Aug. 24, 1943. A. T. POOLE 2,327,741

BUCKLE

Filed Aug. 22, 1942

Fig. 1.

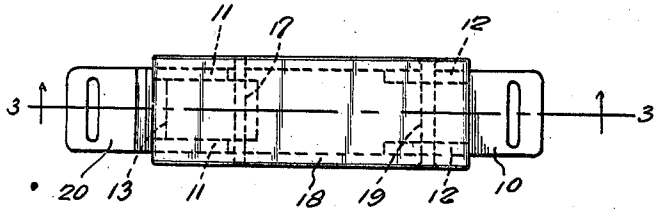


Fig. 2.

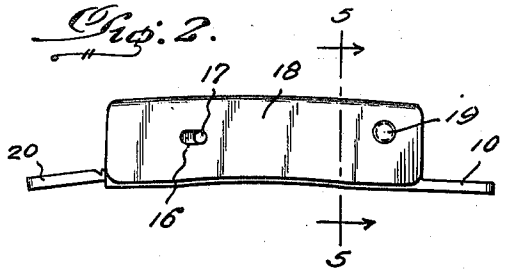


Fig. 5.

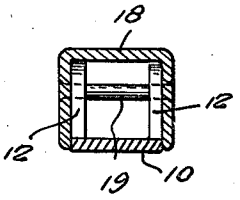


Fig. 3.

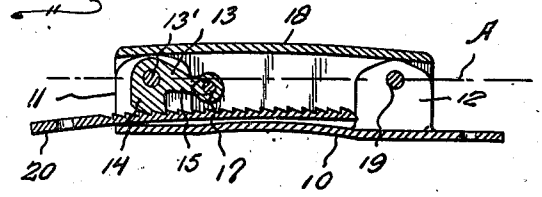


Fig. 6.

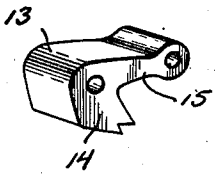
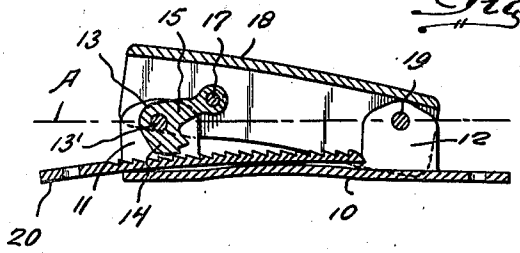


Fig. 4.



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2,327,741

BUCKLE

Asby Tom Poole, Greybull, Wyo.

Application August 22, 1942, Serial No. 455,801

2 Claims. (Cl. 24—170)

The present invention relates generally to buckles, and while it is primarily intended for use as an overshoe buckle, its general application or use in any desired connection is contemplated by the claims.

The invention has for its principal object, the provision of a buckle including a pivoted gripping cam which is definitely maintained immovable in its gripping position, and that any stress or pull to which the buckle is subjected will only tend to increase the effectiveness of the gripping action of the cam.

In carrying out the invention, I provide a buckle of the character above mentioned which is very simple in construction, and one capable of being readily opened or closed with very little effort.

More specifically stated, the invention provides a buckle having a base upon which is mounted a pivoted gripping cam, actuated by a lever also pivoted on the base, the latter being designed to be slightly flexed and tensioned as the cam assumes its gripping position, the tension of the base being utilized to effectively hold the cam immovable while in use.

The nature and advantages of the invention will be better understood when the following detail description is read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawing forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a top plan view of a buckle constructed in accordance with the invention.

Figure 2 is a side elevation thereof showing the buckle closed.

Figure 3 is a sectional view taken on line 3—3 of Figure 1 showing how the gripping cam is effectively maintained in its active position.

Figure 4 is a similar sectional view through the buckle showing the position of the parts with buckle open.

Figure 5 is a transverse sectional view taken on line 5—5 of Figure 2.

Figure 6 is a perspective view of the gripping cam.

