O. L. RAYMER.

BUCKLE.

APPLICATION FILED AUG. 28, 1919.

1,347,827. Patented July 27, 1920.

Fig. 1.

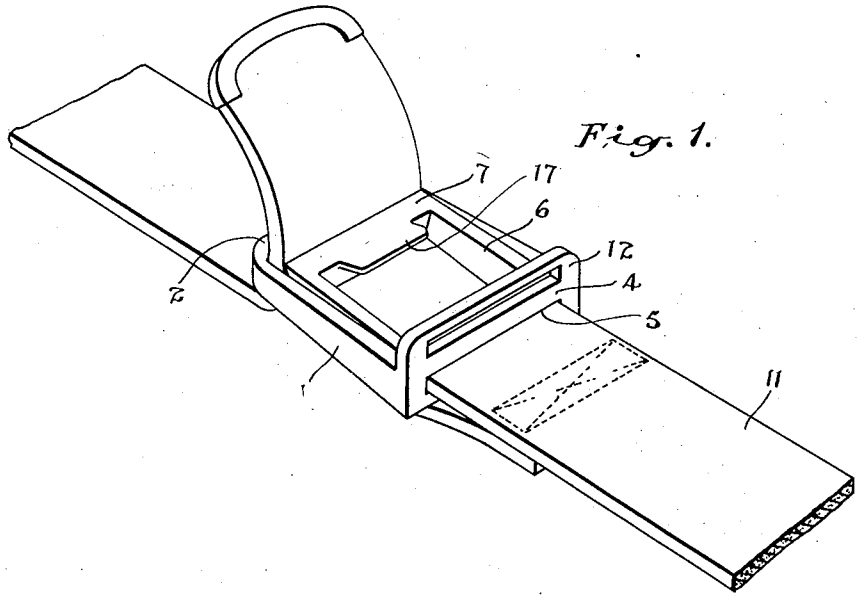
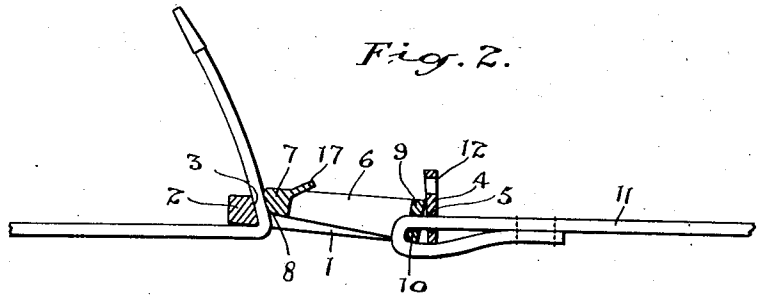


Fig. 2.



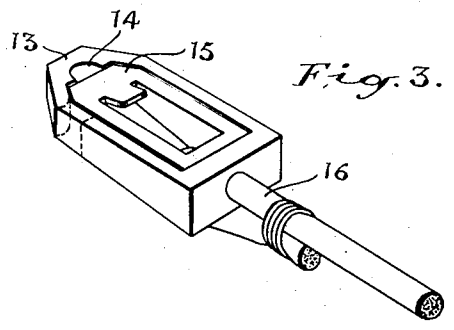


Fig. 3.

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UNITED STATES PATENT OFFICE.

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BUCKLE.

1,347,827. Specification of Letters Patent. Patented July 27, 1920.

Application filed August 28, 1919. Serial No. 320,407.

To all whom it may concern:

Be it known that I, OSCAR LLOYD RAYMER, a subject of the King of Great Britain, and resident of the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Buckles, as described in the following specification and illustrated in the accompanying drawings, that form part of the same.

The principal objects of this invention are, to devise a form of buckle which may be very easily and quickly adjusted to any desirable degree and will retain a secure grip without injury to the member to which it is attached and which dispenses with the necessity of perforating the gripped member.

The principal feature of the invention consists in the novel construction and arrangement of the buckle members whereby the tension of the flexible binding member to which the buckle is attached is utilized to draw the binding member into gripping contact with the flexible member.

In the drawings, Figure 1 is a perspective view of my improved buckle showing the strap gripped therein.

Fig. 2 is a longitudinal sectional view of the buckle shown in Fig. 1.

Fig. 3 is a perspective view of a modified form of buckle adapted for use with rope binders.

The buckle is formed of two members, the outer member 1 as shown in Figs. 1 and 2 being rectangular and having the front cross bar 2 formed with a beveled face 3 and the inward side of the back cross bar 4 is preferably inclined at an angle greater than a right angle from the top edge of the member. A slot 5 is formed in the cross bar 4 adjacent to its lower edge.

