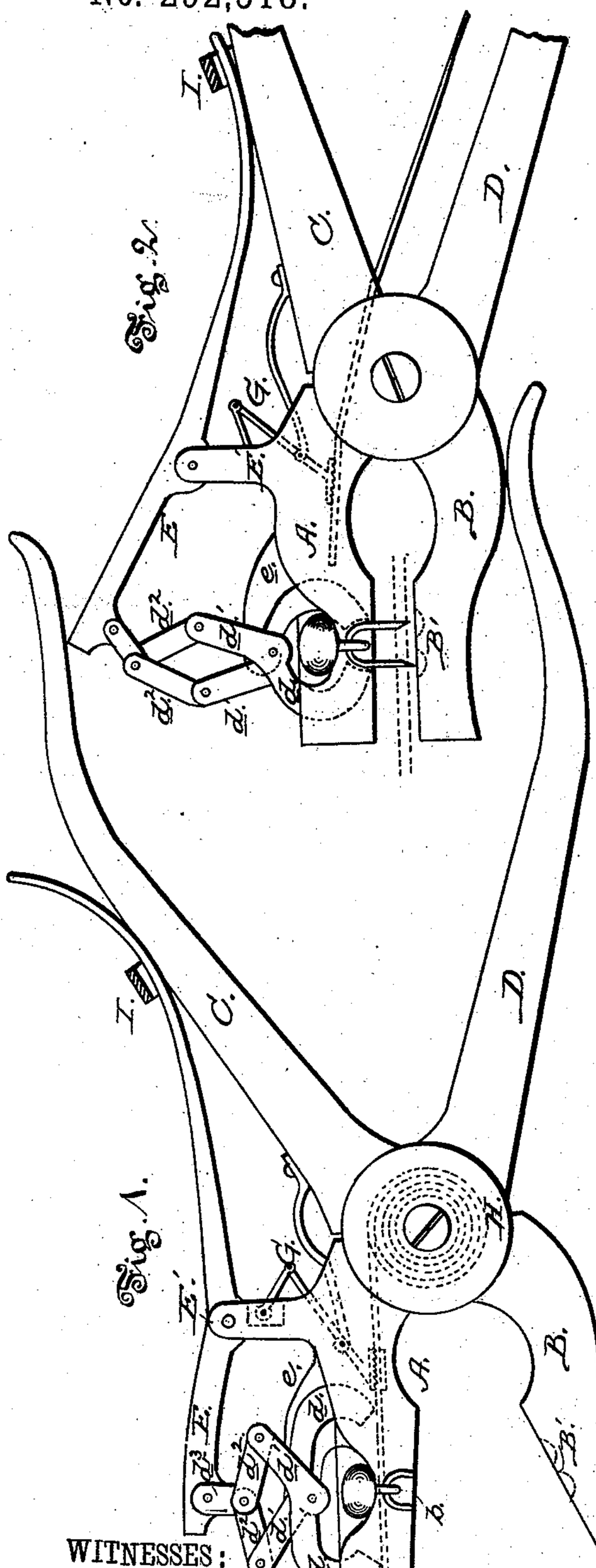
(No Model.)

P. H. SWEET, Jr.

INSTRUMENT FOR ATTACHING BUTTONS TO FABRICS, &c.

No. 292,518. Patented Jan. 29, 1884.



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INSTRUMENT FOR ATTACHING BUTTONS TO FABRICS, &c.

SPECIFICATION forming part of Letters Patent No. 292,518, dated January 29, 1884.

Application filed February 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, PARKER H. SWEET, Jr., a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Setting-Instruments for Attaching Buttons to Wearing-Apparel; 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.

My present invention relates to improvements in that class of setting-instruments which are adapted for attaching buttons to articles of wearing-apparel by means of a metallic fastener or connection, the object of my invention being to provide an instrument which will not only attach the buttons to fabrics, but also form the metallic fastener or connection for attaching said buttons from a continuous length or coil of wire at one and the same operation; and my improvements consist in providing the upper jaw of a setting-instrument with a recess or cavity for holding the buttons; also, a certain mechanism for forming each fastener or connection from a continuous length or coil of wire as it passes through the shank of a button; also, in certain constructions for feeding the wire into position through the shank of a button to form each fastener; and, further, in certain other details of construction and general arrangement of parts, all as will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a front elevation of a setting-instrument embodying my improvements, with the jaws thrown open and a button in position to receive the fastener; Fig. 2, a similar view, with the jaws in a nearly-closed position, showing the fastener formed in the shank of the button and with its prongs projecting downward ready for attachment to a fabric. Figs. 3 to 5 represent detail views of the upper jaw, showing the successive operations of forming each fastener. Fig. 6 represents a detail view of the mechanism for cutting off and forming the fastener, and Fig. 7 represents a detail view of the mechanism for feeding along the wire from which the fasteners are formed.

Similar letters of reference occurring on the several figures indicate like parts.

