Sept. 26, 1939. H. P. TROENDLY 2,173,889

BUCKLE

Filed Sept. 30, 1937

Fig. 1.

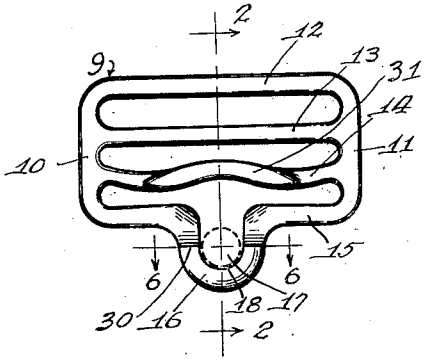


Fig. 2.

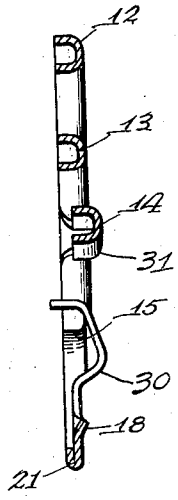


Fig. 3.

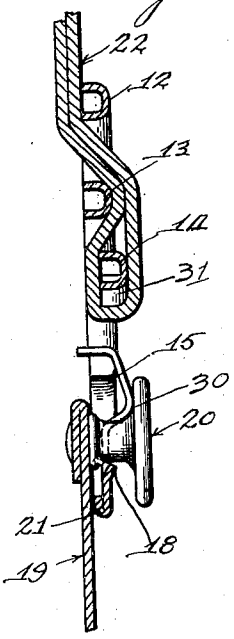


Fig. 4.

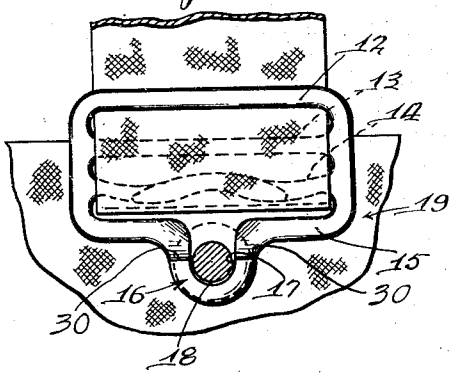


Fig. 5.

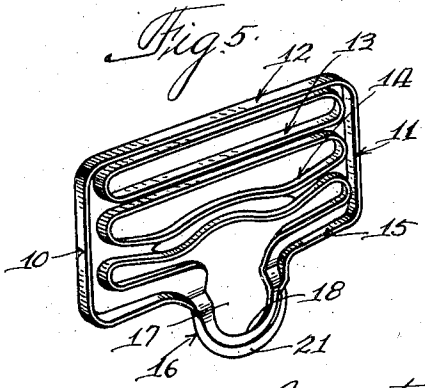
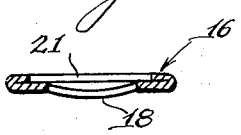


Fig. 6.



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UNITED STATES PATENT OFFICE

2,173,889

BUCKLE

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Application September 30, 1937, Serial No. 166,469

3 Claims. (Cl. 24—200)

This invention relates to a buckle and has special reference to a buckle adapted to be adjustably associated with straps, bands and the like for the support of garments or other objects on the person.

More particularly, this invention relates to a buckle for detachably securing a button-supported member such as the bib of an overall to a strap or other supporting member which comprises a strap-receiving frame formed of sheet metal having a button-retaining opening, a portion 18 of the material bounding the opening being displaced in a manner to prevent undue wear of the button-supported member by reason of any friction which may be developed between the buckle and the button-supported member.

It is contemplated by the present invention to adopt this construction for use with various types of objects particularly on the person. However, in the drawing and in the following description, the buckle will be shown and described in connection with a shoulder strap of an overall, the strap being preferably threaded for adjustable engagement with the buckle frame. It is readily apparent, of course, that various other uses could be mentioned in connection with buckles generally of the type adopted for use with supporting and supported members and that this invention therefore is not to be limited to the specific use herein described and illustrated.

In a buckle of the above noted type it is highly desirable to minimize if not actually prevent wear such as is ordinarily occasioned between the buckle and the supported member particularly adjacent the button. In the use of the invention with a bib of an overall, it has been found that in most instances of use of a sheet metal buckle there is an undue amount of wear of the material of the bib adjacent the button due to the sharp edges of the buckle engaging and rubbing against the material of the bib during normal wear. The present invention contemplates the substantial elimination of this wear in the provision of a depending button-retaining loop, the material of which is displaced in such a manner as to present a rounded edge adjacent the button-supported member with a portion 18 of the material of the loop bounding the opening thereof being displaced in a direction away from the button-supported member.

