

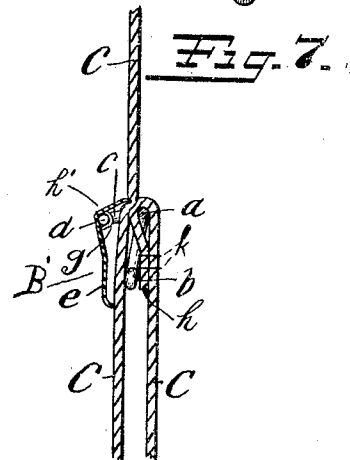
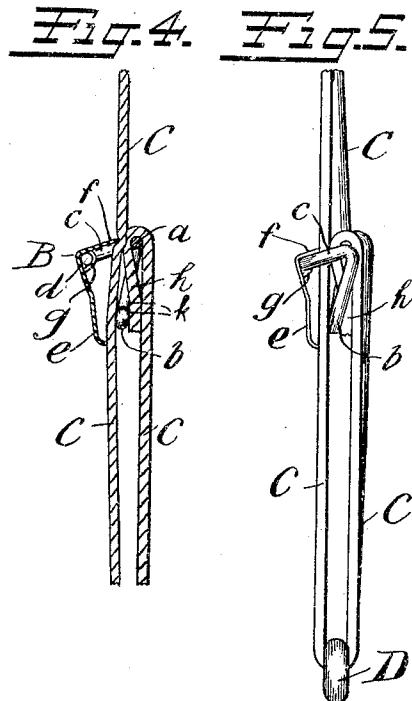
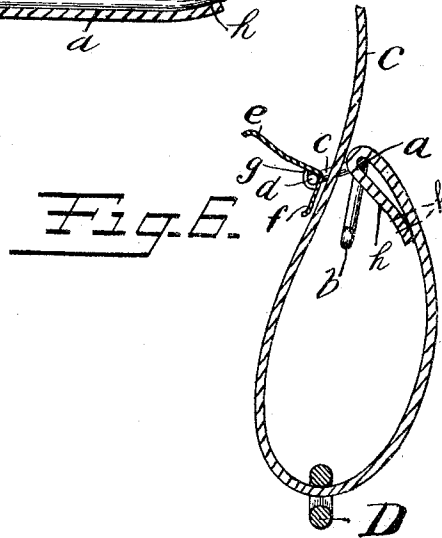
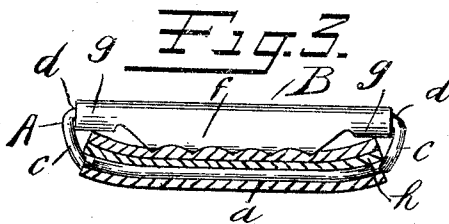
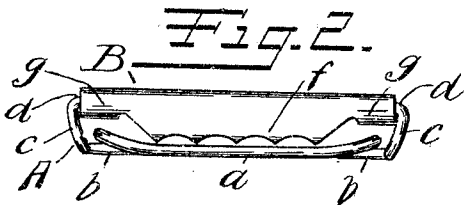
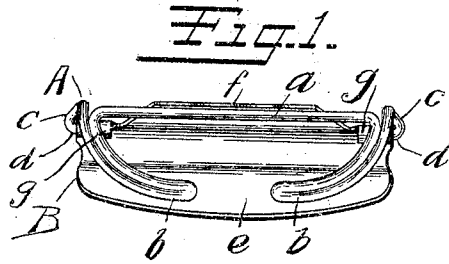
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BUCKLE.

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959,138.

Patented May 24, 1910



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BUCKLE.

959,138.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed December 4, 1909. Serial No. 531,283.

To all whom it may concern:

Be it known that I, WALTER A. HOLDEN, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Buckles, of which the following is a specification.

My invention relates to buckles of the lock lever class designed to carry the end of a webbing and to operate along the running portion thereof to form an adjustable loop.

The object of my invention is to provide a buckle of this character having a back bent up out of a single piece of wire in a manner to form a single bar around which the end of the webbing may be folded and which will lie in back of and cooperate with the lever edge when the buckle is closed.

A further object is to bend the wire forming the back in such a manner as to permit the bar to yield bodily when coacting with the lever edge for the purpose of effecting a secure grip on the running portion of the webbing and to accommodate the buckle to different thicknesses of webbing.

I attain these objects in the details of construction and manner of operation set forth in the following description and accompanying drawings in which like reference characters refer to corresponding parts.

In the drawings: Figures 1 and 2 are rear and top views respectively of one form of buckle in which my invention is embodied; Fig. 3, a top view of the same but showing the webbing in horizontal section; Figs. 4 and 5 a vertical section and side view respectively of the buckle when in position on the webbing; Fig. 6, a vertical section showing the position of the parts before the buckle is closed on the webbing, and Fig. 7, a vertical section showing a modified form of the lever.

Referring to Figs. 1 to 6 inclusive my buckle comprises the back A and the lever B. The back A is bent up out of a single piece of wire its middle portion being left straight to form the bar *a*. The wire is then bent downwardly and inwardly from the ends of the bar *a* and returned upon itself forming the inwardly projecting fingers *b, b*, then forwardly and slightly downwardly and laterally forming the flaring sides *c, c*, and the extremities are then bent inwardly toward each other forming the pintles *d, d*.

