(No Model.)

G. W. PRENTICE.

BUTTON FASTENER.

No. 344,007. Patented June 22, 1886.

Fig. 1.

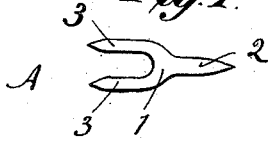

Fig. 2.

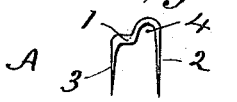

Fig. 3.

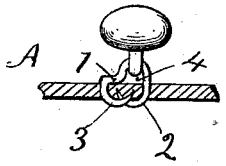

Fig. 4.

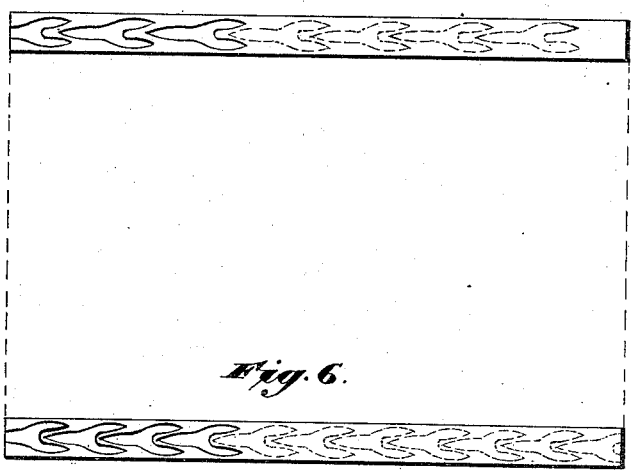

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE W. PRENTICE, OF PROVIDENCE, RHODE ISLAND.

BUTTON-FASTENER.

SPECIFICATION forming part of Letters Patent No. 344,007, dated June 22, 1886.

Application filed January 27, 1886. Serial No. 189,898. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PRENTICE, 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-Fasteners; 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 relates to metallic fasteners for securing eye-shank buttons to fabric of that class which are provided with a table having parallel prongs, one of which engages the eye of the button, and all of the prongs being passed through the fabric and subsequently clinched to secure the button thereto.

Heretofore in fasteners of the class mentioned the flattened prongs have been produced by the fastener being formed from stock previously prepared for the purpose, being angled at its edges, and others have been thinned at the points or ends of the prongs to more easily penetrate material in attaching the button.

My invention has for its object an improvement in said fasteners; and it consists, essentially, in swaging or shaving the depending prongs of a button-fastener their entire length, the single or button-holding prong being swaged or shaved from the extreme inner portion of the staple of said prong to its outer end, substantially as hereinafter more fully described.

Figure 1 is a plan view of the blank from which my improved fastener is formed. Fig. 2 is a side elevation of the fastener. Fig. 3 is a like view of the fastener, with button as attached. Fig. 4 is a strip of sheet metal in plan, showing a series of blanks from which what is known in the trade as the "Heaton Fastener" was formed. Figs. 5 and 7 are comparative views, in plan, of the blanks from which the old and improved fasteners, respectively, are formed. Fig. 6 is a plan view of a strip of sheet metal, showing a series of blanks from which my improved fastener is formed. Figs. 8 and 9 are comparative views, in side elevation, of the old and improved fasteners, respectively.

In carrying out my improvement the blank A is cut from sheet metal, substantially in the form shown in Fig. 1, consisting of the table 1, having prongs 3 3 at one side, and the single prong 2 at the opposite, the latter being bent at its junction with the table to form the staple 4, to engage the eye of a button, and all the prongs being bent at right angles to said table, substantially as shown in Fig. 2. Thus far the fastener is formed in the usual manner.

During the operation of bending the blank A to form the fastener the prongs are swaged or shaved to a gradual taper their entire length, the prongs 3 3 from the under side of the table 1 and the prong 2 from the extreme under side of the staple 4 to the ends of the prongs, as fully shown in Fig. 2. This constitutes my improvement, the object being to cause the prongs of the fastener after passing through the material, the button being engaged with the staple 4, to be clinched to said material, as illustrated in Fig. 3, with a firmer hold than with the usual form of prongs flattened, as previously described, as the prongs, being gradually tapered their entire length, on coming in contact with the clinching mechanism in the instrument devised for attaching are caused to bend gradually in a long curve after passing through the material, and thus embrace a much larger surface of said material than with the short, quick bend or curl incident to the usual form of prongs. The single or button-holding prong, by being tapered to the extreme inner side of the bend of the staple, is drawn inward toward the table on being clinched, instead of bulging outward, as in the prongs flattened in the usual way, and a superior article is thus produced at no advance in the cost of manufacture. It will also be seen by the comparative views of the drawings, Figs. 4 and 6, that I am enabled to cut ten blanks from a strip of metal that would only produce seven of the old form, thus effecting a great saving of metal, and yet producing a fastener whose attaching-prongs are of the same length as they are drawn out in the operation of swaging. In the old fastener the prongs are of uniform thickness throughout, being sharpened or beveled at the ends only, and in this form are difficult to manu-

facture, do not penetrate the material nearly as readily, and make a larger hole therein. The operation of swaging also renders the prongs more rigid, so that while they are sufficiently malleable to be upset they are less liable to bend while being set or until the prongs have passed through the material. The prongs also, being thinner, leave less projections on the under side to hurt the foot.

Having described my invention, I claim—

1. A button-fastener consisting of a table having penetrating-prongs bent at right angles to the table, one of said prongs being bent to form a loop or eye for the reception of the eye of a button, said prong being swaged or shaved its entire length from the inner portion of said loop or eye, the remaining prong or prongs being swaged or shaved from the under portion of the table to their ends, substantially as set forth.

2. The fastener A, comprising the table 1, having prongs 2 and 3, bent at right angles to the table, the prongs 3 being swaged or shaved their entire length from the under side of said table to their ends, and the prong 2 being bent to form the loop or eye 4, and swaged or shaved from the inner portion of said loop or eye to its end, substantially as described, and for the purpose specified.

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

GEORGE W. PRENTICE.

Witnesses:
F. A. SMITH, Jr.,
JAMES F. THAYER.