

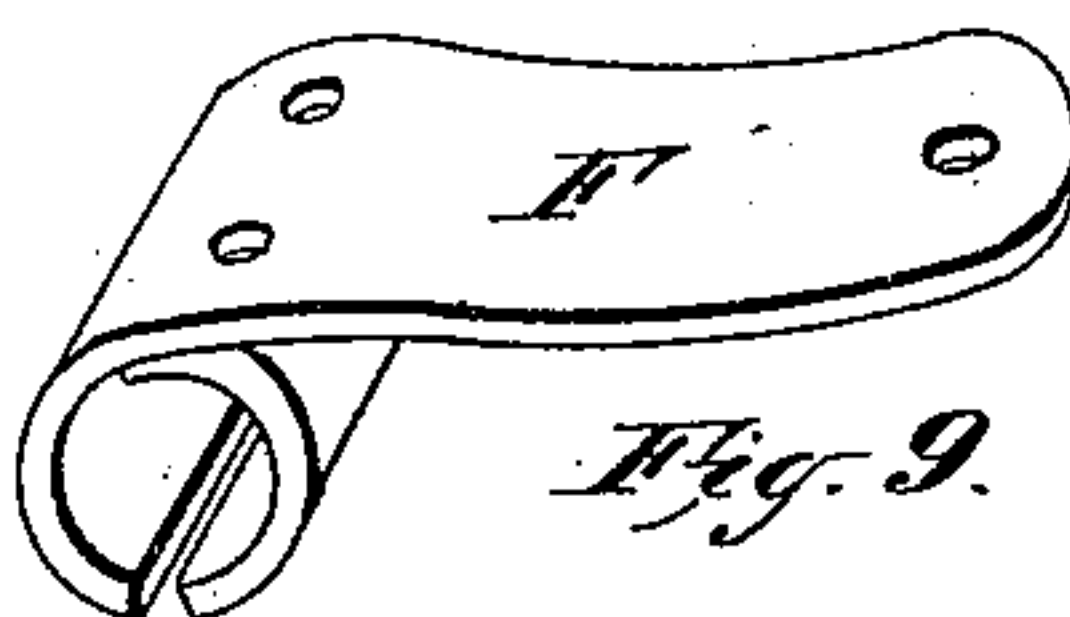
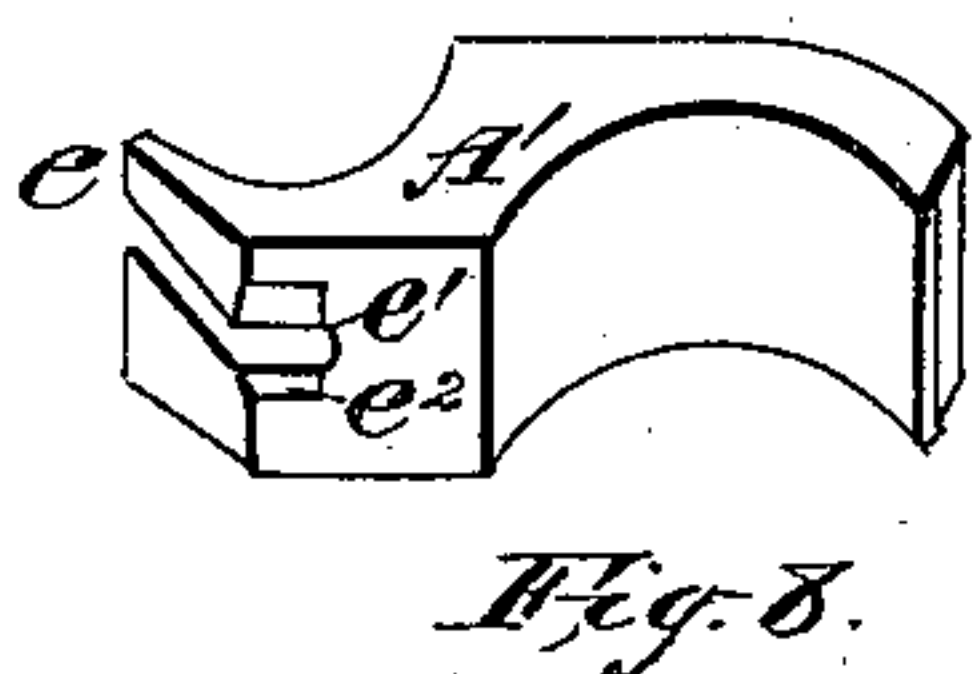
