

(No Model.)

G. A. WELD.  
FASTENING DEVICE.

No. 459,059.

Patented Sept. 8, 1891.

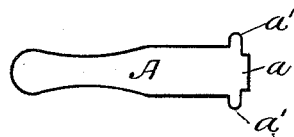


Fig. 1.

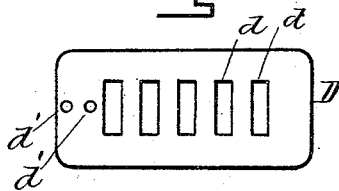


Fig. 3.

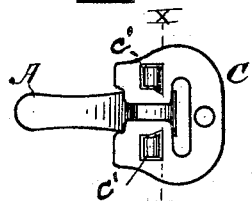


Fig. 6.



Fig. 5.

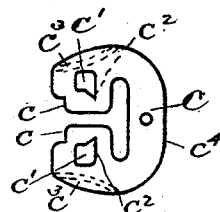


Fig. 2.

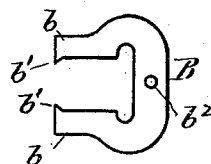


Fig. 4.

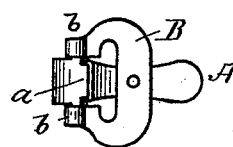


Fig. 7.

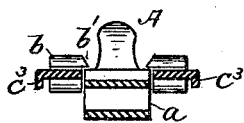


Fig. 8.

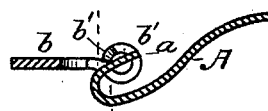


Fig. 9.

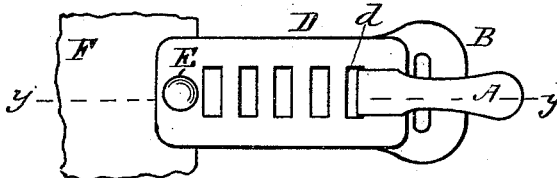


Fig. 10.

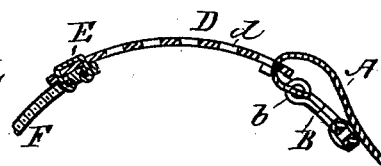


Fig. 11.

WITNESSES

Geo. H. Charl.  
C. D. Smith.

INVENTOR

George A. Weld.  
By his attorney,  
Bowdoin S. Parker.

# UNITED STATES PATENT OFFICE.

GEORGE A. WELD, OF WINCHESTER, MASSACHUSETTS.

## FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 459,059, dated September 8, 1891.

Application filed April 8, 1891. Serial No. 388,150. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. WELD, of Winchester, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Improvement in Fastening Devices, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to fastenings for boots, shoes, and other articles, and has for its object the perfecting of certain weaknesses and defects which use has demonstrated to exist in the special forms of fastenings heretofore in use.

In the drawings like letters of reference indicate corresponding parts.

Figure 1 is the tongue before being bent. Fig. 2 is the upper plate. Fig. 3 is the take-up or clasp. Fig. 4 is the under plate. Fig. 5 is the double-pronged rivet. Fig. 6 represents the fastening devices with upper plate and tongue open, disconnected with take-up or clasp. Fig. 7 represents the fastener with tongue closed and under plate in view. Fig. 8 is a vertical section on line *xx* of Fig. 6. Fig. 9 is a sectional view showing the method of attachment of the tongue to the under plate and showing the guard or stop for the tongue A. Fig. 10 shows the clasp closed and joined to the take-up. Fig. 11 is a sectional view on line *yy* of Fig. 10.

In the drawings, A, Fig. 1, represents the tongue before bending up, having a handle part, as shown, and a pintle on each side near one end. (Indicated by *a' a'*.) These are made in my present invention preferably rounding. At the same end of the body A of the tongue I form the part *a*. This is the cam part of the tongue when bent up, and is made narrower than the body of A, as shown in Fig. 1. The reason of this will be explained hereinafter. The cam part *a*, is well shown in Figs. 7 and 9.

The under plate B, Fig. 4, is formed, as shown, with the projections *b' b'*. The ends *b b* are made to be turned over, as shown in Figs. 7 and 9. The ends *b b* when turned over form the bearings for the pintles *a' a'* of tongue A. The object of the projections *b' b'* on piece B is to form stops for the cam *a* of tongue A.

It has been found that the fastening may be injured or destroyed by pressing the tongue back too far when open, and I have therefore devised the said stops *b' b'*, formed integral with the ends *b b* of piece B. The cam part *a* of tongue A is made narrower, as shown in Fig. 1, so that it may turn between the stops *b' b'*; but when the tongue is reversed the wide part of the tongue, near the pintles, will strike the stops and danger of straining or injury is obviated. These parts are well shown in Figs. 7, 3, and 9.

