Nov. 15, 1932. L. ALTERSON 1,887,614

BUCKLE

Filed July 26, 1932

Fig. 1.

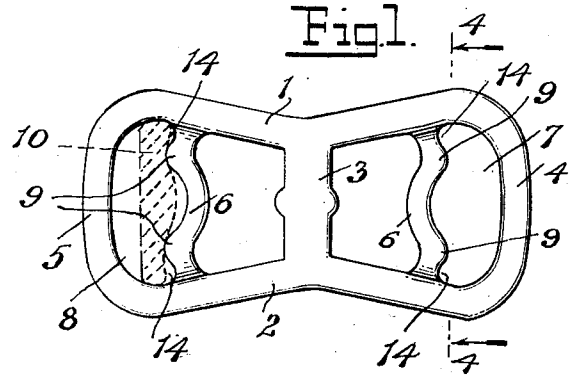


Fig. 2.

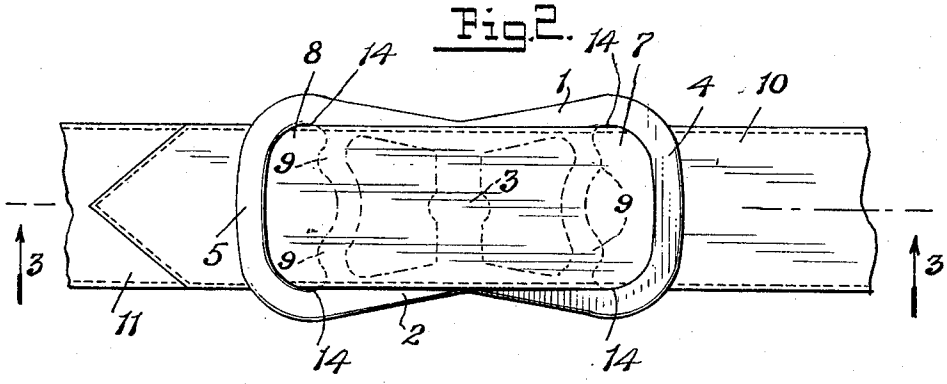


Fig. 3.

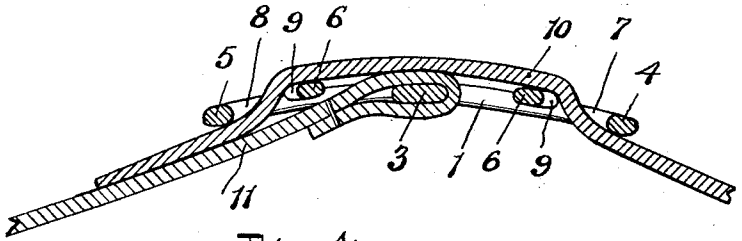
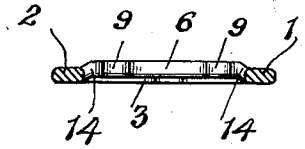


Fig. 4.



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UNITED STATES PATENT OFFICE

LOUIS ALTERSON, OF NEW YORK, N. Y.

BUCKLE

Application filed July 26, 1932. Serial No. 624,686.

This invention relates to a buckle particularly adapted for use upon shoes, belts, or in any other environment, where its function is to detachably unite two ends of a strap.

The object of the invention is to provide a buckle which will be of simple and sturdy construction and which will securely, yet detachably, unite the two ends of the strap whether the same be the ends of a belt, a shoe strap, or the like.

One of the objections generally met with in buckles is that they require holes in the strap to permit the passage of a buckle tongue, and consequently do not provide the required nicety of adjustment demanded, particularly where the buckle is used upon a shoe strap. Additionally the formation of holes in a strap to permit the passage of the buckle tongue weakens the strap and causes either breakage or imposes wear and tear on it so that the same soon presents a worn or dilapidated appearance. A buckle provided with a tongue is usually of such bulk or thickness that it is uncomfortable to wear, particularly on a shoe strap where it cuts into the instep of the wearer.

Other types of buckles wherein a tongue passing through holes in the strap is not used, have been provided with teeth or other sharp or pointed projections which cut or penetrate into the body of the strap so that the strap soon became worn through or presented an abraded appearance.

The primary object of this invention is to provide a buckle having no moving or hinged parts; having no tongue penetrating the strap, and having no sharp penetrating teeth which might serve to impose wear upon or abrade the strap. My improved buckle is so constructed that it firmly grips the strap and prevents slippage thereof under all conditions of use.