In carrying out my improvements, the setting-instrument is composed of an upper and a lower jaw, A B, which are adapted to be operated by the handles C D in a manner well known. The upper jaw, A, is provided with a central recess or receptacle, *a*, opening out to one side for the reception of the buttons which are to be attached to fabrics or other materials, a slot, *a'*, being provided in the bottom of said recess or receptacle to allow the shanks of the buttons to project through, as shown. Directly beneath this recess or receptacle *a* is provided a tapering anvil, *b*, which is rounded upon its upper surface, and provided with a groove, *b'*, which extends from the front to the rear, for the reception of the lower portion of the shank of each button. On either side of the central recess, *a*, and anvil *b* are provided openings *c*, which are adapted to permit of the ingress and egress of the jaws of the forming-dies *d*, said jaws being of a curved shape and pivoted directly above the central recess, *a*, to an arm, *e*, which projects from the rear side of the upper jaw, A, of the setting-instrument, as fully shown in the drawings. The upper portions or arms *d'* of the forming-dies *d* are pivoted to the ends of the arms d^2, which in turn are pivoted together to an arm, d^3, which is pivoted to the outer arm of the spring-lever E, which is journaled in an upright, E', projecting upward from the jaw A, the rear end of said lever being curved and adapted to rest upon the upper surface of the upper handle, C, of the setting-instrument, as fully shown in Figs. 1 and 2 of the drawings. A groove, F, extends through the upper jaw, A, from front to rear, and in a line with the top of the anvil *b*, through which is fed a continuous length of wire, from which the metallic fasteners or connections are to be formed, a suitable feed mechanism, G, being provided for feeding the wire along in suitable lengths with each suc-

cessive opening of the handles of the instrument. The inner faces of each of the jaws of the forming dies *d* are provided with grooves *d'*, and the lower portions with sharp edges for cutting off the wire to form the fasteners.

In the operation of my invention, the wire which is to form the fasteners or connections is arranged in coils upon the spool H on the side of the setting-instrument, as shown at Fig. 1, or it may be carried back in a continuous length from said instrument, as shown in Fig. 2, the latter plan being deemed most preferable, and the front end of the wire is passed into the groove F, under the foot of the feed mechanism G, as shown. The button being now placed into the recess *a*, with its shank projecting down through the slot *a'* and its base resting in the groove *b'* of the anvil *b*, the handles C D of the instrument are opened to their full extent, thereby causing the feed mechanism G to push a given length or portion of the wire in the groove F through the shank of the button. Now, as the handles of the instrument are brought together, the front end of the spring-lever E, controlled by the fixed sleeve I, draws up the pivoted connections of the jaws of the forming-dies *d*, and causes said jaws to descend and first cut off the requisite length of wire, as shown at Fig. 3, and as the handles C D still come farther together, the length of wire thus cut off is bent around upon the anvil *b* until it forms a staple-shaped connection, as fully shown in Figs. 2 and 5. The material to which the button is to be attached is then inserted between the two jaws A B, and by a single impulsive closing of the said jaws the lower points or prongs of the staple-shaped connection is driven through the said fabric or material, and clinched upon the lower surface thereof by means of the dies B' in the lower jaw of the instrument, thereby securely attaching the button in place. This operation may be repeated at pleasure, and insures the rapid setting of the buttons, it being only necessary to drop a button into the recess *a*, and then to open and close the jaws of the setting-instrument, to insure of the button being readily attached to fabrics in the quickest and best possible manner.

My invention is also equally adapted to be applied to power-machines in place of the ordinary hand setting-instruments, and such application is hereby contemplated by and forms the subject of a separate application for Letters Patent which is about to be made by me.

Having thus described my invention, what I claim as new and useful is—

1. As an improved article of manufacture, the herein-described setting-instrument for attaching buttons to fabrics, consisting of the jaws A B, adapted to be operated by the handles C D, and the upper jaw, A, of which is provided with a receptacle for receiving the button, a mechanism for feeding a length of wire through the shank of each button, and a mechanism for cutting off the length of wire and forming a fastener or connection therefrom, and the lower jaw, B, of the instrument being provided with a suitable die for bending or deflecting the prongs of said fastener into or upon the lower surface of the fabric, after passing through the same, all substantially as and for the purpose specified.

2. In a setting-instrument for attaching buttons to fabrics, the upper jaw, A, provided with the central recess, *a*, anvil *b*, curved openings *c*, feed mechanism G, and cutting and forming dies *d*, having arms *d' d'* and d^2 d^2, adapted to be operated by the lever E, pivoted to the arm E' of said upper jaw, and whereby a length of wire is automatically fed through the shank of the button, cut off, and formed into a fastener or connection during the operation of opening and closing the jaws of said setting-instrument, substantially as and for the purpose specified.

3. In a setting-instrument for attaching buttons to fabrics, the upper jaw, A, formed as described, and provided with mechanism whereby a length of wire is automatically fed through the shank of a button, cut off, and formed into a fastener or connection during the operation of opening and closing the jaws of said instrument, substantially as and for the purpose specified.

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

PARKER H. SWEET, JR.

Witnesses:

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