When the ends *b b* of piece B are turned over, forming the bearings for pintles *a' a'* of tongue A, it becomes important to cut out the holes *c' c'* of plate C, which plate sets on over plate B, thus making the thickness of the two plates less, and also improving the spring part *c c* of plate C in its operation when acting on the cam *a* of tongue A. It will be understood that the tongue A, turning on its pintles *a' a'* in the bearings *b b*, will bring the cam part *a* up against the spring part *c c* of plate C, while the stops *b' b'* will prevent the opening or turning back of tongue too far, so as to break the plates apart or break or bend the pintles. These points are very important and are peculiar to my invention.

Another peculiarity of my present invention is the improved way of securing the take-up D to the shoe or rubber. Heretofore a single rivet has been employed, but in use this is found objectionable, and I have therefore devised a double-pronged rivet with single head, and this is inserted so that the prongs will enter two holes *d' d'*, placed parallel with the length of the take-up. I have found that this manner of use has great advantages, and, moreover, when so used the prongs are pressed into the under thickness of the leather or other substance and both prongs are turned inwardly toward each other, as shown in Fig. 11, F representing the shoe to which the take-up D is fastened by the two-pronged rivet E.

Fig. 11 gives a sectional view of the completed fastener as attached to a shoe.

I am aware that fastenings designed for the same purpose have been made before, but in all that I have seen the pintles have been made flat or square in order to act as cams upon which the spring-piece of the upper plate,

or the plate itself, might act. The defects of those constructions I obviate by making pintles substantially round and making a special bearing for each, adapted to the requirements of the article, and I provide, as already described, for a cam part acting directly upon the spring-part, and all combined with stops to regulate the extent to which the tongue can be opened. The top and bottom plates B and C are secured together by a rivet at  $b^2 c^2$ , or in any other convenient manner.

It is unnecessary to explain further in detail the construction and operation of my improved fastener, as the drawings, in connection with the well-known state of the art, will be fully understood.

In my patent dated May 28, 1889, and No. 404,023, I show a similar fastener; but the improvements herein described are not found in that patent. I am also acquainted with the patent of Smith, No. 372,576, dated November 1, 1887, and of Hammond, No. 321,495, dated July 7, 1885, and Nase, No. 421,750, dated February 18, 1890; but my present invention is a new departure from either of the foregoing inventions named and obviates the peculiar objections and difficulties found by use to be inherent in all the previous constructions. For instance, in plate C the form  $c^2 c^2$  of holes  $c' c'$  is necessary to accommodate the stop parts  $b' b'$  of plate B. Otherwise the plate B at those points would have to be raised or struck up, which would be very objectionable both as to use and beauty of the completed article. Each side of the plate C at  $c^3 c^3$  is bent downward for two reasons, first, to stiffen the plate C as a spring-plate for the fastening device; second, to make a more neat and tasty article, thereby contributing to its selling qualities and value. The method of forming the holes  $d' d'$  to receive the two-prong rivet being parallel with the length of the take-up prevents the objectionable swinging movement of the take-up usual to other forms of rivet-fastening of such or similar parts. This method of securing the fastening to the shoe or similar article applies equally to both parts—*i. e.*, the clasp part and the take-up part. The holes  $d' d'$  are not shown in the drawings as formed in plate B or C; but the same principle would of course apply to them as applies to the take-up D. The two parts each being secured to

the shoe by the two-prong rivet E, placed in two holes similar to  $d' d'$ , keep both parts substantially in line with each other and add greatly to the ease of hooking and unhooking.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a fastening device, the plate B, formed with two parallel arms, the extremity of said arms adapted to be turned back, forming the integral bearings  $b b$ , and with the projections  $b' b'$ , adapted to form stops for the tongue when turned back with the said bearings, in combination with the tongue A, said tongue provided with the rounding integral pintles  $a' a'$ , adapted to be inserted and used in bearings  $b b$ , and the integral cam part  $a$ , formed narrower than the body of said tongue at the junction adjacent to the said pintles, and all adapted and arranged to operate in connection with a suitable spring-plate to be secured to plate B, substantially as and for the purposes set forth.

2. In a fastening device, the combination of the spring-plate C, formed with the spring parts  $c c$ , adjacent to a slot formed in said plate, and with the openings  $c' c'$ , the plate B, provided with the bearings  $b b$  and stops  $b' b'$ , all integral with said plate, and the tongue A, having the cam part  $a$  and the rounding pintles  $a' a'$ , all integral with said tongue and all adapted to operate substantially as and for the purposes set forth.

3. The fastening device herein described, consisting, essentially, of the plate B, having the bearings  $b b$  and stops  $b' b'$ , formed as described, the plate C, having the spring parts  $c c$  and the apertures  $c' c'$ , to receive the bearings  $b b$  and the stops  $b' b'$ , the tongue A, having the rounding pintles  $a' a'$ , and the cam part  $a$ , formed as described, and the take-up D, having the openings  $d$ , and all arranged substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 4th day of April, A. D. 1891.

GEORGE A. WELD.

Witnesses:

GEO. H. CHACE,  
BOWDOIN S. PARKER.