June 4, 1940. F. J. O'BRIEN 2,203,270

BELT BUCKLE

Filed May 14, 1938

Fig. 1.

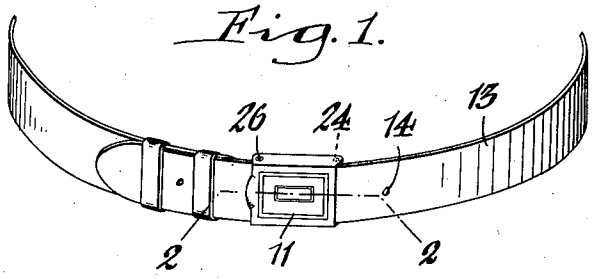


Fig. 2.

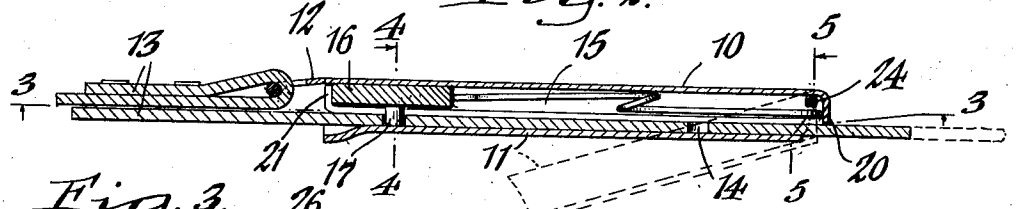


Fig. 3.

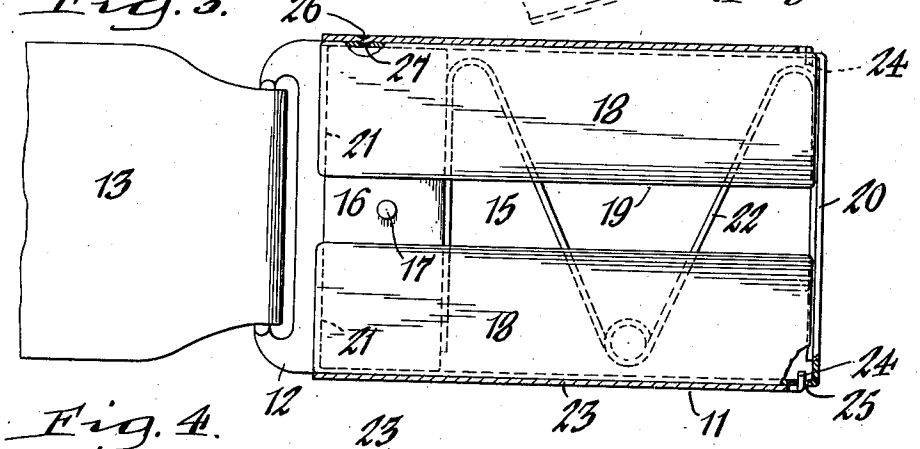
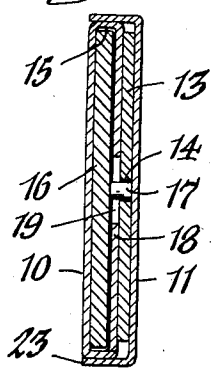


Fig. 4.



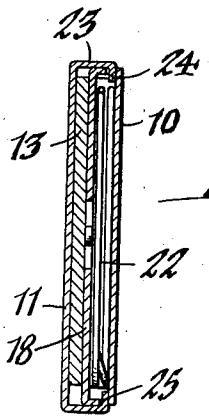


Fig. 5.

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BELT BUCKLE

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3 Claims. (Cl. 24—163)

This invention relates generally to buckles and more particularly to certain new and useful improvements in belt buckles.

It has for one of its objects to provide a buckle of this character which is so designed and constructed as to automatically permit the expansion and contraction of the belt while being worn and to be adaptable to self-adjustment in response to like movements of the waist of the wearer.

Another object of the invention is to provide a self-adjusting belt buckle which is simple, compact and inexpensive in construction and which affords extreme comfort to the wearer.

A still further object is the provision of a belt buckle of this character wherein its adjustable parts are effectually enclosed and danger of such parts catching on the clothing of the wearer is eliminated.

In the accompanying drawing:

Figure 1 is a fragmentary perspective view of a belt showing my improved buckle associated therewith. Figure 2 is an enlarged horizontal section taken substantially in the plane of line 2—2, Figure 1. Figure 3 is a vertical longitudinal section taken on line 3—3, Figure 2. Figures 4 and 5 are cross sections taken on the correspondingly-numbered lines in Figure 2.

Similar characters of reference indicate corresponding parts throughout the several views.

