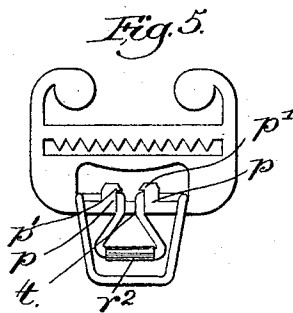
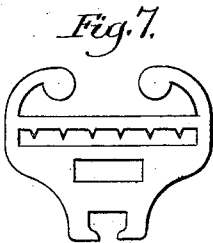
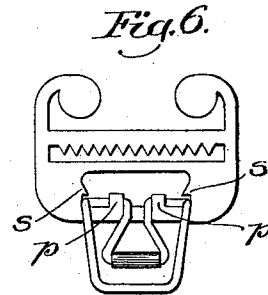
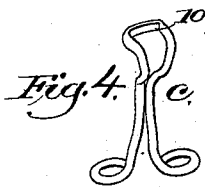
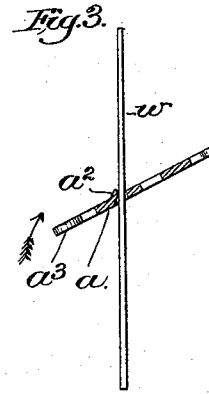
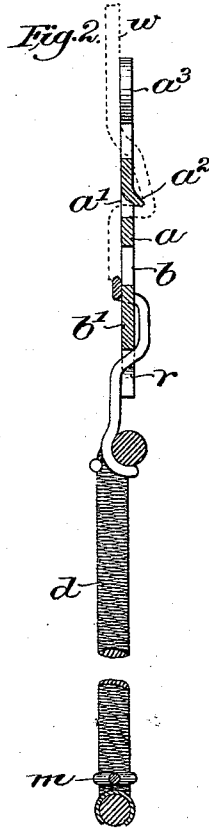
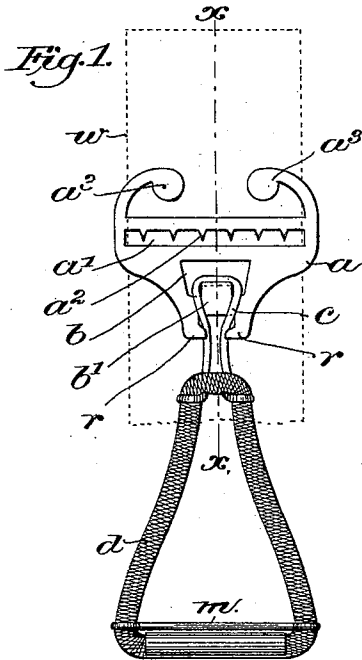


(No Model.)

A. M. ZIEGLER.
BUCKLE.

No. 487,043.

Patented Nov. 29, 1892.



Witnesses.
Edward F. Allen.
Louis N. Howell.

Inventor:
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UNITED STATES PATENT OFFICE.

ALFRED M. ZIEGLER, OF BOSTON, MASSACHUSETTS.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 487,043, dated November 29, 1892.

Application filed May 9, 1892. Serial No. 432,332. (No model.)

To all whom it may concern:

Be it known that I, ALFRED M. ZIEGLER, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Buckles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Suspender-buckles as now commonly made are provided with slots or openings, through which pass the shoulder straps or webs, and to adjust the buckles on the straps or webs requires considerable time and often causes trouble.

This invention has for its object the production of a novel buckle whereby the effective length of the suspender may be quickly and easily adjusted.

The buckle embodying this invention is composed of a metal plate or body having an elongated slot or opening, the metal constituting the upperside of the slot being toothed, the teeth being turned slightly outwardly, their points being directed downwardly, the plate above its slotted and toothed part being provided with ears, preferably integral with the body of the buckle, said ears lying upon the front side of the strap or web and being of such shape and size as to leave an open space between them, through which the strap may easily be passed when it is desired to adjust the buckle thereon. The body of the buckle below its slotted and toothed part is provided with a suitable opening having, preferably, a tongue which is engaged by a loop-like wire cast-off, the latter being retained in place on the tongue by lips or shoulders, which overlap parts of the cast-off when the latter is in its operative position. The cast-off supports an elastic loop or triangle. (Represented as braced or bridged at its lower end to support the strap or end of the suspender.)

Figure 1 in front elevation shows a buckle embodying my invention, the dotted lines showing the web in place; Fig. 2, an enlarged vertical section of the buckle shown in Fig. 1 in the dotted line xx ; Fig. 3, a detail showing the buckle tipped on the strap or web. Fig. 4 represents the cast-off detached. Fig. 5 represents a modification to be referred to; Fig.

6, yet another modification to be described, and Fig. 7 yet another modification showing the tongue omitted.

My improved buckle is composed, preferably, of a sheet-metal plate or body a , having an elongated slot a' , the metal at the upper edge of the slot being cut to form teeth, as at a^2 , which, while pointing downwardly, are made to project outwardly.

This buckle has formed preferably integral with it two ears $a^3 a^3$, one near each end of the buckle, the said ears being adapted to act against the face of the web, and yet there is left between the ears an open space of sufficient width to enable the strap or web w to be passed from the back to the front of the buckle or ears, and vice versa, when it is desired to adjust the buckle on the said strap or web without drawing the end of the strap completely through the slot a' . The length of the outwardly-turned teeth will depend upon the thickness and character of the web used. The teeth a^2 are made substantially as long as the slot or opening a' is wide, the turning out of the teeth more or less affording sufficient space to permit the strap used to be readily passed through the buckle.

