

(No Model.)

G. A. WELD.
SHOE FASTENING.

No. 507,249.

Patented Oct. 24, 1893.

Fig. 1.

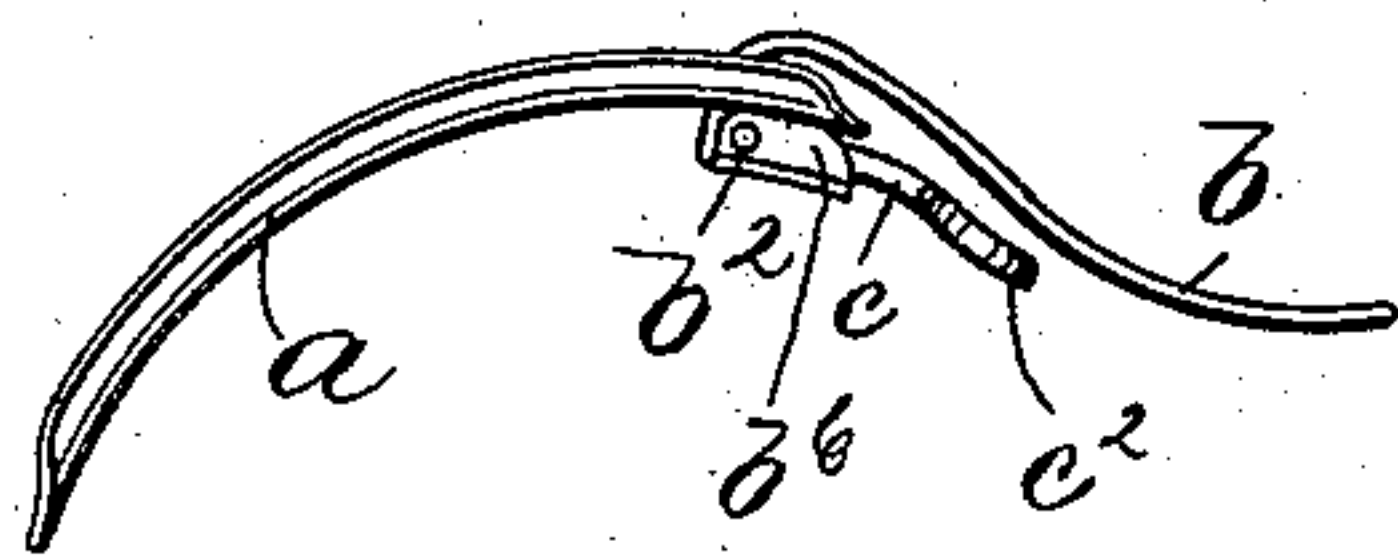


Fig. 9.

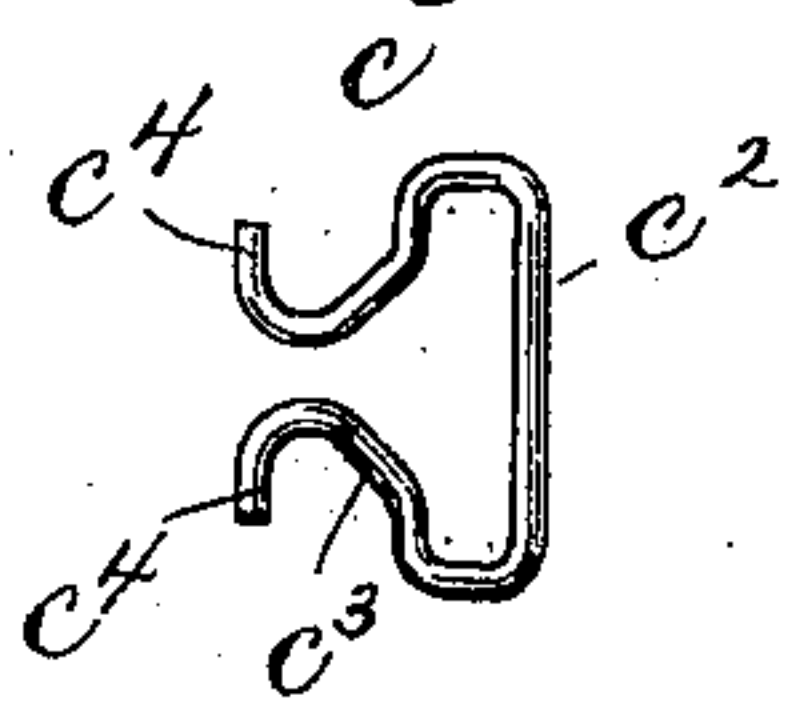


Fig. 2.

