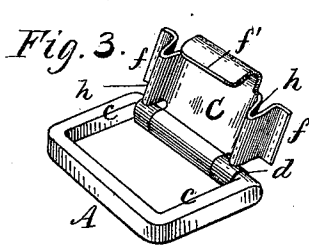
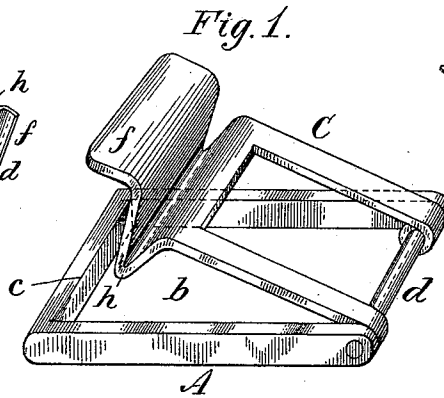
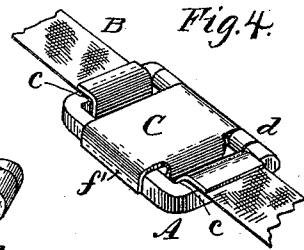
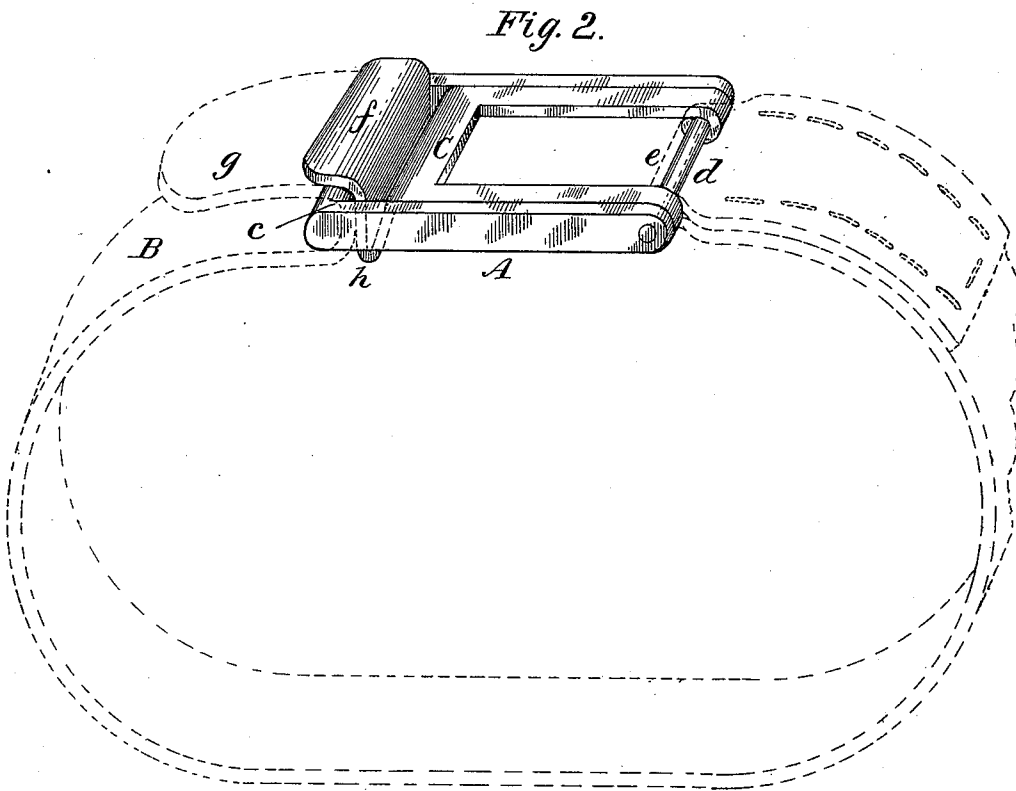


(No Model.)

B. H. DAY, Jr.
BUCKLE.

No. 438,912.

Patented Oct. 21, 1890.



WITNESSES:
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UNITED STATES PATENT OFFICE.

BENJAMIN H. DAY, JR., OF WEST HOBOKEN, NEW JERSEY.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 438,912, dated October 21, 1890.

Application filed May 3, 1890. Serial No. 350,487. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN H. DAY, JR., of West Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Buckles, of which the following is a full, clear, and exact description.

This invention relates to what are known as "lever-buckles" for holding straps and other flexible strips or fastenings, in which the strap or strip is secured without damage, as by prongs entering perforations in it, and the buckle is much more easily and quickly operated. In these buckles there is usually combined with the buckle-frame a hinged tongue or clamp adapted to pinch or hold by friction the engaging end or portion of the strap in between it and the buckle-frame.