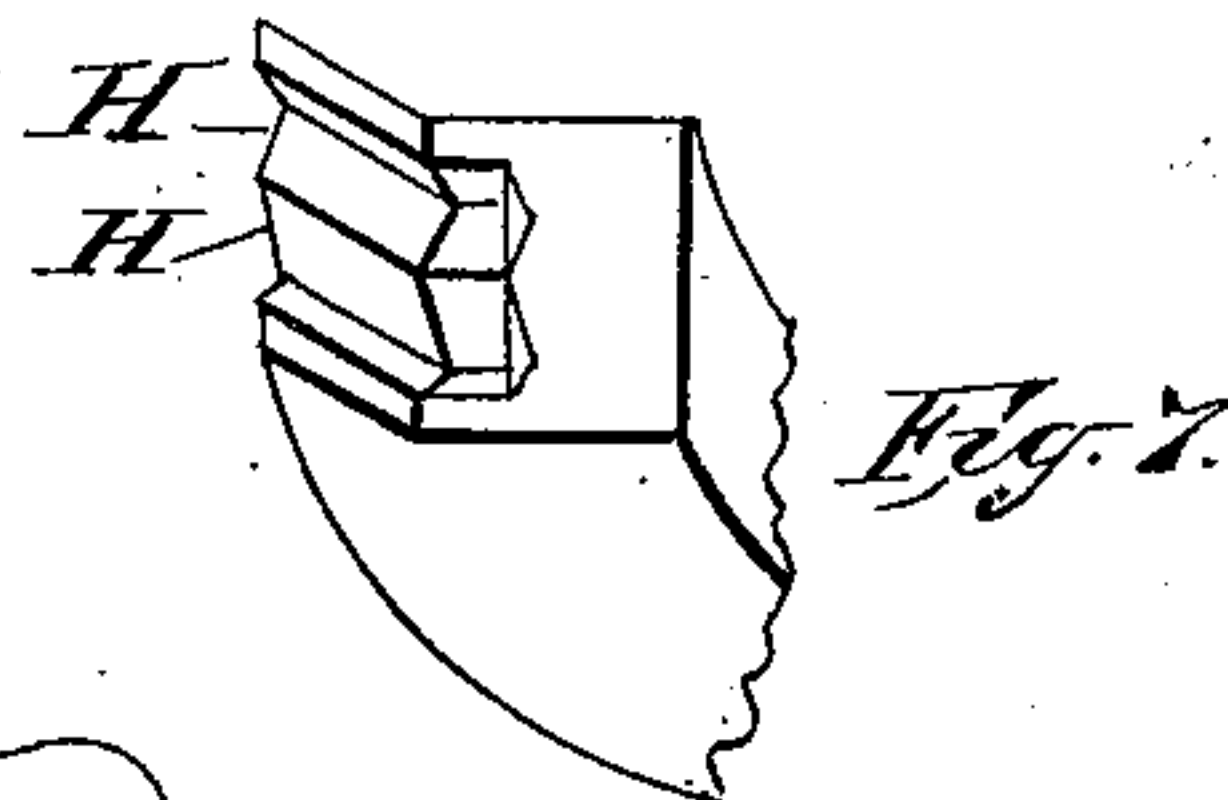
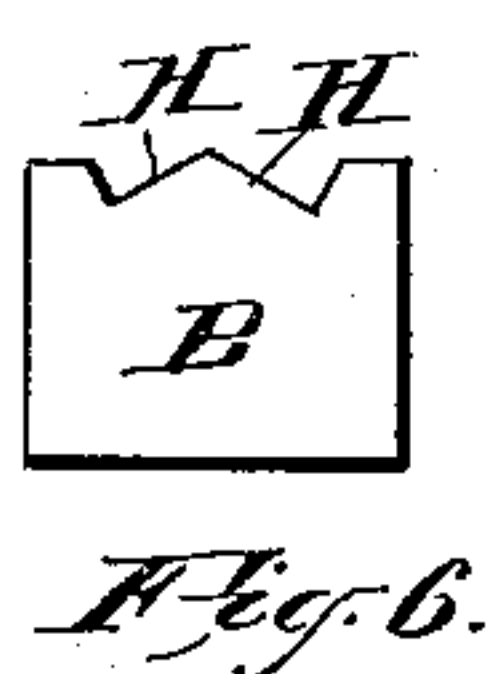
