No. 837,650. PATENTED DEC. 4, 1906.

A. T. VAN ALSTYN.

BUCKLE.

APPLICATION FILED APR. 17, 1905.

Fig. 1.

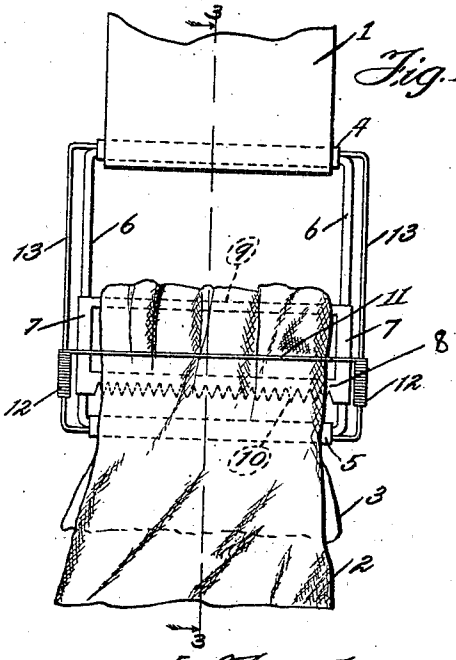


Fig. 2.

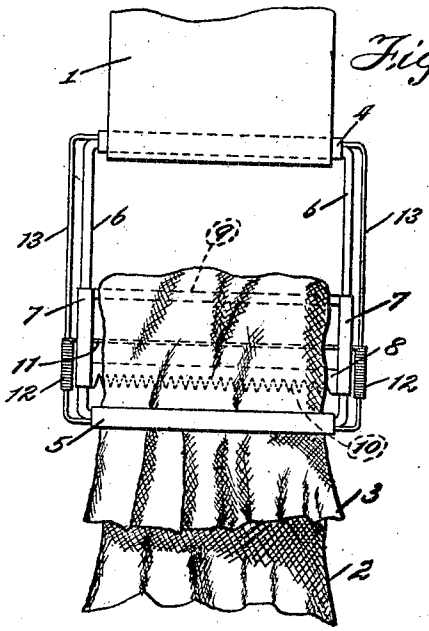


Fig. 4.

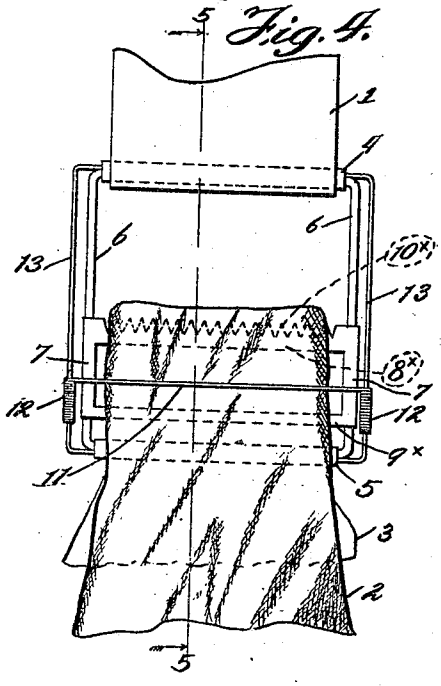


Fig. 5.

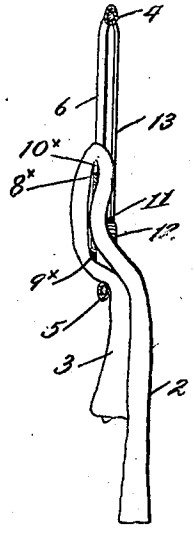
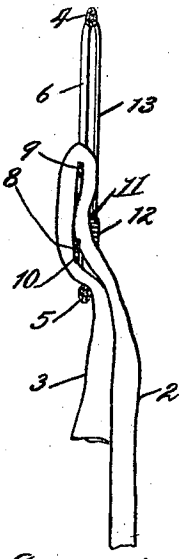


Fig. 3.



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BUCKLE.

No. 837,650. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed April 17, 1905. Serial No. 255,917.

