

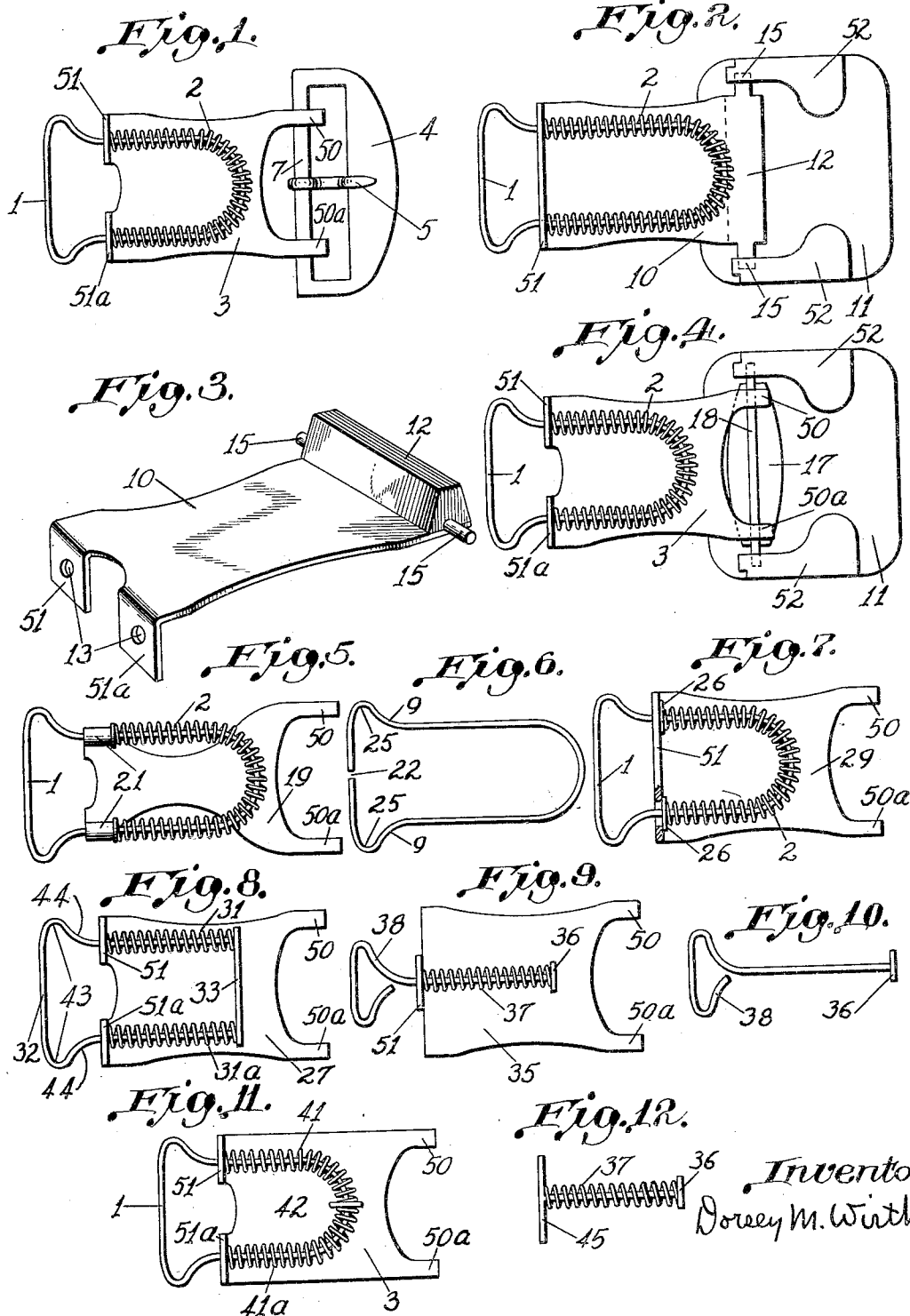
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BELT BUCKLE

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UNITED STATES PATENT OFFICE

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BELT BUCKLE

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This application relates to expanding belt buckles, wherein the expanding member is a spring which allows a comfortable degree of resiliency between the buckle end of the belt and the portion of the opposite end of the belt attached to the buckle. The novel feature of this invention is the employing of a holder member, for slidably carrying a belt connector member, the holder member being connected with a buckle body, as the following description of the drawing will show.

In the drawing:—

Figure 1 is a front view of one form of buckle contemplated by this invention.

Figure 2 is a back view of another form of belt buckle included in this invention.

Figure 3 is a perspective view of one of the parts used in form of buckle disclosed in Figure 2.

Figure 4 is a back view of another form of belt buckle contemplated by this invention.

Figure 5 is a detailed view of another suggested form of the spring expanding member which might be incorporated in any of the forms of buckles alluded to in this application.