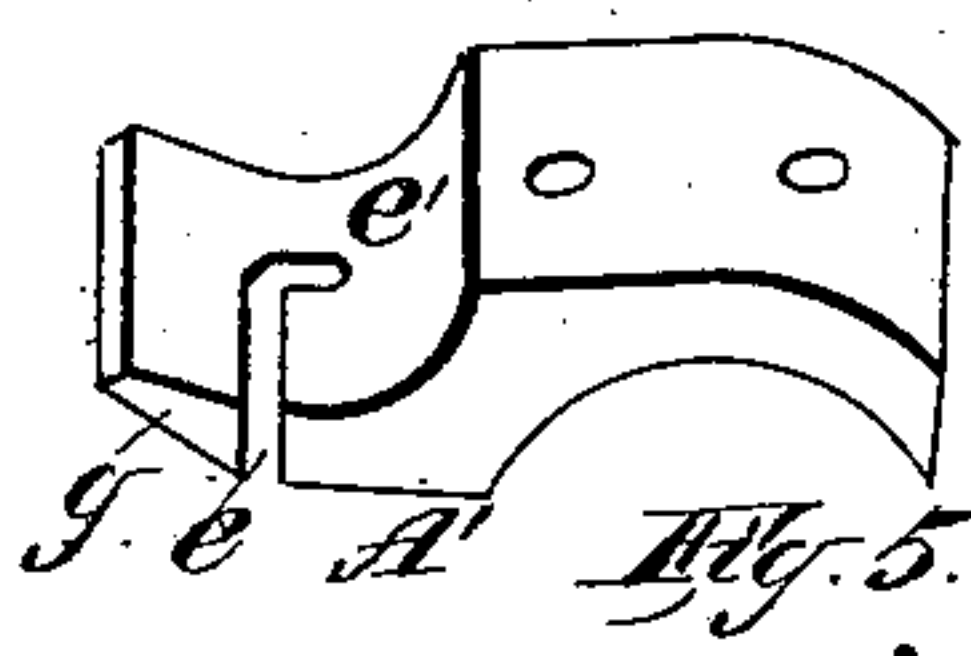
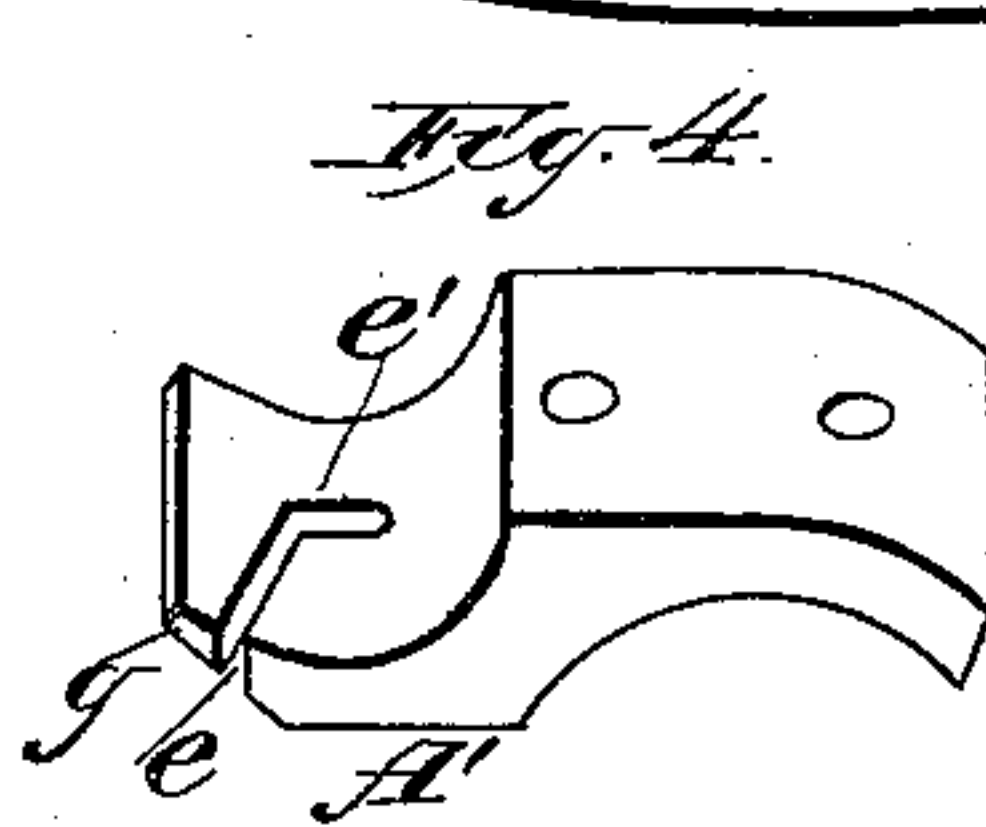