Specifically, the invention contemplates the provision of a buckle having one or more openings through which the adjustable end of the strap passes, which openings are provided at one side with a bar having several rounded and spaced projections so located that the same firmly press against the surface of the strap to grip the same and force it into wedging contact with adjacent curved surfaces to prevent its movement through the buckle, without in any way tearing or penetrating the face of the strap to cause wear upon it.

In the accompanying drawing Fig. 1 is a plan view of a buckle made in accordance with the invention; Fig. 2 is a similar view showing how the strap is held by the buckle; Fig. 3 is a sectional view on the line 3—3 of Fig. 2, looking in the direction of the arrows; and Fig. 4 is a sectional view on the line 4—4 of Fig. 1, looking in the direction of the arrows.

In the structure shown in the drawing, 1 and 2 indicate the longitudinal side bars of the buckle frame, these side bars being integrally connected at an intermediate point by a transverse bar 3 which forms a member about which one of the strap ends 11 is secured. The strap end 11 is secured to the cross member 3 by being folded about the same and stitched down as clearly shown in Fig. 3, or by stitches which pass about the bar 3 and secure the same to the face of the strap end. At their ends the two longitudinal side members 1 and 2 are connected by end members 4 and 5 which produce a substantially rectangular buckle frame. Located between the central cross bar 3 and the end member 4 is another cross bar 6 which is slightly raised or elevated above the plane of the buckle frame as clearly shown in Fig. 4. A similar cross bar 6 is located adjacent to the end member 5 of the frame. An opening 7 is located between the cross bar 6 and the end member 4 through which the adjustable strap-end 11 extends as shown in Fig. 3. A similar opening 8 is located between the other cross bar 6 and the end member 5 of the frame. Each of the cross bars 6

is provided with a pair of spaced, rounded projections 9 which are formed on the edge of the bar 6 which faces the end member 4 or end member 5. These projections 9 are thus directed into the spaces 7 and 8 and impinge against the strap-end 10 passing therethrough. In practice, the strap-end 11 is secured to the cross bar 3 and the other strap-end 10 is adjusted through the buckle to the required extent. In passing the adjustable strap-end 10 through the buckle it is first passed upward through the opening 7 and thence brought over to the opening 8 where it is passed downwardly and outwardly under the end member 5 of the buckle frame.

The course of the strap-end 10 is clearly shown in Fig. 3 where it will be seen that when passed through the buckle as therein shown the inner face of the strap is in firm contact with the several projections 9 on the cross bar 6. An attempt to withdraw the strap 10 from out of the buckle by drawing it backward or in a direction to the right of Figs. 2 and 3 causes the strap to forcibly impinge against the rounded projections 9 which cause the longitudinal edges of the strap into wedging engagement with the narrowed end portions 14 of the strap passages 7 and 8, which acts to firmly resist the withdrawal of the strap. These projections are positioned near the longitudinal sides of the buckle frame and operate against the strap near its longitudinal side edges. While these projections 9 operate to frictionally resist the withdrawal movement of the strap they do not in any way abrade or injure the surface of the strap or oppose the insertion of the strap through the buckle.

What I claim is:—

1. A buckle having a frame formed with longitudinal side bars, a central bar extending across the frame and about which a strap end is adapted to be permanently attached, intermediate cross bars connecting the longitudinal side bars, integral end bars spaced from the intermediate bars, said end bars having curved end portions so that a strap passage formed between them and the adjacent intermediate bars has curved contracted end portions, and projections upon the intermediate bars against which the adjustable strap portion extending through the strap passages is adapted to directly impinge so that the longitudinal edge portions of said adjustable strap portion are directed with a wedging action into the curved contracted end portions of the strap passages.

2. A buckle having a frame formed with side members and an end member, a cross member extending between the side members and adapted to permanently receive one end of a strap, a curved cross member connecting the side members and spaced from the end member, the space between the end member and the curved cross member constituting a strap passage that is curved and contracted at its ends so that the longitudinal edges of a strap passed through said passage will be gripped in said curved and contracted portions, and spaced projections on the curved cross member adapted to directly impinge against the strap passed through the passage to direct the edge portions of said strap into the curved and contracted portions of said passage.

LOUIS ALTERSON.