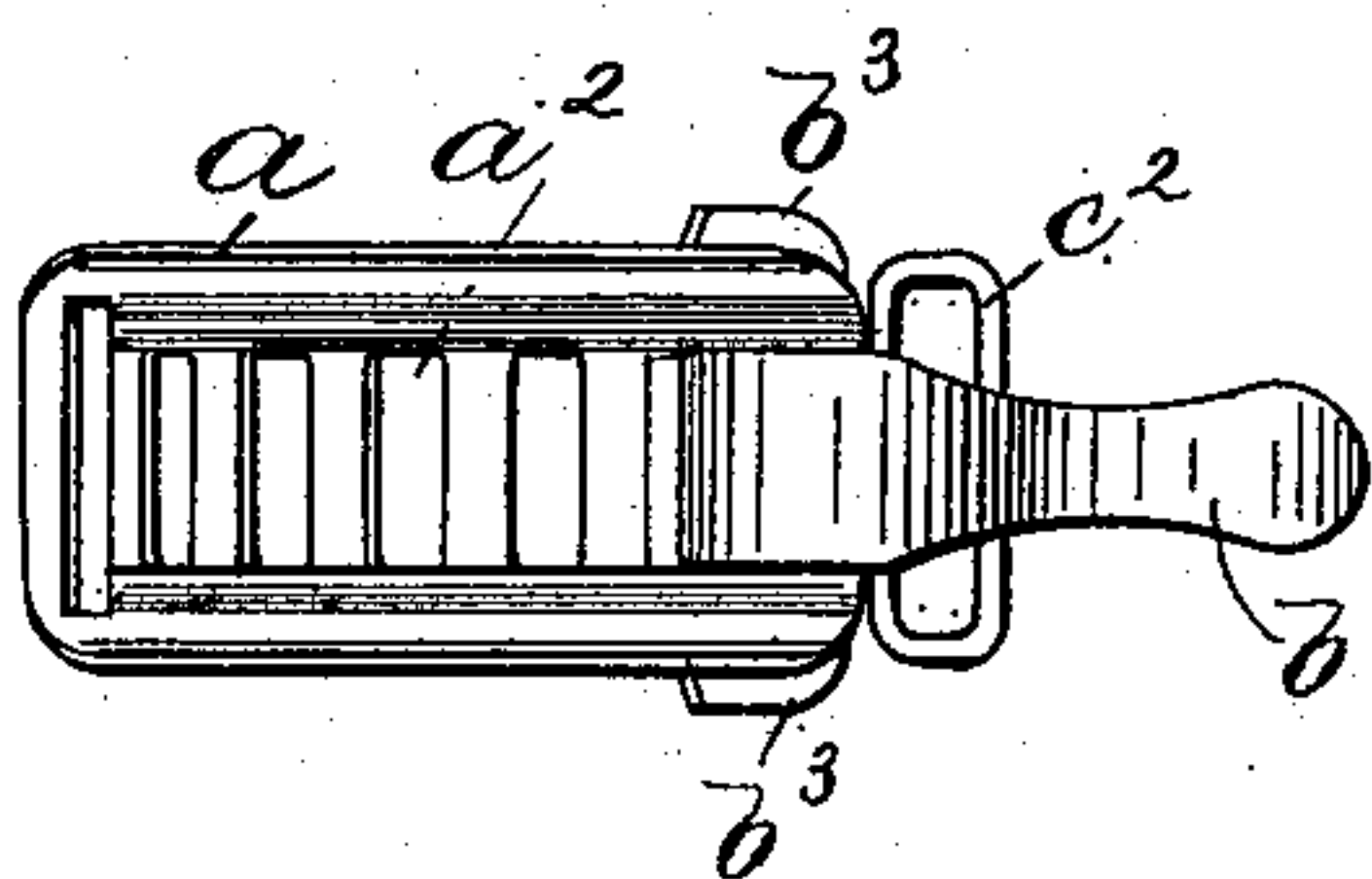


Fig. 7.