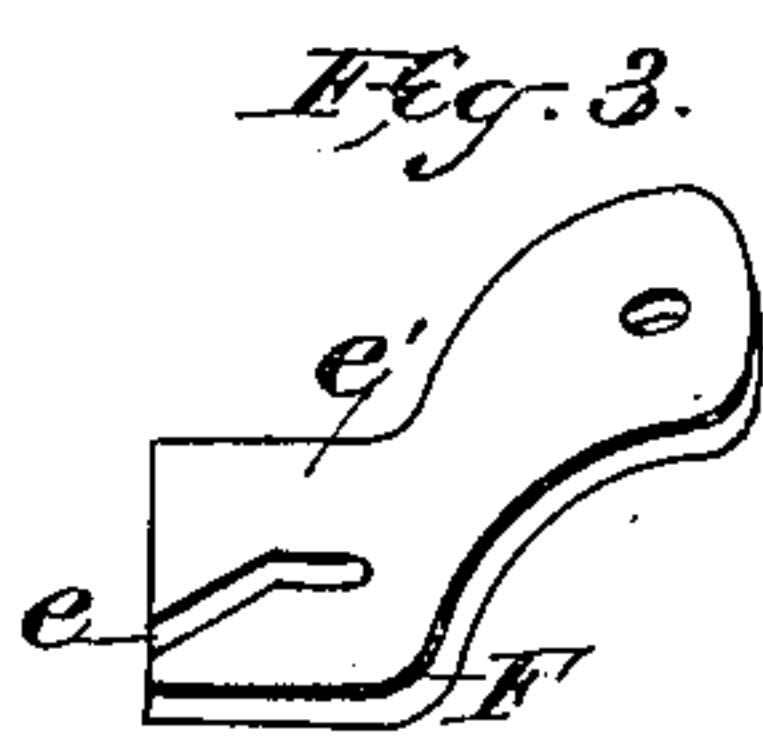