Referring now to the drawing, the improved buckle consists of a base member or body plate 10 and a swinging cover or retaining plate 11, the former having an ear or extension 12 at one end to which one end of the belt 13 is attached in any suitable manner, the opposite or free end of the belt being adapted to be adjustably fastened between such plates and being provided with the usual row of apertures 14 for adjusting the belt to the buckle.

The body plate 10 is shaped to provide a substantially hollow or box-like structure to provide a guide-way or chamber 15 for a belt-engaging slide bar 16 having a stud or projection 17 thereon with which one or another of the belt-perforations 14 is adapted to engage. While the box-like structure or chamber 15 of the body plate 10 for supporting and guiding the slide bar may be constructed in any appropriate manner, I form it by providing such plate with upper and lower side flanges 18, 18 which terminate short of their opposing inner edges to provide a longitudinal passage or slot 19 for the passage of the belt-engaging stud 17 during the fore and aft movements of the slide bar 16 relative to the plate, while the ends of the plate-chamber may be closed by end or abutment-flanges 20 and 21 projecting from the plate 10 and side flanges 18, respectively, as shown in Figure 2.

The slide bar is slidably mounted within the plate chamber 15 and also housed within this chamber is a spring 22, one end of which abuts the plate-flange 20 while the other end abuts against the inner edge of the slide bar and normally functions to retain the slide bar in its extreme extended condition against the opposing end flanges 21, as seen in Figure 2. When the waist of the wearer is expanded by bending of the body or otherwise, the slide bar is free to slide in a direction against the tension of the spring 22 and thereby adjust the belt to the expanding movements of the waist, and upon the contraction of the waist to normal the spring automatically urges the slide bar to its initial position.

The cover plate 11, which serves to hold the free or perforated end of the belt in coupled engagement with the slide bar stud 17, is hinged to swing vertically toward and from the body plate 10, and for this purpose it has side flanges 23 projecting rearwardly from its top and bottom edges which overlap the corresponding edges of the main body plate in the closed position of the cover and which terminate at one end in opposing hinge lugs 24 which are adapted to engage companion openings 25 in the adjoining top and bottom portions of the side flanges 18 of the body plate 10. The free end portions of the cover-flanges 23 have teats 26 formed thereon which are adapted to interlock with companion recesses 27 formed in the opposing portions of the body-plate, whereby to retain the cover plate frictionally in its closed position.

In applying the belt, the cover plate 11 is swung open, the free end of the belt is passed between the resulting gap formed between the hinge portion of the cover plate and the body plate 10 and the proper belt-perforation 14 is engaged with the stud 17 of the slide bar 16, after which the cover plate is closed. Upon the expanding and contracting movements of the waist of the wearer, the belt is permitted to expand and contract by reason of the tensioned belt-engaging slide bar 16, the spring 22 contracting in response to expanding movements of the waist to permit a movement of the slide bar in one direction, and upon the waist being restored to normal the spring tension urges the slide bar in the opposite direction or to its initial position.

I claim as my invention:

1. A belt buckle, comprising relatively dis-

placeable body and cover plates between which the free end of a belt is adapted to be fastened and to one of which plates the opposite end of the belt is connected, the body plate having upper and lower side flanges bent inwardly from the upper and lower edges thereof to provide a guide chamber and said flanges terminating short of their opposing edges to provide a longitudinal guide passage, a slide bar guided in the chamber of said body plate, a belt-engaging stud on said bar projecting through said guide passage, and a spring arranged in said guide chamber and in operative engagement with said slide bar for yieldingly resisting its movement in one direction.

2. A belt buckle, comprising relatively displaceable body and cover plates between which the free end of a belt is adapted to be fastened and to one of which plates the opposite end of the belt is connected, the body plate having upper and lower side flanges bent inwardly from the upper and lower edges thereof to provide a guide chamber and said flanges terminating short of their opposing edges to provide a longitudinal guide passage and being provided at their opposite ends with laterally-bent abutments forming end closures for the guide chamber, a slide bar guided in the chamber of said body plate, a belt-engaging stud on said bar projecting through said guide passage, and a spring arranged in said guide chamber and bearing at one end against the companion flange-abutments and at its other end against said slide bar, the latter normally abutting the flange-abutments at the other end of said body plate.

3. A belt buckle, comprising relatively displaceable body and cover plates between which the free end of a belt is adapted to be fastened and to one of which plates the opposite end of the belt is connected, the body plate having upper and lower side flanges bent inwardly from the upper and lower edges thereof to provide a guide chamber and said flanges terminating short of their opposing edges to provide a longitudinal guide passage, a slide bar guided in the chamber of said body plate, a belt-engaging stud on said bar projecting through said guide passage, and a spring arranged in said guide chamber and in operative engagement with said slide bar for yieldingly resisting its movement in one direction, said cover plate being pivoted to said body plate and movable to and from a latched position overlying the latter to retain the free end of the belt in connected relation to said slide bar and to permit its release therefrom, respectively.

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