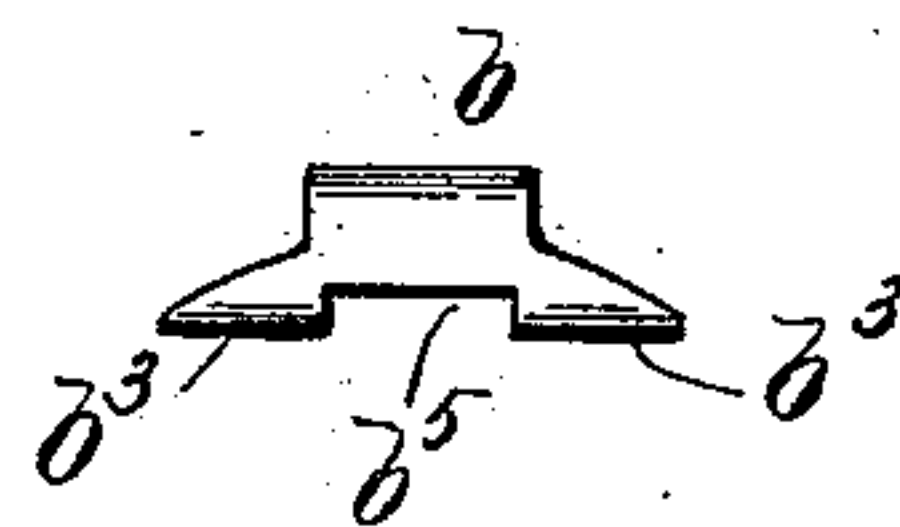


Fig. 10.

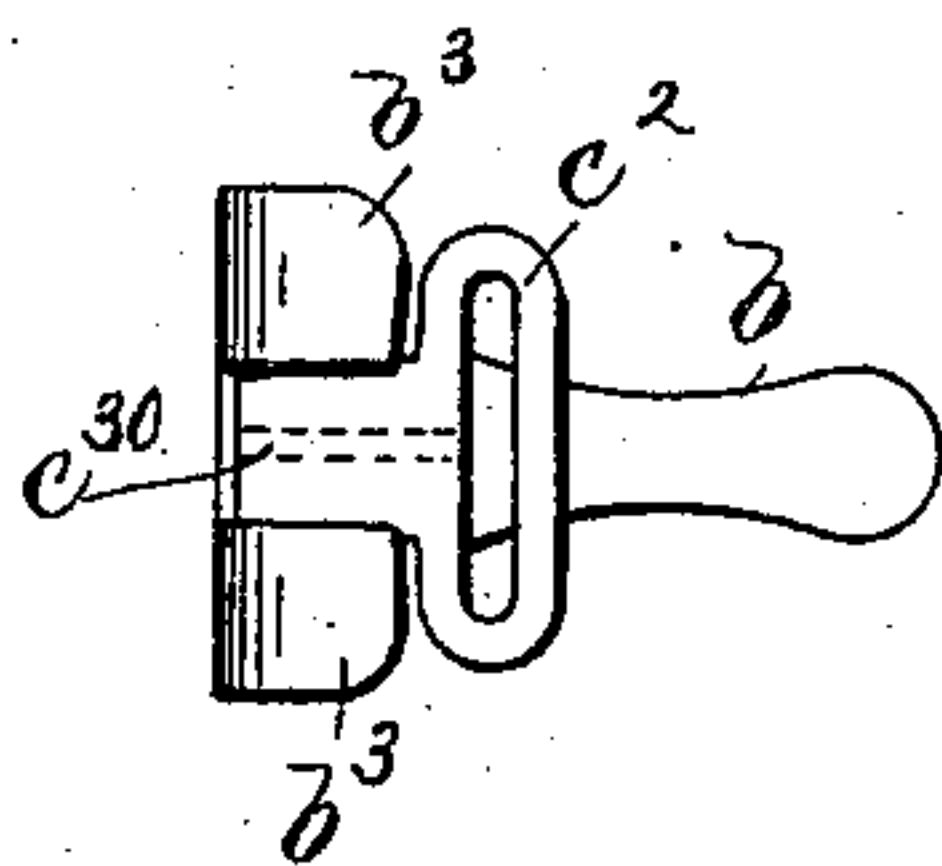


Fig. 3.