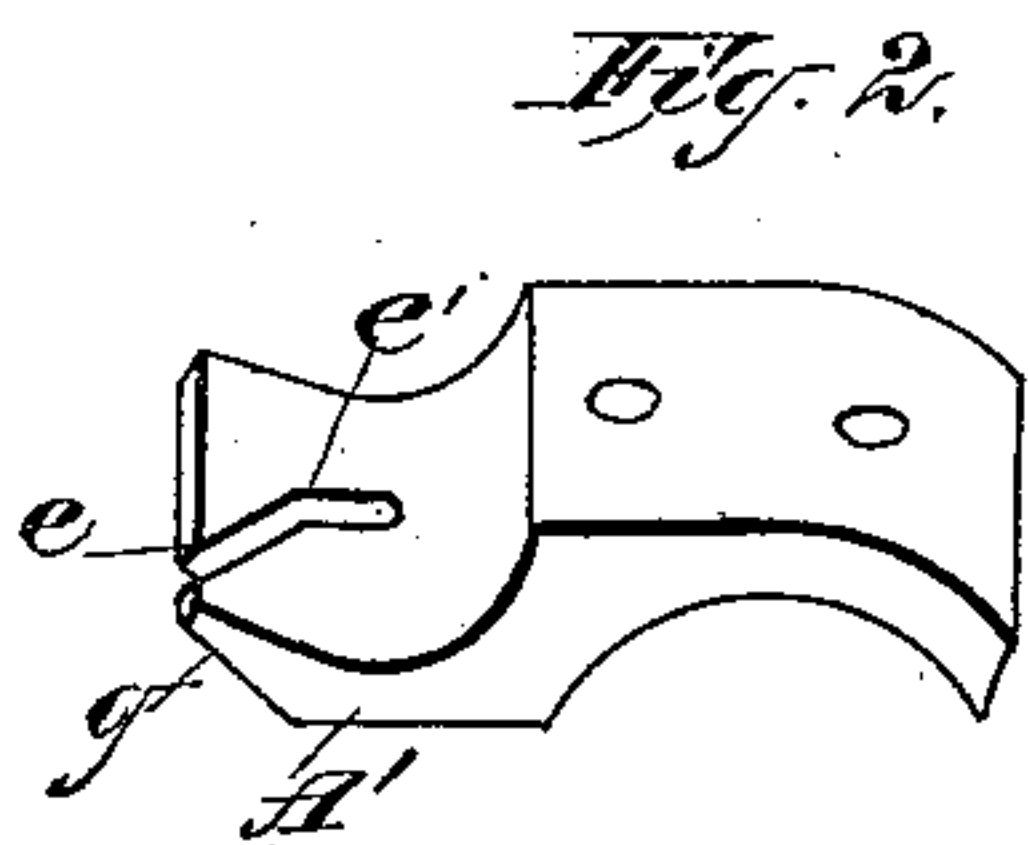
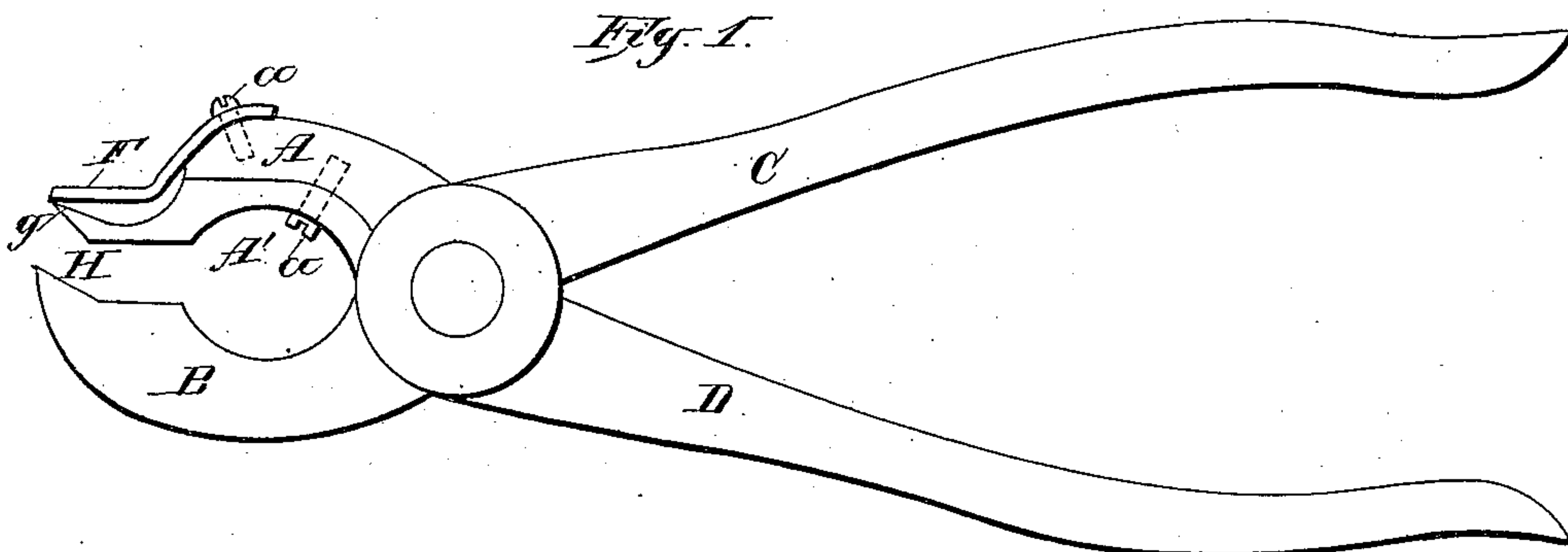
(No Model.)