Figure 6 is a detailed perspective view of a certain part used in some of the forms shown in the drawing.

Figure 7 is a view showing the use of washers between the ends of spring and holder part.

Figure 8 is a view showing a modified form of belt connector that can be used in this invention.

Figure 9 is a view showing another modified form of belt connector that may be used in this invention.

Figure 10 is a detailed perspective view of the belt connector that is used in Figure 9.

Figure 11 is a view showing two springs carried on the belt connector loop, and the two springs separated by a washer carried on the loop part.

Figure 12 is a modified form of belt connector that may be used in connection with the holder shown in Figure 9.

Common to all the forms of this inven-

tion as shown in the drawing is a holder which is attached to the buckle body as in Figures 1, 2, 4, and which carries through openings a belt connector loop. The holder is preferably made from a flat plate and has laterally disposed formations at one end as indicated by 51 and 51a in Figures 1, 2, 3, 4, 7, 8, 9, 11, and at the other end of the holder are fingers formed with eyes indicated by 50 and 50a in Figures 1, 4, 5, 7, 8, 9, 11. The holder through its eyed fingers is connected with the buckle body by means of a transverse bar as 18 of Figure 4. In the form of Figure 2 there is formed in one piece of relatively heavy material the holder proper 10, and the jaw 12, as particularly clearly shown in Figure 3. The ends of the jaw portion 12 are provided with the pivots 21 for journalling in the buckle body.

Common to the form of Figures 1, 2, 4, 5, 7, 11, is a belt connector loop. This belt connector loop comprises a closed loop formed by bending a bar or wire into a U shape, the parallel legs of this U shape are inserted through the openings of the holder member, these openings are clearly seen in Figure 3 at 13. As indicated in Figure 6, the legs are bent generally away from each other as at 9 and then bent again inwardly as at 25, from which point they proceed directly into end abutting relation, meeting at the point 22. Common to each form of holder and belt connector assembly as shown in Figures 1, 2, 4, 5, 7, 11, is a coil spring 2, carried on each of the belt connector members. The spring is disposed on each leg of the belt connector loops and continues around the curved portion. The ends of the spring are adapted to abut the inner face of the lateral formation of the holder. The spring supplies the resilient expanding character of the belt buckle.

The form of buckle body most commonly used and with which each style holder is connected is composed of a substantially flat rectangular body portion preferably of sheet metal. The buckle body having inturned flanges on opposite sides having inwardly directed ears constituting journal mountings. The ears are disposed on the ends of

the flanges 52 as shown in Figures 2 and 4 and are disposed at right angles to the body portion 11, but spaced therefrom.

Figure 1 shows a buckle body 4 which has a yoke formation 7. The holder 3 is connected to the bight portion of the buckle body by means of eyed fingers 50 and 50a, also swingably carried on the bight portion is the belt hole engaging tongue 5. The holder slidably carries the belt connector 1 thru openings in the lateral formations 51 and 51a of the holder. The coil spring 2 is disposed on the belt connector for a resilient and expanding spring action between the holder and belt connector.

In Figure 2 the holder 10 and jaw portion 12 are of one piece, the pivots 15 at each end of the jaw are journaled into the ears of the inturned flanges 52 of the buckle body 11. The holder slidably carries the belt connector through openings in the lateral formation 5 of the holder. On the belt connector is disposed the coil spring 2.

In Figure 4 the transverse bar 18 carries the holder 3 and also mounted on the bar is the clamping jaw 17, the ends of the bar being journaled into the ears of the inturned flanges 52 of the buckle body 11. The holder slidably carries the belt connector 1 through openings in the lateral formations 51 and 51a. Disposed on the belt connector is the coil spring 2.

Figure 5 shows the holder 19 whose openings are formed by bending into barrel shape eyes, the extended parts 21. The belt connector 1 is slidably carried through these openings. A coil spring 2 is disposed on the belt connector.

Figure 7 shows one of the holders used in this invention, carrying the belt connector 1 which is slidably mounted thru openings in the lateral formation 51 of the holder 29. At the point where each end of the coil spring 2 presses against the holder, the washers 26 are placed, the washers being mobile and having smaller openings than the openings thru the holder thru which the belt connector passes. These washers prevent the ends of the spring from working through the openings of the holder and therefore prevent any interference with the proper sliding of the belt connector.

Figure 8 shows another form of belt connector that can be used in this invention. In this form the connector is of U-shape, whose legs are bent inwardly as at 43, then upwardly as at 44, so as to be parallel to each other, the legs are then inserted through the openings of the lateral formations 51 and 51a, the coil springs 31 and 31a are then passed over the legs of the U shape as shown, and the transverse bar 33 is then connected to the leg ends. This forms a closed connector, and the springs supply the resilient expanding character of the buckle.

