May 6, 1958 B B. KREISLER 2,833,015

BELT BUCKLES

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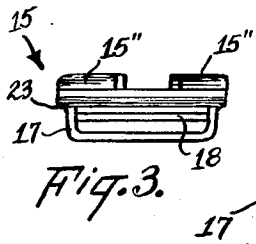


Fig. 3.

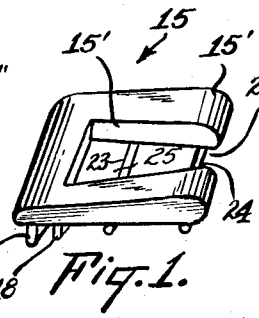


Fig. 1.

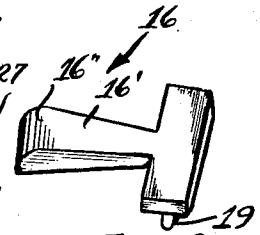


Fig. 2.

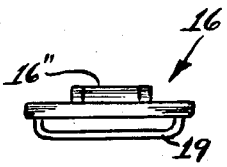


Fig. 4.

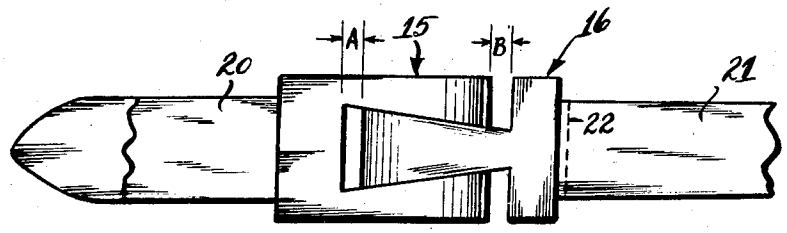


Fig. 6.

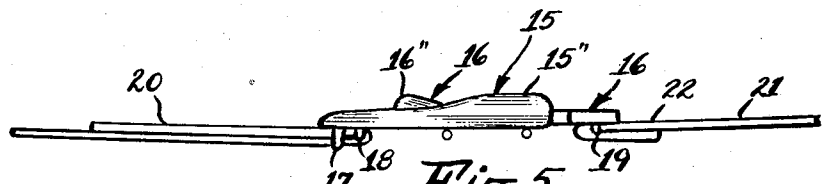


Fig. 5.

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BELT BUCKLES

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6 Claims. (Cl. 24—201)

The present invention relates to novel and improved buckles for men's and women's belts and generally for joining the free ends of a belt which is substantially taut when in use.

The principal object of this invention is to provide a novel and improved belt buckle of the character mentioned, which comprises two releasably engageable parts anchored on the belt ends respectively; the construction of said buckle parts and the manner of interlocking them, affording a structure which involves no moving parts to go out of order and no "biting" into the belt body to cause its wear or tear. Further, said buckle parts remain engaged though relatively swung due to body movements of the wearer.

Another object hereof is to provide a novel and improved belt buckle of the nature set forth, whose parts are engaged and disengaged by a simple manipulation.

A further object of this invention is to provide a novel and improved belt buckle of the type described, of a construction affording a new mode of operation; said buckle being reasonably cheap to manufacture, lending itself to such decorative shapes and surface ornamentation as style may dictate and being efficient in carrying out the functions for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

For the practice of this invention, one of the buckle parts includes a trapezoid-shaped plug extending from the belt end said part is attached to; the sloping sides of said trapezoidal plug diverging towards the other belt end. The second buckle part has a socket in its face into which said plug enters freely when the belt ends are brought towards each other. Now, upon separating the belt ends, said plug becomes wedged in said socket which is of trapezoidal cross section and whose sloping sides make the same angle as that between the sloping sides of the plug. Movement of the plug into and out of said socket is lateral to the trapezoidal faces of such plug. The joint structure is somewhat akin to a dove-tail joint with modifications to permit the required plug movements.

In the accompanying drawings forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is a perspective view of one of the buckle parts embodying the teachings of this invention.

Fig. 2 is a perspective view of the other buckle part, in accordance with this invention.

Fig. 3 is the left end view of Fig. 1.

Fig. 4 is the right end view of Fig. 2.

Fig. 5 is an elevational view of the assembled buckle.

Fig. 6 is a top plan view of Fig. 5, or what may be deemed a face view of the buckle.

In the drawings which show one form this invention may assume, the numeral **15** designates generally one of the buckle parts and the numeral **16** indicates the other, each of which has suitable means as for instance the loops **17**, **18** and **19** as shown, for being attached to

the belt ends **20**, **21** respectively; as for example by the stitching **22** and by the lacing for frictional hold through the loops **17**, **18** to permit adjustment of belt length as is well known.