W. M. HAZEL.

# BUTTON SETTING INSTRUMENT.

No. 333,411.

Patented Dec. 29, 1885.



Witnesses:  
E. G. Dennis  
M. E. Oliphant

*Inventor:*  
Wm M. Hazel  
*By* Stout & Underwood  
*Attorneys.*

# UNITED STATES PATENT OFFICE.

WILLIAM M. HAZEL, OF NEW YORK, N. Y.

## BUTTON-SETTING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 333,411, dated December 29, 1885.

Application filed May 1, 1883. Serial No. 93,638. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. HAZEL, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Setting-Instruments for Attaching Buttons, of which the following is a specification.

My invention has for its object to provide an improved setting-instrument for attaching buttons to shoes and other articles of apparel by means of a staple-fastening, the peculiar construction and arrangement of the upper and lower jaws of said instrument being such as to prevent the possibility of the button and staple, while being secured, slipping out of their position in the slot of upper jaw, and also to insure the proper clinching of said staple by under jaw; and it consists, essentially, in forming through the face of the upper jaw an elongated slot, the longer portion of which extends partly across the face of said jaw, the forming of a slotted spring to correspond, and in forming in the face of the under jaw a die having corrugations arranged one on each side of the longitudinal center of said jaw, all of which will be more fully shown in the drawings, set forth in the specification, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my invention; Fig. 2, the detachable portion of the upper jaw, showing the elongated slot; Fig. 3, the spring with a slot in it to correspond with that made in the upper jaw, as shown in Fig. 2; Figs. 4 and 5, modifications of slot shown in Fig. 2. Fig. 6 represents the outer end of under jaw, showing the shape of and location of the corrugations of the die. Fig. 7 represents a perspective view of the complete die in under jaw. Fig. 8 represents the face of the upper jaw, which is beveled in front, and slot concaved on its under side from shoulder to rear. Fig. 9 represents a modified form of the spring shown in Fig. 3, and Fig. 10 a fastening which may be employed in connection with the instrument shown in Fig. 1.

Similar letters and figures of reference indicate like parts in the several drawings.

My improved setting instrument in its preferred form is constructed with the upper jaw, A, and lower jaw, B, which are pivoted together