To all whom it may concern:

Be it known that I, ALBERT T. VAN ALSTYN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Buckles, of which the following is a full, clear, and exact specification.

My invention relates to buckles for general use, but more particularly to a buckle especially adapted for holding various thicknesses of fabric or other material with equal facility; and it has for its primary object to provide an improved, simple, and inexpensive form of buckle for that purpose.

With a view to the attainment of these ends and the accomplishment of certain other objects that will hereinafter appear the invention consists in the features of novelty which will now be described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a back view of my improved buckle. Fig. 2 is a face view thereof. Fig. 3 is a vertical section on the line 3 3, Fig. 1. Fig. 4 is a back view of a modified form hereinafter described; and Fig. 5 is a vertical section thereof on the line 5 5, Fig. 4.

1 is any strap by which the buckle is supported when in use, and 2 3 indicate the folds of one end of a fabric or other material to be secured by the buckle. At one end of the buckle is a cross-bar 4, to which the strap 1 is secured in any suitable way, and at the other end is a similar cross-bar 5, and these two cross-bars are connected together by side bars 6, which may be composed of wires or cylindrical rods and upon which are mounted and slide two slides or sleeves 7, which are formed on or secured to a cross-bar of open or skeleton formation comprising two cross members 8 9, arranged at a considerable distance apart, so as to properly brace the sleeves or slides 7, and thereby constitute a rigid structure capable of sliding on the side bars 6 without binding. The cross member 8 is formed with teeth or serrations 10 along its lower edge, and the entire sliding cross-bar thus constituted by the sleeves 7 and cross members 8 9 is capable of being pushed to the lower ends of the rods 6, so as to allow the end 3 of the fabric to be passed over the cross member 9 from the back and then brought down in front of the cross member 8 and finally passed under the cross member 8 and over and down behind the cross-bar 5, as shown in Fig. 2, the slide being first elevated to allow the end 3 to pass, whereupon the strain on the fabric 2 will again pull the slide downwardly and cause the teeth 10 to bite the end 3 of the fabric where it passes over the cross-bar 5, as shown in Fig. 3, and thus preventing the fabric from being pulled loose by direct downward strain upon the end 2 thereof.

In order that the parts may be bound in this position and the end 2 of the fabric prevented from working upwardly and possibly raising the teeth out of secure engagement, a clasp is provided. This preferably consists of a cross-bar 11, which is formed with or secured to a pair of slides 12, sleeved on two side rods or guides 13, secured in any suitable way to the cross-bars 4 5. The guide-bars 13 are made of flexible wire or other suitable material, so that they will bend with relation to the bar 6, and they are arranged in a different plane from the bar 6, as shown in Fig. 3, so as to allow the cross-bar 11 to slide up and down behind the cross members 8 9 and their slides or sleeves 7, and thereby serve to press or bind the fabric at the back of the cross members 8 9 and in so doing increase the friction of the slides 12 on their guide-bars 13, and thereby prevent the sliding cross-bar 11 from working upwardly, and consequently prevent the slide 7 from making a similar movement. When the parts are in their secured position thus described, the cross-bar 11 of the clasp is opposite the space between the cross members 8 9, and consequently serves to deflect the fabric into said space, and thereby make it more secure.

In the modification shown in Figs. 4, 5 the general construction of the buckle is substantially the same as that already described, excepting that the toothed slide is reversed, the teeth being shown at 10*, the cross member upon which they are formed at 8*, and the plain cross member at 9*, and this is arranged contiguous to the bottom cross-bar 5 when the toothed slide is down. With this arrangement or form the end 3 of the fabric

