(No Model.)

E. H. ALCOTT.

SHOE BUCKLE.

No. 369,152. Patented Aug. 30, 1887.

Fig. 1.

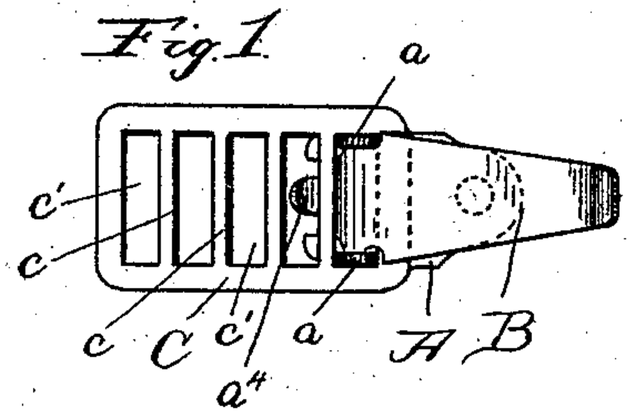


Fig. 2.

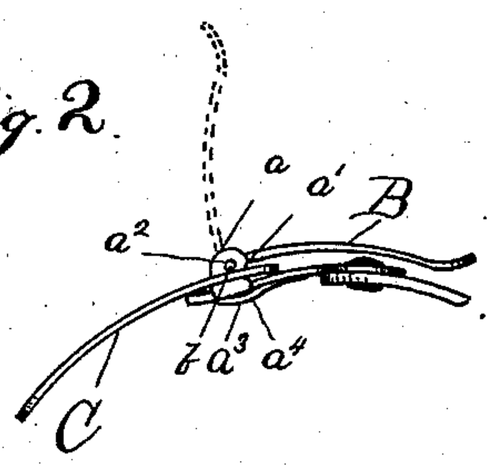


Fig. 3.

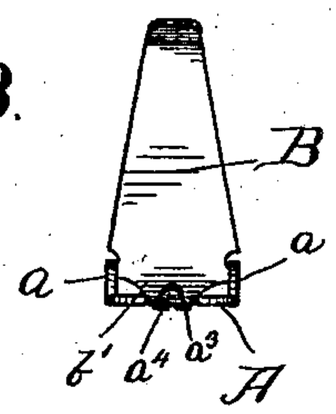


Fig. 4.

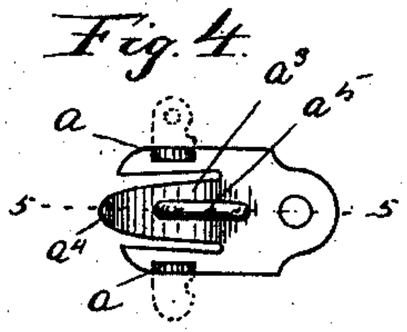


Fig. 5.

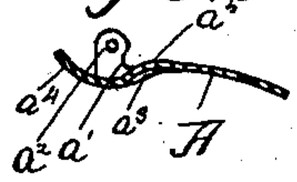


Fig. 6.

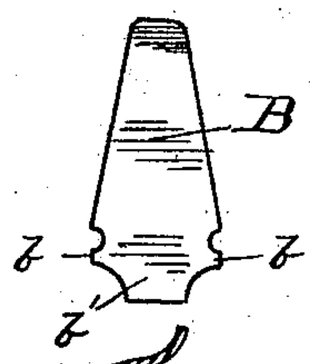
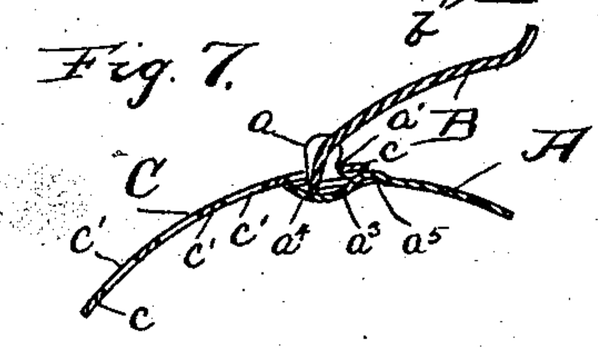


Fig. 7.