Figure 9 shows a holder 35 with the lateral formation 51 which has an opening thru which is slidably carried the single leg belt connector 38. On one end of the connector a loop is formed for connecting with the end of a belt, on the other end of the connector is a disk or cross part 36 against which abuts one end of the coil spring 37. The other end of the spring abuts the part 51, whereby a resilient spring action similar to that in the other forms illustrated is obtained.

Figure 10 is a more clear view of the belt connector 38 as shown in Figure 9.

Figure 11 shows the holder 3 carrying the belt connector 1 through openings in the lateral formations 51 and 51a. On the belt connector are disposed two springs 41 and 41a. The one end of each spring abuts the inner face of the lateral formation, the other ends of the spring abut the washer 42 carried on the belt connector.

Figure 12 is a modified form of the belt connector and spring as shown in Figure 9, which consists of a bar having the transverse extended portion 45 to which is connected the end of a belt. Disposed on the bar is a coil spring 37, on the other end of the bar is a disk or cross part 36 against which abuts one end of the coil spring 37. When this assembly is slidably mounted on a holder such as 35 of Figure 9, the other end of the spring abuts against the holder as at part 51 of Figure 9, whereby a resilient spring action similar to that in the other forms illustrated is obtained between the belt connector and the holder.

Either of the holder and belt connector assembly of Figures 5, 7, 8, 9, 11, can be attached to either style buckle body as shown in Figures 1, 2 and 4. In Figures 2 and 4 to the belt engaging jaws of each of these assemblies, the free end of the belt is adjustably retained by clamping it between the jaw and the underside of the buckle body.

It is believed that the above description and the drawing make clear the nature of my invention and the manner of making and using same. It is to be definitely understood that I do not desire to limit the application of this invention to the particular modifications set out herein to illustrate the principles thereof, and changes may be made in material or structure or arrangements of parts consistent with the spirit and scope of the invention.

I claim:

1. An automatic spring operated belt buckle comprising a loop adapted to be attached to one end of a belt, a compressible and expanding spring on said loop, a holder being mounted on said loop and engaging said spring, a rod disposed transversely of the holder thru holes of the holder and the rod projecting beyond each side thereof, a buckle body having flanges pivotally receiving the projecting

ends of said rod, and a belt engaging jaw mounted between said flanges for co-operating with said body to clamp an end of the belt.

ing portion at one end of the connector and a combination of springs on the connector and the holder for yieldably resisting opposite relative longitudinal movement of the connector and holder, and a belt engaging means carried by the buckle assembly for adjustably retaining the free end of the belt, a washer mounted on the belt connector for separating the springs.

In testimony whereof I affix my signature. 75
DORSEY M. WIRTH.

5 2. A belt buckle of the class described comprising an elongated loop adapted to be connected at an end of a belt, a compression spring of spiral form disposed on said loop, a holder having openings to slidably accommodate the sides of said loop, and to permit said holder to slide longitudinally on the loop against the resistance of the spring, the holder including at one lateral face a belt engaging jaw which has projecting ends as pivot lugs and a buckle body receiving said pivot lugs and adapted to co-operate with said belt engaging jaw to hold a portion of the belt.

10 3. A belt buckle of the class described comprising a buckle body, an expanding belt connector assembly connected with said buckle body, said belt connector assembly comprising a holder, means connecting said holder with the buckle body, and an elongated belt connector slidably carried by the holder, 25 a belt connecting portion at one end of the connector and a spring or combination of springs on the connector and reacting against the other end of the connector and the holder for yieldably resisting opposite relative longitudinal movement of the connector and holder, and a belt engaging means carried by the buckle assembly for adjustably retaining the free end of the belt, washers placed at the point of contact between the ends of the spring or springs and the holder.

30 4. A belt buckle of the type described comprising a belt connector, a holder carrying the belt connector slidably in one of its portions, a spring on the connector for resisting longitudinal separation of the connector and the holder, a buckle body having a yoke formation, the holder connected with the bight of the yoke portion, a belt hole engaging tongue swingably carried on the bight of the yoke portion for retaining one end of a belt, the other end of the belt being fixedly retained by attachment to the belt connector.

45 5. An automatic spring operated belt buckle comprising a loop adapted to be attached to one end of a belt, a compressible and expanding spring on said loop, a holder being mounted on said loop and engaging said spring, the holder pivotally connected with a transverse rod, a buckle body having flanges receiving the projecting ends of said rod, and a belt engaging jaw mounted between said flanges for co-operating with said body to clamp an end of the belt.

50 6. A belt buckle of the class described comprising a buckle body, an expanding belt connector assembly connected to said buckle body, said belt connector assembly comprising a holder, means connecting said holder to the buckle body, and an elongated belt connector slidably carried by the holder, a belt connect-

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