Buckle part **15** may be a U-shaped piece offering a dove-tail channel **15'** for the dove-tail male plug **16'** which extends for entrance into said channel. Since one end of said channel has stop means as provided by the bars **23**, **24** to limit the extent of movement of said plug **16'** thereinto, I prefer to call the opening into which said plug fits, a socket. The opening of clearance **25** in the socket permits the plug **16'** to be swung so that its thicker and wider end leaves the socket engagement by a rearward movement and of course, the plug is free to leave the socket by a forward movement upon swing of the plug in the opposite direction. Regardless of such relative positions of the buckle parts **15**, **16**, at least the intermediate portions of the divergent surfaces of the plug will constantly engage the divergent surfaces of the socket. This means that bodily movements of the wearer will never undo the engagement of the buckle parts. The plug **16'** is of course part of the buckle component **16** and is an extension of the belt end **21**. The said plug **16'** as well as the socket **15'** is trapezoidal as shown, and the angles made by their sloping sides respectively, are equal. Entrance and exit of the plug into the socket is of course by movement of the plug laterally to its trapezoidal faces.

When the buckle parts are in wedged or locked condition as shown in Fig. 6, the construction is such that there is a clearance A in the socket **15'** and a thinner section at the attached base of the plug and the space B, to permit movement of said plug longitudinally of the belt to undo the said wedging action and thus free the plug **16'** for removal from said socket **15'**. To better assure maintenance of the wedging action, should the buckle parts **15**, **16** be relatively swung due to body movements of the wearer of the belt, the plug **16'** is thickened at its free end **16''** and the tines of the U-piece are thickened at their extremities as indicated by the numeral **15''**. The bars **23**, **24** serve as axes for the respective swing movements of the plug part **16**.

The opening **27** in the socket wall between the divergent opposite walls of the socket, assures that the plug **16'** will be gripped with some resiliency.

As a suggestion for economical manufacture, the buckle herein shown may be made by being die-cast. Of course, this article may be fabricated in other ways from metal, plastic or other suitable materials.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiment shown herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. In a belt buckle of the character described, two separate parts, each having means for attaching a belt end thereto respectively; the first of said parts presenting a plug having a pair of opposite end surfaces which diverge in extension of the belt end on said first part when such belt end is on said first part; the second part having a socket into and from which said plug can be entered and removed; said socket having opposite side walls which diverge in the same direction as said plug surfaces; the angles of both said divergencies being equal, whereby when the plug is inserted into said socket and upon movement of said parts to increase the distance between their belt-attaching means, said parts will become engaged by

said plug becoming wedged in said socket between said divergent side walls of the socket; said socket having clearance whereby the parts can be moved to decrease the distance between their belt-attaching means, whereupon said plug will become released for removal from the socket; said parts while in engagement, being swingable with respect to one another in opposite directions, whereby the widest end of the plug will leave the divergent walls of the socket in one direction and then in the other direction when the plug is swung one way and then the other with respect to said second part.

2. The belt buckle as defined in claim 1, wherein the wall of the socket between its divergent walls, is provided with an opening therethrough commencing at the entrance of said socket, whereby said divergent walls of the socket grip the plug with some resiliency when the plug is engaged in said socket.

3. The belt buckle as defined in claim 2, wherein the plug extends through said socket wall opening when said plug is in the socket.

4. The belt buckle as defined in claim 1, wherein the plug is comparatively thinner at its narrower region and thicker at its wider region and wherein the second part is comparatively thinner where it contacts the thicker part of the plug and thicker where it contacts the thinner part of the plug.

5. In a belt buckle of the character described, two separate parts, each having means for attaching a belt end thereto respectively; the first of said parts presenting a plug having a pair of opposite end surfaces which diverge in extension of the belt end on said first part when such belt end is on such first part; the second part being U-shaped; the opposed inner edges of the arms of said U-shape being divergent in the same direction as said plug surfaces; the angles of both said divergencies being equal, whereby when said plug is inserted between said arms and upon movement of said parts to increase the distance between their belt-attaching means, said parts will become engaged by said plug becoming wedged between said arms; said second part having clearance whereby the parts can be moved to decrease the distance between their belt-attaching means, whereupon the plug will become released for removal from said second part, and an element secured to a face of at least one of said arms and extending towards the other of said arms, serving as a stop for the plug when said plug is set between said arms; said parts while in engagement, being swingable with respect to one another in opposite directions whereby the widest end of the plug will leave the divergent edges of the U-shaped part in one direction and then in the other direction when the plug is swung one way and then the other with respect to said second part; said element serving also as the axis of swing of the plug with respect to said first part.

6. The belt buckle as defined in claim 5, wherein the plug is comparatively thinner at its narrower region and thicker at its wider region and wherein the second part is comparatively thinner where it contacts the thicker part of the plug and thicker where it contacts the thinner part of the plug.

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