and operated by the handles C D in a manner well known. The upper jaw, A, is preferably made detachable, as shown in Fig. 2 of drawings, so that its strength may be increased by being hardened. It is then attached by means of the screws *a a'*, as shown. The front portion, A', of said upper jaw, which holds the button and fastening in position for the clinching process, is upon its upper outer face made concave from front to rear, and is provided with an elongated slot, *e e'*, the longer portion of which preferably extends diagonally across the face of jaw A, and its shorter portion parallel to the length of said jaw, forming at *e'* a shoulder, against which the button-eye rests. When the fastening and button are attached and placed in their position in said slot, the shoulder *e'*, with the aid of that in the spring F of Fig. 3, which is slotted to correspond with that in the jaw A, together with the spring resting against the outer and upper part of the concave A', securely holds said button and fastening in their proper position. The front part of jaw A on its face is beveled upward, and from the lower end of said bevel at the shoulder *e'* of slot *e* back the length of said slot it is hollowed out to fit the loop of the fastening, which may be arranged with a vertical wall both front and rear of hollow portion *e'*, or it may extend to lower end of bevel with vertical wall in rear only, as preferred. The outer end of the lower jaw, B, is beveled upon its inner upper face to partly correspond with the beveled portion of the upper jaw, A, and has cut therein a die consisting of angular corrugations H H, arranged one on each side of the longitudinal center of said lower jaw. These corrugations extend the entire length of the beveled portion of the inner face of the jaw B, and are continued rearward a suitable distance, as shown by Fig. 7. The lower jaw, B, is beveled upon its inner upper face partly to correspond with the front bevel of the face of the upper jaw, A, so that when the fastening is forced through the fabric and its prongs do not stand perpendicular, which often occurs when the instrument is in the hands of inexperienced persons, the prongs will slide down edgewise the said inclined die until its base is reached, when an impulsive pressure upon the handles C D forces the prongs of the fastening in opposite directions,



which arrangement compels the fastening to clinch properly at the base of the die H, which is immediately under where the button rests.

In Figs. 4 and 5 of drawings I show modifications of Fig. 2, with the slot  $e$  entering the upper jaw, A, at its side, which construction may be employed, if desirable, without departing from the spirit of my invention, as may also the modified form of the spring of Fig. 2 shown in Fig. 9 of drawings.

My object in making the corrugations H H of the die partly beveled is to permit the fastening to remain straight in its prongs while sliding down the longer portion of said die, and then by increased pressure to force its ends hard up against or into the under side of the fabric, which gives the prongs a shorter turn, and consequently fixes them more flatly and securely than others that curl up from the time they strike a die of other form.

In constructing my instrument, the die H may be made in the under jaw, B, without the inclined portion shown at the extreme end of said jaw, if preferred; but the beveled part  $g$  in upper jaw, A, is necessary in order to admit the free passage of the button and fastening into the slot  $e e'$ .

Having fully described my invention and the manner of using the same, what I claim as new and useful, and desire to secure by Letters Patent, is—

1. In a setting-instrument, the upper jaw detachable from its handle and provided with concaved upper part, as at A', and flat operative face with beveled front portion,  $g$ , and the spring F, the said jaw and said spring being each provided with corresponding elongated slots  $e e'$ , and the lower face of the jaw

being provided with concavities, as at  $e^2$ , parallel with the part  $e'$  of its slot, in combination with a lower jaw having in its inner upper face a die consisting of angular corrugations H H, arranged one on each side of the longitudinal center of said lower jaw, substantially as set forth.

2. A button-setting instrument consisting of the jaws A B, operated by handles C D, the jaw A being made detachable and provided with an elongated slot, the longer portion of which slot extends in a direction across the face of the jaw, while the shorter portion extends in a direction parallel with the length of said jaw, the spring F, slotted to correspond with the jaw A, and the jaw B, beveled upon its upper inner face and provided with a die consisting of the angular corrugations H H, substantially as set forth.

3. A button-setting instrument consisting of an upper jaw, A, beveled upward at its outer end,  $g$ , and provided with an elongated slot, the longer portion  $e$  of which slot extends diagonally in a direction across the face of said jaw, and the shorter portion  $e'$  in the direction of the length of said jaw, a correspondingly-slotted spring, F, and a lower jaw having in its inner upper face a die consisting of angular corrugations H H, arranged one on each side of the longitudinal center of said lower jaw, substantially as specified.

Signed at New York, in the county of New York and State of New York, this 30th day of April, A. D. 1883.

WM. M. HAZEL.

Witnesses:

EDW. WM. FRANCIS,  
GEO. H. HANKS.