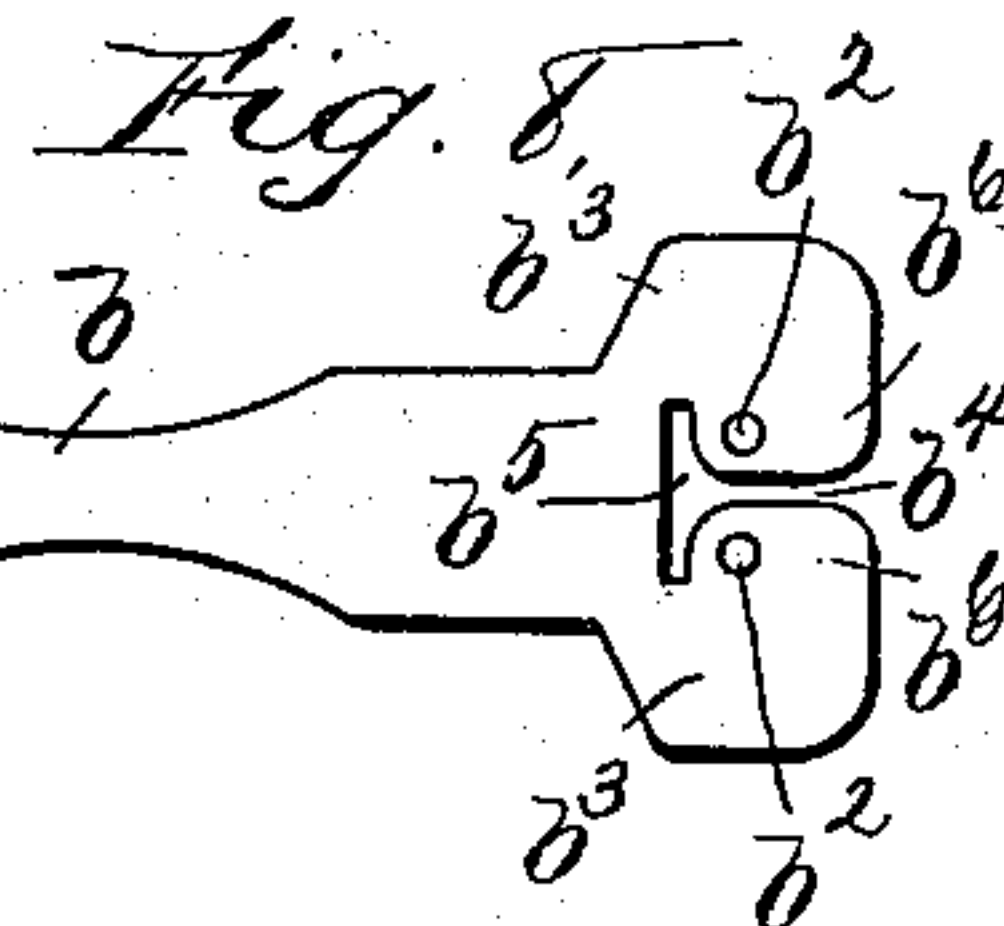
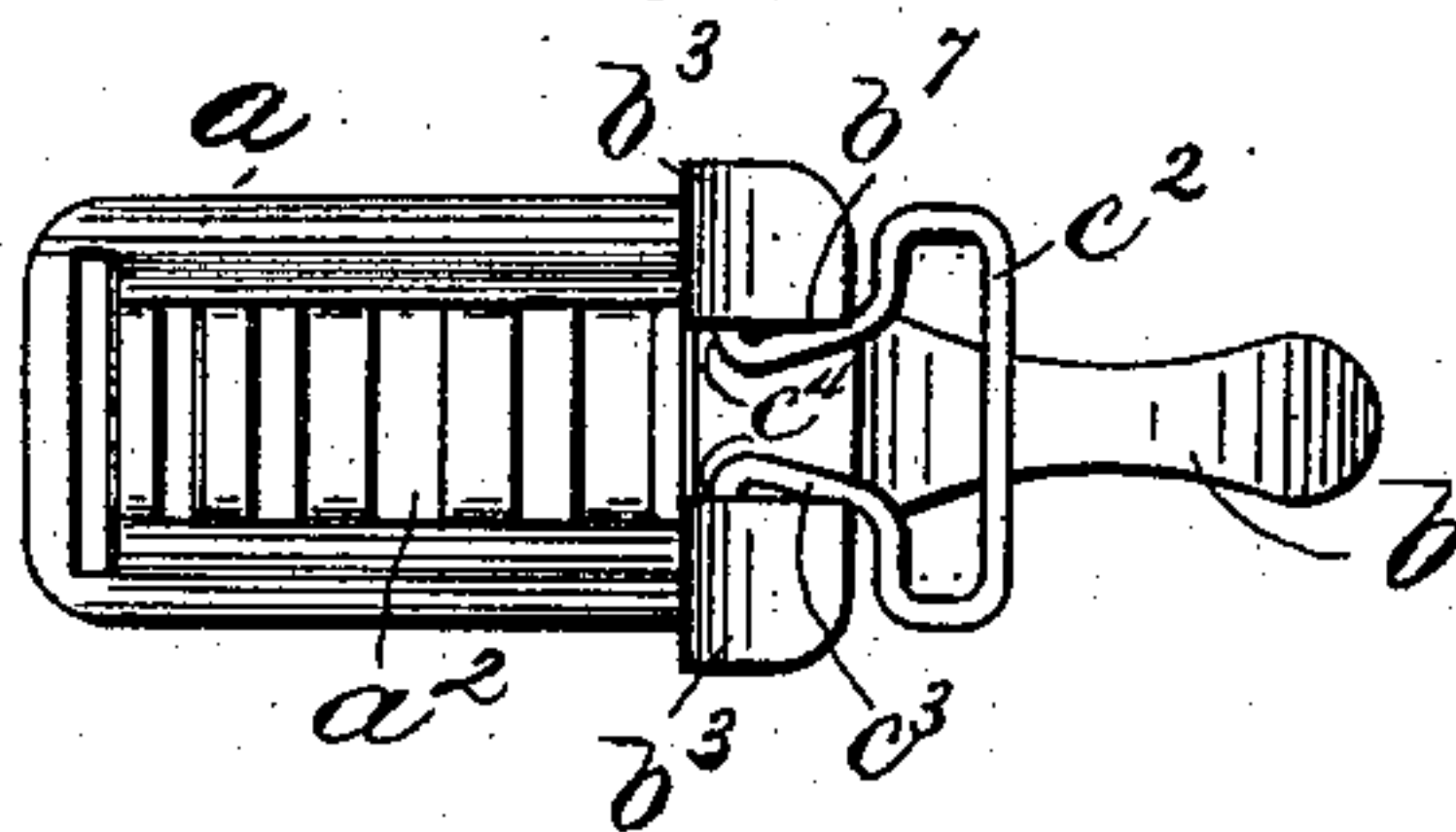