Before entering into a detail description of what is herein illustrated, I desire to have it known that the drawing merely shows one embodiment of the invention, to which I do not limit myself and that such changes in construction may be resorted to when desired as fall within the scope of what is claimed.

The buckle constituting the subject matter of the instant invention may of course be constructed from any suitable material and also vary in size without departing from the spirit of the invention. The buckle includes a base 10 of resilient material in that it is adapted to be placed under tension to effectively maintain the buckle closed in a manner to be hereinafter fully set forth. For this purpose the base 10 of the buckle includes an intermediate curved portion which is adapted to be slightly flexed or bowed incident to the closing of the buckle. Projecting from the opposite ends of the base are spaced pairs of ears indicated at 11 and 12 respectively. A gripping cam is pivoted between the ears 11 as clearly illustrated, the pivot therefore being indicated at 13'. This cam is preferably of the contour shown in Figure 6, including angularly disposed branches 14 and 15 respectively. The gripping cam 13 is operated by a suitable lever which is pivoted to the cam as at 17. The pivot 17 operates in a slot 16 which latter is formed in the sides of a lever 18, and the parts are so associated that when the lever is actuated to move the cam 13 to its gripping position, the curved portion of the base is slightly flexed or bowed, thereby placing the base under tension which is utilized to effectively maintain the cam 13 immovable while in use. The operating lever 18 for the cam 13 may of course be of any suitable construction or design without departing from the inventive idea. The lever 18 is pivotally mounted between a pair of ears 12 as at 19. The active branch 14 of the gripping cam may if desired be serrated as shown, and is adapted to very effectively grip the object with which it is used. As hereinabove stated, the buckle is primarily intended for use on overshoes or the like, in which connection the gripping cam engages a serrated tongue indicated at 20. However, a general application of the invention is contemplated by the claims, and it is of course manifest that a strap or the like may be used with the buckle instead of the tongue 20.

In use, the object to be gripped is received between the ears 11 and reposes on the base 10, while the lever 18 occupies its inactive or open position as shown in Figure 4. The lever is then depressed to move the cam 13 to its active gripping position as clearly indicated in Figure 3. It is during this operation of the lever 18 that the base 10 is placed under tension to be utilized in holding the gripping cam 13 against casual displacement or slippage while in use. This result is accomplished by the connection between the gripping cam 13 and the lever 18. In other words, when the operating lever is

initially moved the pivot 17 engages one end of the slot 16 while the pivot is above the dotted line A shown in Figure 4. Further movement of the lever 18 to move the cam 13 to its full active position shifts the pivot 17 beneath the dotted line A which position of parts is illustrated in Figure 3. As the pivot 17 is forced beneath the dotted line A it contacts the opposite end of the slot 16, thereby exerting an outward stress on the respective pairs of ears 11 and 12. This cycle of operation slightly flexes the intermediate curved portion of the base 10. This tension of the base is utilized to very effectively maintain the cam 13 in gripping relation with the object 20 in a manner that positively prevents casual opening of the buckle under any circumstances. The buckle can however be very easily opened with a minimum of effort by simply lifting up on the lever 18. Furthermore, the buckle in its entirety is very simple in construction and can be manufactured and sold at a nominal cost.

While it is believed that the nature and advantages of the invention will be readily understood from the foregoing description, I desire to have it known that I do not limit myself to what is herein disclosed, and that the scope of the invention is defined by the appended claims.

What is claimed is:

1. A buckle including a resilient base having an intermediate curved portion adapted to be flexed under tension when the buckle is in use, a gripping cam pivoted at one end of the base, an operating lever therefor pivoted at the other end of the base, and means connecting the cam and lever to each other and to the base, whereby the base is tensioned incident to the operation of the lever to effectively hold the cam immovable in its active position.

2. A buckle including a resilient base having an intermediate bowed portion, a gripping cam pivoted at one end of the base, an operating lever therefor pivoted at the opposite end of the base, and a slot and pin connection between the cam, lever and base, whereby the bowed portion of the base is flexed and tensioned as the cam is moved into gripping position, to effectively hold the cam against movement while in use.

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