2 is passed over the teeth 10* and then downwardly in front and carried under the cross member 9* and over the cross-bar 5, as before, allowing the downward pull on the fabric to embed the teeth where the fabric bends and the bar 9* to also grip the end 3 of the fabric over the top of the cross-bar 5. The clasp 11 12 may then be slid down into place at the back or against the main portion 2 of the fabric for preventing the toothed slide from riding upwardly, as before explained. One advantage of this latter form or arrangement of the parts is that it may be readily released by simply grasping the end 3 of the fabric and pulling upwardly thereon, which will result in the buckle being inverted and the main part 2 of the fabric pulled downwardly on the cross-bar 11 of the clasp, and thereby sliding the clasp away from the toothed slide or toward the cross-bar, releasing the fabric from the teeth and leaving it supported only by the plain cross member 9*, whereupon it may be readily pulled out of the buckle. This manipulation of the device causes the buckle-frame to turn on its cross member 4 in the strap 1 or to turn on said cross member as its pivot and to wind the strap 1 thereon if the strap should be so tight that the cross member could not turn therein. As the lower cross-bar 5 thus turns upwardly by a pull on the end 3 of the cloth or strap the strain on the end 2 of the cloth will force the clasp 11 toward the cross-bar 4, and as the upward movement continues the downward strain (the buckle being now substantially inverted) induced by the end 2 will also pull the slide-bar $9^{\times}$ in the direction of the cross-bar 4, and as a consequence release the grip upon the cloth. In other words, by pulling upwardly on the end 3 of the cloth the cloth will be straightened out, just as though the end 2 were raised from its present position in Fig. 5 until it lies against the cross-bar 4, and then pulled upwardly, causing the slide 11 to move toward the cross-bar 4 until that portion of the cloth which is in the buckle is in substantially a straight line between the cross-bar 4 and the cross-bar 5. When the clasp 11 is thus moved away from the back of the cross-bar $8^{\times}$ $9^{\times}$ or toward the opposite side of the cross-bar, the teeth $10^{\times}$ no longer grip the cloth, and it may be pulled out of the buckle by continuing the pull in the direction of the cross-bar 4.

It is of course obvious that the strain produced by the fabric between the clasp-bar 11 and the cross member or bar 8 or 8* will be received by both guide-bars 6 and 13, and consequently both of the guide-bars will partake more or less of the deflection or flexure necessary for permitting the clasp to pass over the fabric, the degree of flexure of each guide-bar being solely dependent upon the thickness of the wire or rod of which it is composed.

What is claimed as new is—

1. In a buckle the combination of a buckle-frame, a movable toothed cross-bar mounted thereon, and a clasp slidably mounted on said frame and movable with relation to said cross-bar the movement of the clasp being limited to the confines of the frame.

2. In a buckle the combination of a buckle-frame, a toothed cross-bar mounted thereon and a clasp flexibly and elastically mounted on the frame, and slidable with relation to said cross-bar.

3. In a buckle the combination of a buckle-frame, a movable toothed cross-bar mounted thereon, and a clasp slidably mounted on the frame and movable over said cross-bar.

4. In a buckle the combination of a buckle-frame, a cross-bar mounted thereon, flexible guide-bars arranged at the ends of said cross-bar and a clasp slidable on said guide-bars with relation to said cross-bar.

5. In a buckle the combination of a buckle-frame, a cross-bar mounted thereon, flexible guide-bars arranged at the ends of said cross-bar, and a clasp slidably mounted on said guide-bars parallel with said cross-bar and movable in a plane across the face of the cross-bar.

6. In a buckle the combination of a buckle-frame, a cross-bar slidably mounted thereon and having its central portion cut away to form an opening, and a clasp slidably mounted on the frame and movable across said opening.

7. In a buckle, the combination of an open frame having means at one end for the attachment of a strap and at its other end having a fixed strap-binding member, and a cross-bar slidable between said member and means and into close binding relation with said binding member for gripping a strap, said frame and cross-bar being so proportioned and arranged as to provide a space at both sides of the cross-bar for the introduction of a strap between the cross-bar and the said means and between the binding member and the said cross-bar.

8. In a buckle, the combination of an open frame having means at one end for the attachment of a strap, a cross-bar extending across said frame and situated at a distance from both ends of the opening of said frame, whereby a strap may be passed between either side of the cross-bar and the frame, and a slide mounted on the frame and slidable across the cross-bar and adapted to coöperate with the cross-bar in binding a strap.

9. In a buckle, the combination of an open frame having means at one end for the attachment of a strap and at its other end being provided with a fixed strap-binding member, a cross-bar slidable on said frame between said means and member, and a clasp slidable on said frame to a position across the cross-bar and adapted to coöperate with the cross-bar in binding a strap.

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