Other objects and advantages will hereinafter be more particularly pointed out, and for a more complete understanding of the characteristic features of this invention reference may now be had to the following description when taken together with the accompanying drawing, in which latter:

Figure 1 is a plan view of a buckle constructed in accordance with the teachings of this invention;

Fig. 2 is a sectional view on an enlarged scale taken on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged sectional view similar to Fig. 2 showing an association of the buckle of the present invention with a fragmental portion of a supported and a supporting member;

Fig. 4 is a front elevational view of Fig. 3;

Fig. 5 is a perspective view of the buckle showing the rear face thereof; and

Fig. 6 is a plan sectional view taken on the line 6—6 of Fig. 1.

Referring now more particularly to the drawing, the buckle of the present invention is shown as comprising a frame 9 preferably rectangular in shape comprising side bars 10 and 11 connected by spaced cross bars 12, 13, 14 and 15. The cross bar 15 of the frame is shaped to define a button-retaining loop 16, the button-receiving opening 17 of which opens into the slot defined by the cross bars 14 and 15.

The buckle may be conveniently stamped or otherwise formed from sheet metal with the side bars and cross bars dished to form a so-called embossed frame as shown more particularly in Figs. 2 and 3 with the result that the buckle frame as well as the cross bars thereof are strengthened and relatively light gauge metal may be utilized while still producing a buckle of the desired strength.

The buckle illustrated and described above is of the type disclosed in the patent issued to Louis A. Erb, No. 1,999,166 issued April 23, 1935, and assigned to the assignee of the present invention so that a more detailed description of the showing of the present invention may be obtained therefrom. However, this invention is not limited to the type of buckle therein described and illustrated and may be employed generally with buckles of sheet metal having button-receiving openings which are adapted to detachably receive the button of a member to be supported. The present invention is directed specifically to the formation of the material bounding the button-retaining opening forming the button-retaining loop, and with reference now more particularly to Fig. 3 the button-retaining loop 16 is provided with a flared portion 18 directed out of the normal plane of the frame in a direction away from a button-supported member 19, a button 20 being secured to the supported mem-

ber 19. The face of the button-retaining loop 16 is also provided with displaced portions or humps 30 lying substantially in the plane of an off-set portion 31 of the bar 14 to deflect the button 20 over the fold of the strap 22 folded about the bar 14 as tension is relieved on the strap 22. The peripheral embossment 21 of the button-retaining loop is folded to present a rounded edge adjacent the button-supported member 19.

A pressure is alternately exerted and relieved on a strap 22 by movement of the wearer of the garment and the buckle alternately pulls and is relieved of its engagement with the button. Because of the play necessitated in affording a desired detachability between the buckle and the button, this alternate application and releasing of pressures between the supported and supporting members results in the tilting of the button and the supported member so that an engagement is had between the depending loop portion 16 of the buckle and the supported member. Such engagement usually produces undue wear where sharp and perhaps rough edges are presented between the depending loop portion of the material of the supported member adjacent the button. The present invention provides the usual embossed portion of the loop to be turned in a manner to present a well rounded edge to minimize, if not substantially eliminate, any wear on the material of the supported member. Also by reason of the material of the member bounding the button-receiving opening being flared in a direction away from the supported member, a rounded surface is presented to the material of the supported member if any engagement is had therebetween.

While but a single embodiment of this invention is herein shown and described, it is to be understood that various modifications thereof may be apparent to those skilled in the art without departing from the spirit and scope of this invention and, therefore, the same is only to be limited by the scope of the prior art and the appended claims.

I claim:

1. A buckle for detachably securing a button-supported member to a strap or other supporting member comprising a strap-receiving frame formed of sheet metal having a button-retaining opening for receiving the shank of a button, and a flared portion bounding the button-retaining opening of said button-retaining loop and extending out of the normal plane of the frame in a direction away from the button-supported member.

2. A buckle for detachably securing a button-supported member to a strap or other supporting member comprising a strap-receiving frame formed of embossed sheet metal and having a depending button-retaining loop for receiving the shank of a button, a flared portion bounding the button-retaining opening on the interior edge of said button-retaining loop and extending out of the normal plane of the frame in a direction away from the button-supported member, and a folded portion formed from the material of the embossment on the exterior edge of said button-retaining loop to present a rounded edge adjacent the button-supported member.

3. A buckle for detachably securing a button-supported member to a strap or other supporting member comprising a strap-receiving frame formed of sheet metal having a depending button-retaining loop for receiving the shank of a button, a rounded displaced portion of the button-retaining loop extending in the direction of the button-supported member and presenting a blunt contact therewith, and a flared portion bounding the button-retaining opening of said button-retaining loop extending out of the normal plane of the frame in a direction away from the button-supported member.

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