Fig. 4.

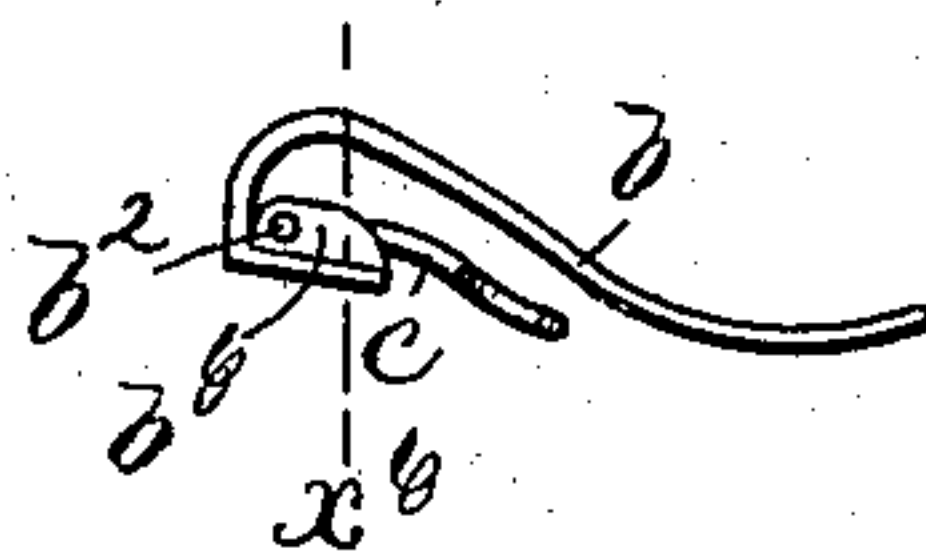


Fig. 5.

