

Aug. 23, 1932.

I. D. FORD

1,873,371

SLIDE BUCKLE

Filed June 28, 1929

Fig. 1

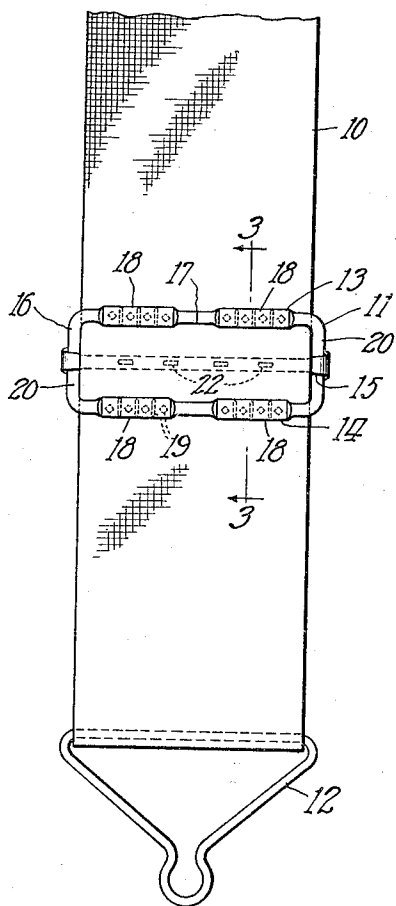


Fig. 2

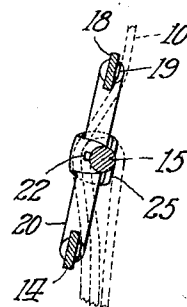
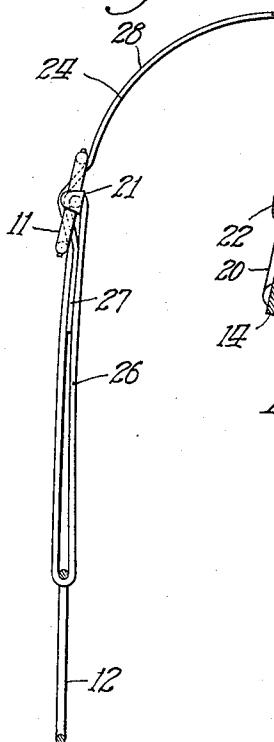


Fig. 3

Fig. 4

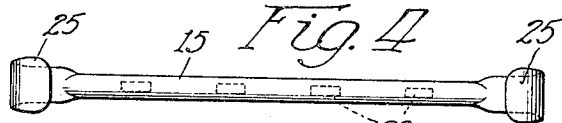
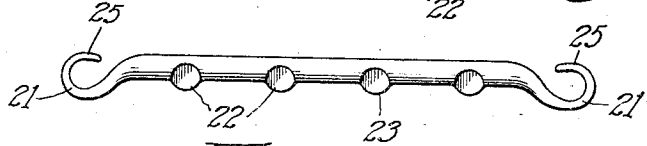


Fig. 5



Inventor
Ira D. Ford

By Roland C. Rehm
Att'y

UNITED STATES PATENT OFFICE

IRA D. FORD, OF ROSELAND, ONTARIO, CANADA, ASSIGNOR TO UNIVERSAL BUTTON FASTENING & BUTTON COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN

SLIDE BUCKLE

Application filed June 28, 1929. Serial No. 374,541.

This invention relates to improvements in so-called slide buckles, and aims to provide an improved device of this character which is efficient in operation and which may be worn without discomfort.

The nature of the invention may be readily understood by reference to one illustrative construction embodying the invention and shown in the accompanying drawing.

In said drawing:

Fig. 1 is a rear elevation of the under or rear side of a suspender strap carrying the illustrative slide buckle.

Fig. 2 is a side elevation of a suspender strap arranged as it would lie over a wearer's shoulder and showing the usual location of the slide with reference to the wearer's shoulder.

Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1 through the slide buckle.

Fig. 4 is an enlarged view of the under side of the slide bar, i. e., the side which falls next the wearer.

Fig. 5 is a side elevation of the bar, i. e., a view at 90° from the position of that shown in Fig. 4.

For convenient description of the function and operation of the illustrative slide buckle (herein referred to as a "slide"), the latter has been shown in one typical use, namely, applied to an ordinary overall suspender strap 10 which is usually made of heavy denim or other appropriately strong fabric. In the arrangement shown the suspender strap is threaded through the slide 11 and around a typical button loop 12, the latter serving to attach the suspender strap removably to the overall bib.

The present slide comprises three parallel bars 13, 14, and 15 between and around which the suspender strap is threaded and pulled tight to maintain its adjusted length. The outer bars 13 and 14 are herein shown as the sides of a rectangular frame 16, in this instance formed of wire of circular cross section bent into rectangular form with its ends appropriately welded together in a butt weld as at 17. The joint 17 is preferably located, as shown, intermediate the ends of one of the bars, a region subject to little strain. The

bars 13 and 14 are advantageously upset as at 18 to provide regions which present corners or edges to the suspender strap in order to increase the frictional grip against the strap. The under surfaces of the resulting flattened portions, namely those next the strap, may also advantageously be roughened by small points or lines of metal 19 projecting in relief from such surfaces further to augment the frictional engagement with the strap. The opposite faces of the flattened regions 18 may be embossed with some name or trade-mark.