The lever B is made out of sheet metal suitably blanked and struck up to form the front portion or shield *e*, the web clamping edge *f*, and the pintle straps *g, g* which latter are curled around the pintles *d, d* to form a pivotal connection between the back A and the lever B. The extremity *h* of the webbing C is clamped or threaded through the opening between the bar *a* and fingers *b, b*, then is folded around the bar *a* and may, if desired, be sewed upon itself by stitches *k*. The extremity of the webbing being thus secured to the buckle the running portion is carried downwardly then returned and passes upwardly in front of the fingers *b, b* and through the opening between the bar *a* and lever B as shown in Fig. 6. To lock the running portion of the webbing the lever B is swung to its closed position as shown in Figs. 3, 4 and 5 causing its clamping edge *f* to press the running portion against the front of the bar *a*, or to be more exact against the extremity *h* covering the bar *a*. Before the buckle is webbed the bar *a* lies close to the edge *f* of the lever, as shown in Fig. 2, but when strung with webbing the bar *a* is pressed rearwardly by the lever edge acting through the medium of the interposed layers of webbing, as shown in Fig. 3. This rearward movement of the bar *a* brings the bends *b, b* into action since the increasing of the distance between the bar *a* and the pintles *d, d*, caused by the wedging action of the lever, causes the inside legs of the bend *b, b*, which carry the bar *a*, to swing rearwardly and the outside legs which carry the sides *c, c* and the pintles *d, d*, to swing forwardly, thereby spreading each pair of legs against the torsion at the lower extremities of the bends. In this manner the fingers or bends *b, b* constitute yielding or spring supports for the bar *a* which resist the rearward movement of the latter, thereby causing the bar *a* to coact with the lever edge *f* to grip, compress or clamp the interposed layers of webbing when the buckle is closed.

Ordinarily the diameter of the wire is so small that should the bar *a* not be covered with webbing it would not present a bearing or backing surface of sufficiently large extent to successfully cooperate with the edge of the lever, or in other words the diameter of a naked bar must be unusually large to prevent the lever edge from snapping by in

one direction or the other and destroying the gripping or clamping action. When, however, the bar is covered or confined within the folded extremity *h* of the webbing it not only presents an operative backing surface to the edge of the lever but also an antifrictional surface of a pliable character which will not only hold the lever closed but also more securely grip the running portion. The covering of the bar in this manner and mounting it on spring supports enables me to effect a secure gripping or clamping action between a lever edge and a single bar, and the cramping or crowding the end of the webbing through the restricted opening in under the bar prevents the lever edge from drawing or pulling the webbing upward around the bar which latter action would create a slack fold or bunch in the sewed loop. This is a defect called creeping which is common in lock lever rustless buckles.

It may be noticed that in this style of buckle wherein the webbing is clamped against the front of the bar, in contradistinction to those which clamp the web against the top of the bar, that the top of the sewed loop forms a hump or projection on the back of the webbing.

By the arrangement above described I am enabled to relieve the unsightliness of this hump considerably since the front fold of the sewed loop is pinched or compressed by the lever edge just before it passes over the top of the bar as shown in Figs. 3 and 4, and the unsightliness of the hump is further relieved by bending the extremities of the bar forwardly so that the hump will follow the curve of the running portion which is deflected forwardly slightly into the space on each side of the lever edge in front of the pintles.

It will further be observed that in folding of end *h* of the webbing around a straight bar instead of the entire back of the buckle that I am enabled to utilize a sewed loop of minimum length and thereby save webbing, and by locating the bends *b, b* in front of instead of inside of the sewed loop the balance of the buckle may be maintained without distorting the loop. By making the bar

a, a little shorter than the width of the webbing and flaring the sides *c, c*, outwardly around the sides of the webbing I am enabled to conceal the entire back of the buckle within the layers of webbing.

Referring to Fig. 7 the lever *B'* has its clamping edge *h'* curved or bent so that it will press the webbing against the upper corner of the bar *a* instead of the front as in the preceding figures. Otherwise this modification is the same as Fig. 4.

Having now described one embodiment of my invention various modifications comprehending such broad features as may fairly come within the scope of the appended claims will readily suggest themselves.

What I claim and desire to protect by Letters Patent is:

1. The combination with a running webbing, of a buckle having a back provided with a top bar extending entirely across the back and mounted on yielding supports and a lever hinged to said back provided with a web clamping member arranged to coact with the front of said bar, the said webbing having its extremity folded around said bar, then passed downwardly in back of said spring supports and returned upon itself passing upwardly between the lever and the top bar.

2. A buckle having a back bent up out of a single piece of wire so that its middle portion forms a continuous bar extending entirely across the back, the said wire being carried downwardly and inwardly from the ends of said bar to form an opening in under the bar for threading the webbing, then doubled upon itself and bent forwardly and downwardly from the ends of the bar to form sides, then inwardly to form pintles, and a lever hinged to said pintles, the said lever being provided with a web gripping edge arranged to coact with the front side of said bar to clamp the running portion of a webbing.

WALTER A. HOLDEN.

Witnesses:

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