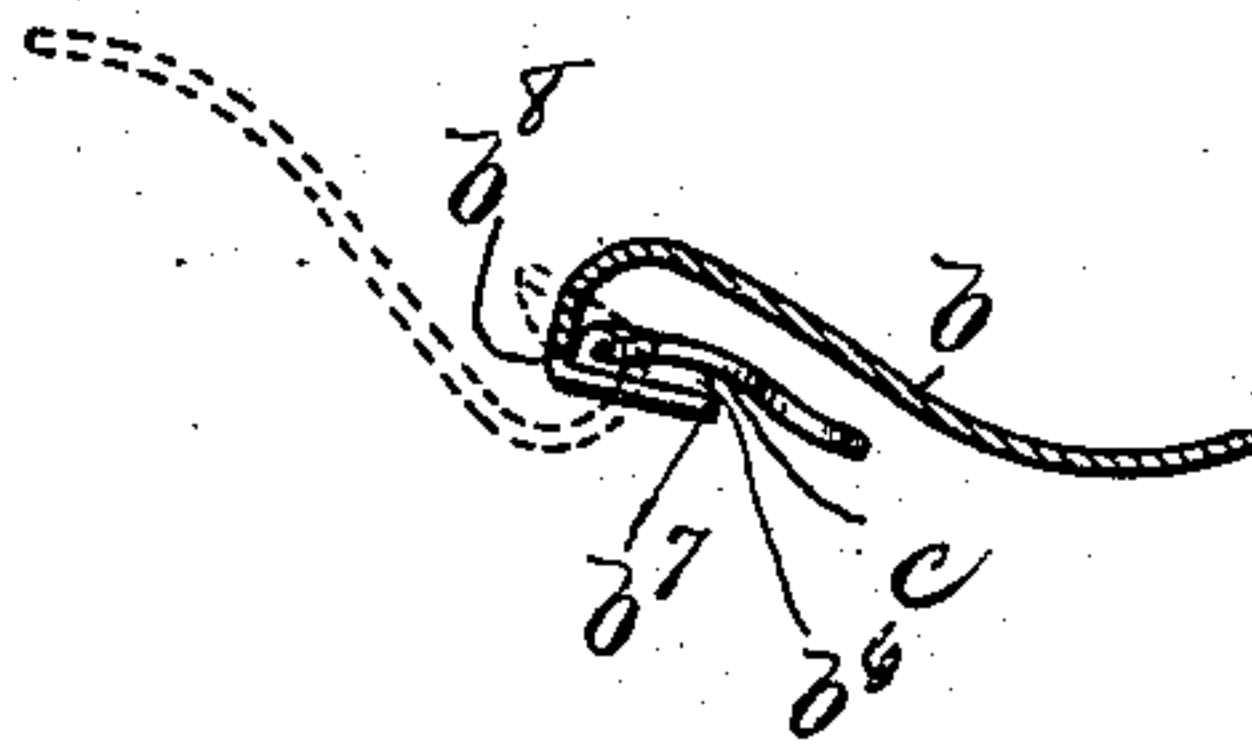
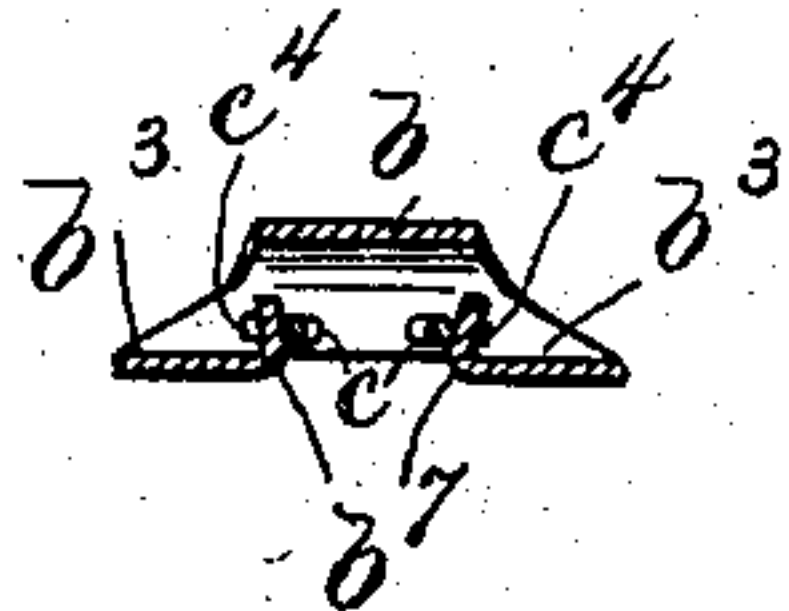