The intermediate bar 15 here shown as round in section (Fig. 3), is made slidable relative to bars 13 and 14 by a connection with the ends 20 of the slide frame,—such connection in this instance being provided by eyes 21 formed at the ends of the bar and embracing the ends 20 of the frame. The bar 15 is also advantageously provided with corners for frictional gripping of the strap, these corners being here shown in the form of integral lugs or teeth 22 formed by upsetting a portion of the metal of the bar. This is conveniently done by punching the bar adjacent its periphery by oppositely acting dies which squeeze out a lip or fin of the metal beyond the normal periphery of the bar without, however, rupturing the outer surface 23 of the teeth in order not to form sharp or jagged burrs which might cut the strap.

The bar 15 is constructed and arranged to lie substantially flush with the under face of the frame so as not to present any projection which would press against the shoulder 24 of the wearer to cause discomfort. Very frequently the slide buckle falls at the wearer's shoulder and presses against the bony structure of the shoulder with such a steady pressure that even slightly projecting portions of the hard metal of the slide ventually cause discomfort. In this connection the eye 21 of the bar is offset relative to the axis of the bar and the metal forming the terminal portion 25 of the eye is flattened to form a relatively thin extremity which lies substantially flush with the inner surface of the bar 15 and of the frame and does not project beyond the surface of the suspender strap be-

tween the slide and the wearer's shoulder even when the strap is firmly pressed against the shoulder. Thus the slide presents no hard surfaces which are likely to contact with the wearer's shoulder. The eye 21 is sufficiently larger in diameter than the ends 16 of the frame to allow completely free sliding movement of the bar under the forces acting against it. Thus the bar may be readily moved to adjust the strap and will just as readily move under the tension of the adjusted strap to develop the frictional grip which holds the strap in adjusted position. The enlarged eye also permits a limited axial twist of the bar 15 under tension of the suspender strap to cause the teeth 22 upon rotation of the bar to bite into the strap more firmly.

While the slide is here shown with the inner strand 26 of the suspender strap lying between the bar 15 and the wearer's shoulder, it is obvious that the slide may also be used with the strand lying on the opposite side of the bar and the free extremity 27 of the strap lying against the upper portion 28 of the strap, thus placing the bar directly adjacent the wearer's shoulder. Even with such an arrangement of straps, the slide does not present any projection which will dig into the wearer's shoulder to cause discomfort.

Obviously the invention is not limited to the details or mode of use of the illustrative device herein disclosed. Moreover, it is not indispensable that all features of the invention be used conjointly, since certain features may be advantageously used in various combinations and sub-combinations.

Having described one embodiment of my invention, I claim:

1. A slide buckle of the character described comprising in combination, a frame providing a pair of parallel bars, an intermediate bar of substantially round cross section, and eye means at the extremities of said intermediate bar to connect the latter to said frame, the portions of said eye means lying at the back of said slide being flattened to present surfaces substantially flush with the back face of said slide.

2. A slide buckle of the character described comprising in combination a buckle frame providing a pair of spaced parallel bars, an intermediate wire bar parallel to said spaced bars and extending across said frame, said intermediate bar being substantially as thick in its cross-sectional dimension normal to the plane of said frame as in its transverse dimension to resist bending and having its ends bent to form eyes extending around the ends of said frame, the portions of said eyes lying at the back of said frame being substantially flattened to reduce their thickness and to form wide and thin contact areas which are substantially flush with the plane

of the back of said frame, and said intermediate bar being arranged so as not to project substantially beyond the plane of the back of said frame, whereby the back of said frame presents a flush contact surface free from substantial projections.

3. A suspender slide buckle of the character described comprising in combination a rectangular closed wire loop presenting a pair of parallel bars, said bars having flattened portions to present gripping corners and having the under faces of said portions roughened to increase the friction against the suspended strap, an intermediate straight wire bar formed with eyes at its ends passing around the ends of said loop to connect said bar slidably in said loop, said intermediate bar being provided with suspender strap engaging corners for increasing the frictional engagement with the suspender strap.

4. A suspender slide buckle of the character described comprising in combination a loop formed of a piece of wire bent into rectangular shape and presenting a pair of parallel bars, the ends of said wire being connected together at a point intermediate the ends of one of said bars, said bars having flattened portions to present gripping corners and having the under faces of said portions roughened to increase the friction against the suspender strap, an intermediate straight wire bar formed with eyes at its ends passing around the ends of said loop to connect said bar slidably in said loop, said intermediate bar being provided with suspender strap engaging corners for increasing the frictional engagement with the suspender strap.

In testimony whereof, I have signed my name to this specification.

IRA D. FORD.