The strap or web w to be engaged by the buckle is represented by dotted lines, Figs. 1 and 2, and in full lines in Fig. 3. The strap or web when being introduced into the buckle is laid in behind the ears a^3 , thence across the face of the buckle below the ears, and thence through the elongated slot a' and out at the back of the buckle, the rear side of the strap or web thus embracing the row of teeth a^2 , so that when strain is put upon the strap or web in the direction of its length the strap will engage the teeth and so fix the buckle to the strap or web and prevent slipping. To adjust the buckle on the strap or web, the latter may be curved or bent longitudinally sufficiently to enable it to be passed from behind outwardly between the ears $a^3 a^3$ to the front side of the buckle. This done, the strap or web buckle may be tipped on the strap, as in Fig. 3, to thus disengage it from the teeth a^2 of the buckle, and thereafter the buckle may be moved freely back and forth on the strap or web, and when in the desired position the

strap or web will be returned to the rear side of the ears, as represented in Figs. 1 and 2, the strain on the strap or web thereafter causing the teeth to enter, engage, and hold the buckle in place on the strap or web.

The body of the buckle has also an opening b , provided, as represented in Fig. 1, with a tongue b' , so located as to be engaged by a loop at one end of a wire-like cast-off c , the latter being adapted to form the connection between the buckle and any unusual button-hole straps or end pieces, the cast-off, as herein shown, having connected to it an elastic or spring loop d , braced at its lower end by a bridge m .

The cast-off will preferably in practice be made from spring-wire, and to retain the cast-off in place on the tongue b' of the buckle the latter will have at some proper place suitable lips r to catch over a part or parts of the cast-off.

In Figs. 5 and 6 I have shown modified forms of buckles and a different cast-off. In Fig. 5 the tongue of the buckle is forked or separated to form two prongs p , each provided with a lip p' to overlap the parts t of the cast-off, the latter consisting of a sort of double loop, as shown, made of wire, the portions of the inner loop when the ends of the wire abut being surrounded by a ferrule r^2 . In Fig. 6 the lips marked s are on the body of the buckle and co-operate with the outer legs of the cast-off.

This invention is not limited to the exact shape shown for the cast-off or tongue or of the lips to co-operate with the cast-off to keep it on the tongue, as the same may be varied and made of other suitable shapes without departing from the principle of operation herein set forth.

The cast-off, bent, substantially as shown, from spring-wire, has its upper end shaped to embrace the tongue closely, the upper end of the cast-off being bent, as at 10, to embrace that part of the buckle between the base of the tongue and the lips, the lower ends of the extremities of the wires being bent to form eyes to embrace the cord, or it may be an elastic loop, such as shown in my application, Serial No. 398,338. It will be understood that the space between the ends of the lips r is somewhat less than the width of the cast-off when the latter is to pass between the said lips, so that as the cast-off is turned down into its working position it as it is passed between the lips will be pinched or sprung together, and having been passed through the space between the lips the latter will catch on the front sides of the wires and aid in keeping the cast-off in place on the buckle.

While I prefer to employ a tongue, as b' , yet the tongue may be omitted, as in Fig. 7, and

the bent upper end of the cast-off engage the bottom edge of the slot b .

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The herein-described buckle, it consisting of a flat body having an elongated slot provided along its upper edge with a row of outwardly and downwardly projecting teeth and having above said teeth inturned ears located substantially in the plane of the body and substantially a continuation thereof to act upon the face of a suitable strap or web, there being a space between the inner edges of the said ears and the top of the body for the passage of the web therebetween, substantially as described.

2. A buckle-body composed of a sheet-metal plate having within its outer edges an opening partially closed by ears $a^3 a^3$, behind which the web rests, a slot a' , having along its upper edge a series of outwardly and downwardly turned teeth a^2 , a slot to receive the upper end of a cast-off, and an opening the mouth of which is contracted in width to engage a part of and aid in keeping the cast-off in place, substantially as described.

3. A buckle consisting of a flat sheet-metal body having a series of integral outwardly-turned teeth, upwardly-projecting ears a^3 above said teeth to receive the web between them and act upon it only near its edges and having an opening at its lower portion and provided with a tongue and lips, combined with a wire-like cast-off adapted to engage and be held in place by the said tongue and lips, the normal width of the cast-off near the said lips being greater than the space between said lips, substantially as described.

4. A buckle consisting of a sheet-metal body having a series of integral outwardly-turned teeth, upwardly-projecting ears a^3 above said teeth to act upon the web only near its edges and having an opening b and lips or shoulders, combined with a cast-off and a spring-loop connected thereto and provided with a brace or bridge, substantially as described.

5. A buckle-body, a slot a' therein, having along its upper edge a series of outwardly and downwardly turned teeth a^2 , a slot to receive within it the upper end of a cast-off, and an opening in said buckle-body, the mouth of which is contracted in width to engage a part of and aid in keeping the cast-off in place, substantially as described.

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

ALFRED M. ZIEGLER.

Witnesses:

GEO. W. GREGORY,
LOUIS N. GOWELL.