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE A. WELD, OF WINCHESTER, MASSACHUSETTS.

SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 507,249, dated October 24, 1893.

Application filed February 4, 1893. Serial No. 460,967. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WELD, of Winchester, county of Middlesex, State of Massachusetts, have invented an Improvement in Shoe-Clasps, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to a clasp or buckle of the kind commonly used upon arctics or over-shoes, to fasten together the sides or corners of the quarter of the shoe over the instep of the wearer. Clasps of this kind have been made, composed of two members one connected with one, and the other with the other of the parts to be fastened together by the clasp, one of said members being a plate having an opening, or usually a number of openings, to receive a tongue or lever which is the main operative part of the other member of the fastening. The first of these members is commonly called the catch plate, and the present invention relates especially to the construction of the other member which is provided with the tongue or lever that engages with the catch plate. As usually constructed the tongue member is pivoted upon a frame piece called the tongue plate which is itself attached to the quarter of the shoe or other part to be fastened by the buckle, and the movement of the tongue on its pivot or fulcrum in the tongue plate is controlled by a spring which tends to hold the tongue either in open or closed position and affords a yielding resistance to the movement of the tongue from one position to the other. The tongue plate usually affords a bearing or seat for the catch plate when the clasp is fastened, and the tongue is held by its spring folded down over the tongue plate so as to securely confine the catch plate until the clasp is unfastened by the operator turning the tongue on its pivot against the resistance of the spring.

In the present invention the tongue is fulcrumed upon or pivotally connected with a frame piece preferably composed of a piece of stout spring wire bent to form a loop for attachment to the shoe and provided at its ends with lateral outwardly projecting fingers which enter lugs at the sides of a recess formed in the tongue piece near the base

thereof and thus afford the pivotal connection between the said tongue and base piece, while the spring action is provided by lateral pressure between the sides of the recess in the base of the tongue piece and the portion of the base piece or attaching part that enters the said recess. The base portion of the tongue is widened so as to afford a bearing for the catch plate at each side of the part that engages pivotally with the frame piece or attaching part. Thus an extremely simple and inexpensive and durable clasp is produced the tongue member of which comprises only two pieces, namely, the tongue itself, and the connecting piece upon which it is fulcrumed.

Figure 1 is a side elevation of a clasp embodying this invention; Fig. 2 a plan view thereof; Fig. 3 an under side view; Fig. 4 a side elevation of the tongue member detached; Fig. 5 a longitudinal section thereof; Fig. 6 a transverse section on line x^6 , Fig. 4; Fig. 7 an end elevation of the tongue detached; Fig. 8 a plan of the flat blank from which the tongue is formed; Fig. 9 a plan view of the attaching part of the tongue member detached, and Fig. 10 an under side view showing a modification in which the frame piece or attaching part is made of sheet metal instead of wire as shown in the other views.

The catch plate member a , Figs. 1, 2, and 3, may be of any suitable or usual construction and of itself forms no part of the present invention, the said catch plate being provided with the usual opening a^2 to co-operate with the tongue b of the other member of the fastening. The said tongue b is fulcrumed or pivotally connected at b^2 with the frame piece or attaching portion c of the tongue member which is provided with a loop c^2 best shown in Figs. 1, 3, and 9, for attachment to the shoe or article to be fastened, in the usual manner. The tongue portion b is made from a flat blank of the shape shown in Fig. 8, the said tongue itself being of a width to enter the opening of the catch plate, and having a wide base portion b^3 having a longitudinal and transverse recess b^4, b^5 , thus forming two wings or projections b^6 which contain the fulcrum openings b^2 and are bent up nearly at right angles to the adjacent portion of the base b^3 in line with the ends of the recess