The inner member or tongue 6 is of rectangular form and fits loosely within the outer member 1.

The front end 7 of the tongue 6 is formed with a beveled surface corresponding with the bevel of the front cross bar 2 of the outer member and the bottom edge 8 is preferably rounded.

The back end 9 of the tongue member is inclined from the top at an angle less than a right angle and a slot 10 is formed in said back adjacent to the lower edge corresponding with the slot 5 in the member 1.

The peculiar beveling of the adjacent faces of the back bars of the tongue and outer member is such that when the tongue is in position and the upper edges of the beveled edges are in engagement, the lower edges will be separated. The tongue thus pivots at its upper edge. The length of the tongue is proportioned to the interior length of the outer member so that when the front cross bars of tongue and outer member are arranged in juxtaposition the front of the tongue will be slightly separated from the outer member.

The strap 11 which may be of leather or any suitable fabric has one end inserted through the slots 5 and 10 and is doubled back underneath the cross bars and secured in a loop. The free end of the strap is passed upwardly from under the cross bar 2 of the outer member between the beveled surfaces of the cross bar 2 and tongue 6. This bends the strap at a slightly acute angle. The tension of the strap pulling upon the lower edge of the back bar of the tongue swings the tongue on its pivotal point of contact at the upper edge and thus forces the front end of the tongue downwardly to grip the strap and the tighter the strap is pulled, the greater the gripping force.

This construction forms an extremely secure grip and holds the strap securely at any point without any form of perforation in the strap or of teeth in the gripping member and the full strength of the strap is insured.

The back bar of the outer member 1 is formed with a keeper loop 12 which holds the loose end of the strap close down to the buckle and obviates the loosening of the grip in the event of the strap becoming slack or being subjected to vibration such as in conveyer belts.

The form illustrated in Fig. 3 is adapted for use in fastening ropes. In this form the front bar 13 of the outer member is of angular form having a rounded groove 14 in the apex. The tongue is formed with an angled end bar the apex 15 of which is flattened to engage the rope. The base ends of both tongue and outer member are formed with round holes in place of the flat holes through which the looped end 16 of the rope passes.

In order to allow of the buckle being placed upon a rope having its ends secured so that it cannot be threaded through the buckle a gap or opening may be cut through

one of the sides of the outer member as illustrated in dotted lines in Fig. 3 which thus allows of the buckle being hooked on to the rope.

The buckle is herein shown as formed of molded metal but it must be understood that it may be pressed from sheet metal and the shape may be altered to suit various requirements without departing from the main features.

To release the buckle a lip 17 may be formed on the inside of the tongue member 6 shown in Fig. 1 and by simply raising or lifting upward on the said lip with finger the gripping tension on the tie member is released, thus providing a quick, simple and easy means of loosening the free end binder.

What I claim as my invention is:—

1. A buckle comprising, an outer member of loop shape having one end perforated, a tongue member arranged within said loop member having the end adjacent to the perforated end engaging said perforated end at the upper side in pivotal contact, and a flexible binding member connected to the tongue below the pivot point and extending through the perforated end of the loop, the free end passing between the free end of the tongue and the adjacent end of the loop and being gripped therebetween.

2. A buckle, comprising, an outer member of loop shape having one end perforated and the opposite end formed with a beveled gripping surface on the inward side, a tongue member arranged within said loop and having a beveled gripping surface at one end and its opposite end pivotally engaging the loop at the upper side, said pivot end being perforated opposite the perforation in the outer member, and a flexible binding member having one end passed through said perforations and passed around the under side of the tongue and the perforated end of the outer member and secured in a loop and adapted to swing the tongue on its pivot and draw the beveled gripping surfaces together.

3. A buckle, comprising, a loop shaped outer member having the back end beveled away from the top at an angle greater than a right angle and the forward end beveled at an angle less than a right angle from the top, a tongue fitting within said loop and having its back and front ends beveled from the top at less than a right angle, said outer member having a perforation through the back end, and a tie member extending loosely through the perforated end of said outer member and secured to the adjacent end of the tongue.

4. A buckle, comprising, an outer buckle member having a perforated end and an opposite end having an inclined face having a recess adapted to receive a free binder end, a tongue member having a perforated end and having an opposing end having an inclined face opposing the recess of the outer member, and a tie designed to extend through the alined perforations of the outer and inner buckle members.

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