Witnesses:

Lew. C. Curtis.

P. W. Munday,

Inventor:

Edward H. Alcott.

By Munday, Evarts and Adcock

his Attorneys:

UNITED STATES PATENT OFFICE.

EDWARD H. ALCOTT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ALCOTT BUCKLE COMPANY, OF SAME PLACE.

SHOE-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 369,152, dated August 30, 1887.

Application filed April 9, 1887. Serial No. 234,221. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. ALCOTT, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Shoe-Buckles, of which the following is a specification.

My invention relates to buckles for shoes, rubber overshoes, and other similar articles.

The object of my invention is to provide an efficient, strong, and durable shoe buckle or clasp of a simple and cheap construction which may be easily and conveniently fastened or unfastened, and which will hold the take-up strap or plate securely when locked or fastened.

To this end it consists, in connection with a suitable slotted plate or take-up, of a sheet-metal base-plate having a central curved spring integral with the plate and furnished with a pair of upturned lugs or ears, one at each side or edge, over which the take-up is drawn and which project through the slots in the take-up, which lugs receive the strain of the take-up edgewise against them, so that no part of such strain comes upon the cam-lever or its hinge, and so that such strain will not be liable to break the lugs off even when the base-plate is made of comparatively light sheet metal. The lugs are furnished with slight notches or made hook-shaped on their rear edges, against which the cross-bar of the take-up rests, so as to keep the take-up better in place. These lugs on the base-plate bear against the cross-bars of the take-up at the extreme ends of said bars, so that the strain will not have a tendency to bend or break the cross-bars, and so that the take-up will be amply strong when made of light stock. By employing a curved spring on the base-plate to act against the cam of the cam-lever such lever is pressed by the spring with the greatest force when the cam-lever is in its horizontal or closed position, and as the cam-lever is raised in opening the buckle the strain upon the spring becomes less and less, and this is a great advantage in the operation of the buckle as well as its construction. The spring consists simply of a flat projecting lip or extension of the base-plate, and I provide it with a central longitudinal corrugation or groove stamped into the metal to strengthen and stiffen the spring at its base or rear part.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a plan view of a buckle embodying my invention, showing the same closed. Fig. 2 is an edge or side view of the same. Fig. 3 is an end view showing the cam-lever raised. Fig. 4 is a plan view of the base-plate. Fig. 5 is a section on line 5 5 of Fig. 4. Fig. 6 is a plan view of the cam-lever blank, and Fig. 7 is a central longitudinal section showing the cam-lever partially raised.

In said drawings, A represents the base-plate, made, preferably, of sheet or plate steel and having a pair of lugs or flanges, *a a*, turned up at right angles at its side edges for holding the take-up C and receiving the strain thereof. The take-up C is of the usual construction, having cross-bars *c* and slots *c'* between the cross-bars, and it is stamped out of sheet metal, preferably sheet-steel. The length of the slot *c'* in the take-up just equals the distance between the upturned bearing-lugs *a a* on the base-plate, so that said lugs may project through the slots in the take-up, and so that the strain will at the same time come against the cross-bars *c* of the take-up at the extreme end thereof.

The upturned bearing-lugs *a a* on the base-plate blank project at the sides of the base-plate, as shown in the dotted lines at Fig. 4, and when turned up at right angles they are parallel to the side edges of the base-plate and of the take-up, so that the strain of the take-up will come edgewise against the bearing-lugs, in which direction they are of course strongest and best adapted to sustain the strain. The rear edges of the bearing or holding lugs *a a* are furnished with curved recesses or notches *a' a'*, thus making the bearing-lugs somewhat hook-shaped to receive and better retain in place the cross-bar of the take-up. The holding-lugs *a a* are also furnished with holes a^2 a^2 to receive the side pivots or pintles, *b b*, of the cam-lever B.