5 b^5 as best shown in Figs. 4, 5, and 6, thus
 bringing the fulcrum openings b^2 opposite
 and in line with one another, at the oppo-
 site sides of a recess in the base portion of
 the tongue piece as clearly shown in Fig. 6.
 The lugs b^6 are bent to slightly divergent po-
 sition as shown in Fig. 6, so that the corners or
 angles between the said lugs and the adjacent
 portion of the base of the tongue project in-
 ward across the said recess as best shown at
 10 b^7 , Fig. 6, thus forming a contracted throat or
 passage through which the corresponding part
 of the connecting piece c has to pass when the
 tongue is turned from the dotted to full line
 15 position, Fig. 5. The said connecting part c
 is preferably made from stout spring wire as
 shown in Fig. 9, bent to form the attaching
 loop c^2 and a shank or connecting part c^3 ter-
 minating in laterally outward projecting fin-
 20 gers c^4 which enter the fulcrum openings b^2
 in the lugs b^6 of the tongue piece the said
 shank portion c^3 extending into the recess in
 the base of the tongue piece between said lugs.
 The said attaching piece is so shaped, as best
 25 shown in Fig. 5, that when the tongue is folded
 down to engage with and fasten the catch plate
 the shank portion c^3 is above the inwardly pro-
 jecting corners b^7 and said attaching piece is
 also so formed as to be under a slight elastic
 30 strain when interposed between the lugs of
 the tongue piece so that the arms c^3 press out-
 wardly against said lugs as shown in Fig. 6.
 As a consequence of this construction when
 the tongue is turned from the dotted to the
 35 full line position Fig. 5 or the reverse, the
 arms c^3 are crowded inward somewhat as the
 projecting portions b^7 pass them and their out-
 ward elastic pressure tends to throw the said
 projections from between them the moment
 40 that the point of nearest approach of said pro-
 jections passes the said arms. Thus a spring
 action is produced tending to throw the tongue
 toward one or the other of its extreme posi-
 tions and tending to retain the tongue in ex-
 45 treme position until moved therefrom by the
 operator.

The wide portion b^3 of the tongue piece near
 the base thereof forms a seat or support for

the catch plate as will be readily understood
 from Figs. 2, 6, and 7, and the shoulder b^8 at 50
 the end of the recess in which the fastening
 piece is pivoted constitutes a stop which by
 its engagement with the fastening piece lim-
 its the outward or opening movement of the
 tongue as shown in dotted lines Fig. 5. 55

It is not essential that the attaching piece
 c should be made of wire. It might if re-
 quired, be made of sheet metal as indicated in
 Fig. 10, the construction and mode of opera-
 tion being otherwise the same except that the 60
 elasticity, for widening the throat may be af-
 forded by the outward yielding of the portions
 b^3 of the tongue at each side of the recess, in-
 stead of the inward yielding of the shank of
 the connecting piece, although the latter might 65
 if desired be made of sheet metal and still be
 made inwardly yielding by slotting the same
 as indicated by dotted lines at c^{30} , Fig. 10.

I claim—

1. The tongue or lever b having a widened 70
 base portion as b^3 recessed and provided with
 upwardly turned fulcrum lugs at the sides of
 said recess, combined with the attaching piece
 having a shank passing into said recess, and
 provided with outwardly turned fingers en- 75
 gaged with the said fulcrum-lugs, substan-
 tially as and, for the purpose described.

2. The tongue or lever b having a widened
 base portion as b^3 recessed and provided with
 upwardly turned fulcrum lugs at the sides of 80
 said recess combined with the attaching piece
 having a shank passing into said recess, and
 provided with outwardly turned fingers en-
 gaged with the said fulcrum-lugs, the shoulder
 at the end of the recess in the tongue being 85
 adapted to engage with said attaching piece
 to constitute a stop for the pivotal movement
 of the tongue, substantially as described.

In testimony whereof I have signed my
 name to this specification in the presence of 90
 two subscribing witnesses:

GEO. A. WELD.

Witnesses:

JOS. P. LIVERMORE,
 M. E. HILL.