My invention consists in a novel construction of the hinged tongue, which is made of spring metal and of corrugated or U shape at or back of its clamping portion, that gives to it a spring-like structure, substantially as hereinafter described, and pointed out in the claims, and whereby the hinged tongue readily adapts itself to different thicknesses of straps and holds the strap with a spring-pressure, and provision is made by simply lifting on the engaging portion of the strap for speedily releasing the tongue from its bite or hold.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective of a buckle embodying my invention, showing the same open; Fig. 2, a perspective view of said buckle closed and showing by dotted lines a strap as attached to and secured by the buckle. Fig. 3 is a perspective view of a modified construction of the buckle in its open position, and Fig. 4 a like view of the same in its closed position upon a strap or tape.

In Figs. 1 and 2 of the drawings, A indicates the buckle-frame, which may be of rectangular form and has a clear opening *b*, in direction of its length and width, through it. The one end or side of said frame is constructed to form a pinch-bar *c*, and its opposite end is provided with a pivot or hinge pin *d*, to and round which the one end portion *e* of the strap B may be secured, and which

may also serve to carry the clamping-tongue C of the buckle. This tongue, which may also be of an open frame-like construction to work snugly within the buckle-frame from the hinge or pivot pin *d* as a center of motion, is made of spring metal and has a transverse corrugation or bend *h* in it—that is, transverse to the length of the strap B through the buckle—said corrugation being at or back of the front or clamping portion of the tongue, which when the buckle is closed jams or clamps the strap in between it and a pinch-bar portion *c* of the buckle-frame, a sufficient space being left between said parts to permit of a close fit of the engaging portion *g* of the strap. Thus when the tongue is raised or buckle opened the free end of the attached strap B may be passed through the space *b* in the buckle-frame and drawn up over the pinch-bar *c* any required distance, after which the hinged tongue is closed and made to jam or clamp in between it and the pinch-bar said free end or portion *g* of the strap, as shown in Fig. 2 and as customary in lever-buckles; but by making the tongue a spring one—that is, not only of spring metal, but with a transverse corrugation or bend in it at or back of its clamping portion to give it increased flexibility or elasticity—the tongue exerts such a spring pressure or hold by friction on the engaged portion of the strap as to allow of different thicknesses of straps or materials being used in and securely held by the same buckle without fear of slipping. Furthermore, the spring-tongue is provided with a lip *f* projecting beyond the corrugation in it, which lip when the buckle is closed engages the front or pinch-bar of the frame, thus not only stopping the tongue from going too far through the frame when the buckle is closed, but permitting of a ready release of the strap by lifting the loose end of it so as to bear on the under side of the lip, and whereby not only leverage is obtained for lifting the tongue, but the pressure brought to bear upon said lip exerts a tendency to spring together the walls of the corrugation *h*, which eases the release of the tongue.

In Figs. 3 and 4 of the drawings the buckle is constructed to operate in like manner and by similar means; but the free portion of the strap or material to be clamped is run length-

wise over or through the buckle in parallel relation with the hinge *d* of the spring-tongue C, which latter is made with two or opposite side clamping portions in transverse relation with the hinge, so that when the tongue is closed they clamp or pinch and hold the strap or material in between them and two adjacent pinch-bars *c* of the buckle-frame A. In this modification, too, the tongue C, made of spring metal, has a corrugation or bent part *h* at or back of each of the jamming or clamping portions of the tongue, thereby giving a spring pressure or hold and adapting the tongue, as in the previous modification, to clamp or hold different thicknesses of straps or materials. The spring-tongue has also a lip *f* projecting beyond each corrugation in it and engaging when the buckle is closed with the pinch-bar *c* of the buckle frame or strap thereon, for the same purposes as previously described with reference to Figs. 1 and 2.

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

1. In a lever-buckle of the description herein specified, the combination, with the buckle-frame having an interior clamping-surface and adapted to receive the material to be clamped through it, of the hinged clamping-tongue constructed with a bent or corrugated spring clamping portion arranged to enter down within said buckle-frame in contiguity to the clamping portion of the frame, substantially as and for the purposes herein set forth.

2. In a lever-buckle of the description herein specified, the combination, with the buckle-frame, of the hinged clamping-tongue constructed with a bent or corrugated spring clamping portion, as at *h*, having a lip *f*, arranged to engage with or extend over the clamping portion of the buckle-frame, essentially as and for the purposes herein set forth.

BENJAMIN H. DAY, JR.

Witnesses:

EDW. M. CLARK,
EDGAR TATE.