The cam-lever B is furnished with a central downwardly-curved end or cam, *b'*, which bears against the central curved spring, a^3, of the base-plate A. The spring a^3 is integral

with the base-plate and consists simply of the end portion of the base-plate between the take-up holding-lugs *a a*. This spring is downwardly curved, the curve a^4 being preferably on about the arc of a circle described around the pivot of the cam-lever as a center by the cam *b'*, so that as the cam-lever is raised or opened the tension of the spring will be released instead of increased as the cam passes under its pivot or hinge.

To stiffen the rearward portion of the flat longitudinally-curved spring a^3, I provide the same with a longitudinal bead or corrugation, a^5, stamped into the sheet metal. By means of the curve a^4 the spring a^3 is made to hold the cam-lever firmly in its closed position—that is, in the position where it should be pressed strongly by the spring—and to relieve the pressure as the cam-lever is raised. By this means the buckle is made to operate much more easily and perfectly, and at the same time the spring is not subjected to any undue strain and rendered liable to be broken by the turning of the cam-lever. By changing the curvature of the spring the maximum pressure of the spring against the cam of the lever may be made to occur at any point desired. It is preferable, however, that the maximum pressure should of course be exerted when the cam-lever is closed.

The cam-lever fits between the take-up holding-lugs *a a* of the base-plate, and in operation the free end of the cam-lever is inserted through a slot, *c'*, in the take up and then the cam-lever is closed, thus carrying the take-up over its holding-lugs *a a*, the curved spring a^3 pressing against the cam, and thus holding the cam-lever closed. The cam *b'* is curved downward, as indicated in Figs. 2 and 7, and when the lever is being raised to open or unfasten the buckle the curved cam end *b'* strikes the cross-bar *c* of the take-up and raises or carries it forward and upward over the holding-lugs *a a* of the base-plate.

In my buckle it will be observed that the strain comes entirely against the bearing-lugs of the base-plate and no part of it against the cam-lever, its hinge, or pivots, and that the strain is also edgewise of the bearing-lugs and against the exterior ends of the cross-bars of the take-up, thus rendering the buckle extremely strong, while it is simple and cheap of construction.

The base-plate is furnished with the usual slot or rivet-holes, a^2, for attaching the same to the shoe or other article.

I claim—

1. The combination of base-plate A, having integral upturned take-up holding-lugs *a a* at its side edges and a central longitudinally-curved spring, a^3, at its end, with a lever, B, having cam *b'* and pivot-ears *b b*, journaled in said lugs *a a*, and a slotted take-up, C, substantially as specified.

2. The combination, with a slotted take-up, of a base-plate having an integral curved spring, a^4, and a lever pivoted to said take-up and having a cam bearing against said curved spring, the curve of said spring being approximately in an arc around the pivot of said cam or lever, substantially as specified.

3. The combination of base-plate A, having spring a^3, furnished with curve a^4, and a longitudinal bead or corrugation, a^5, with a cam-lever pivoted to said base-plate and operating against said spring, substantially as specified.

4. The combination, with base-plate A, having integral upturned take-up holding-lugs *a a* at its side edges, of a slotted take-up adapted to fit over said lugs, a lever pivoted to said lugs, having a cam, *b'*, adapted to engage the cross-bars on said take-up and raise or carry the same over said holding-lugs, substantially as specified.

5. The combination, with base-plate A, having upturned take-up holding-lugs *a a* at its side edges, of a slotted take-up adapted to fit over said lugs, a lever pivoted to said lugs, having a cam, *b'*, adapted to engage the cross-bar on said take-up and raise or carry the same over said holding-lugs, and a curved spring, a^3, integral with the base-plate for holding said cam-lever closed, substantially as specified.

6. The combination of base-plate A, having upturned lugs *a a* at its side edges, furnished with recesses *a' a'* at their rear edges, and pivot-holes a^2 a^2, with lever B, having pivot-ears *b b* and cam *b'*, spring a^3, integral with said base-plate, having curve a^4 and longitudinal strengthening-bead a^5, and take-up C, having cross-bars *c* and slots *c'*, substantially as specified.

EDWARD H. ALCOTT.

Witnesses:
H. M. MUNDAY,
EDMUND ADCOCK.