Aug. 29, 1950 J. C. ULMER 2,520,583

BUCKLE FOR OVERALL SUSPENDER STRAPS

Filed July 26, 1949

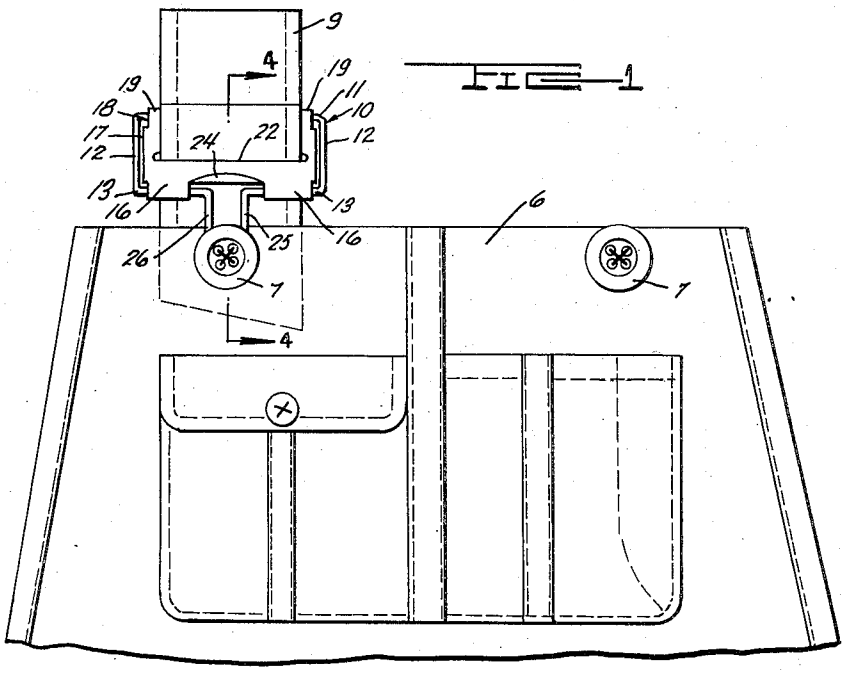


FIG 1

FIG 2

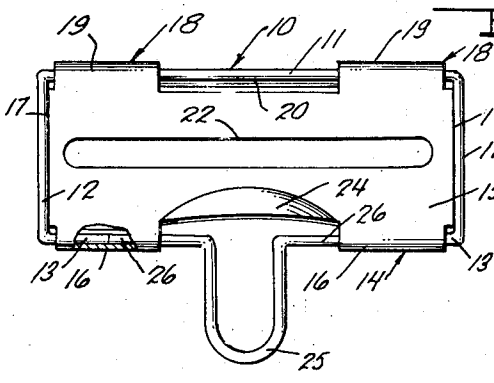


FIG 3

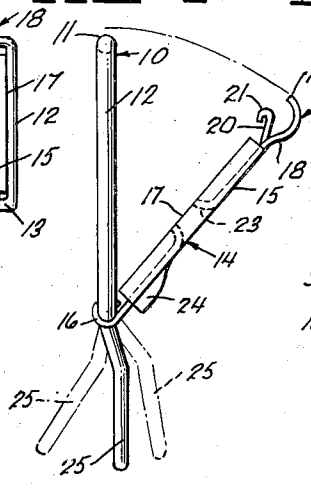


FIG 4

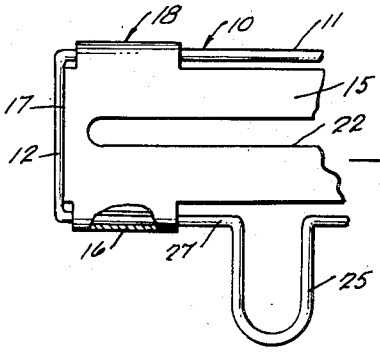


FIG 5

INVENTOR.
JAMES C. ULMER
BY
McMorrow, Berman & Davidson
ATTORNEYS

Patented Aug. 29, 1950 2,520,583

UNITED STATES PATENT OFFICE

2,520,583

BUCKLE FOR OVERALL SUSPENDER STRAPS

James C. Ulmer, Alta, Calif.

Application July 26, 1949, Serial No 106,837

3 Claims. (Cl. 24—73)

1

My invention relates to a buckle for suspenders of workmen's overalls.

An important object of my invention is to provide a buckle of the above-mentioned class which is simplified in construction, durable and cheap to manufacture.

A further object is to provide a buckle which will not slip upon the suspender strap, and which embodies no prongs or teeth to pierce or damage the strap.

A further object is to provide a buckle which is neat and attractive in appearance, and which will lie flat in use, since the suspender strap is passed through the buckle in one thickness only.

A still further object of the invention is to provide a buckle which is readily bodily detachable from the suspender strap, so that a single pair of buckles may be used upon several pairs of overalls.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a front side elevation of a buckle embodying my invention and showing the same in use;

Figure 2 is an enlarged front side elevation of the buckle removed, parts broken away;

Figure 3 is an enlarged end elevation of the buckle showing a button-receiving loop in several positions;

Figure 4 is an enlarged fragmentary vertical section taken on line 4—4 of Figure 1;

Figure 5 is a fragmentary front side elevation of a buckle embodying a slight modification of the invention.

In the drawings, where, for the purpose of illustration, are shown preferred embodiments of the invention, attention is directed first to Figures 1 to 4, wherein the numeral 6 designates the upper front portion or bib of a pair of conventional workmen's overalls. The bib 6 is provided near its top corners with the usual buttons 7 having reduced shanks 8. The buttons 7 are secured to the outer side of the bib, as shown. The overalls include the usual flexible suspender straps 9, only one of which is shown, and the buckle embodying the invention is applied to the straps 9 in a manner to be described.

The buckle comprises a rectangular loop or frame 10, preferably formed of stiff spring steel wire, and including a top horizontal locking bar

2

or side 11, vertical ends 12, and inwardly-extending bottom horizontal extensions 13, parallel to the top side 11. The inner ends of the bottom extensions 13 are spaced apart, as shown.

Pivotally mounted upon the wire loop or frame 10 for vertical swinging movement is a sheet metal clasp plate 14 including a central flat rectangular body portion 15 adapted to be arranged within the loop or frame 10. The clasp plate 14 is provided at its lower end and adjacent to its ends with longitudinally-spaced, inwardly-rolled, integral, cylindrical knuckles or sleeves 16 pivotally receiving the bottom extensions 13. At its opposite ends, the clasp plate 14 is provided with inwardly-facing, narrow, vertical flanges 17 extending for substantially the entire vertical width of the clasp plate and adapted to enter the loop or frame 10 and be disposed close to the vertical ends 12 when the clasp plate 14 is closed, Figures 1, 2 and 4. At its top edge, the clasp plate 14 has a pair of longitudinally-spaced, integral clamping hooks 18 disposed opposite the knuckles 16 and including forwardly-inclined flat portion 18' and rearwardly-projecting curved portions 19 integral therewith. Between the hooks 18, the clasp plate is provided with a rearwardly-inclined, upstanding, locking tongue 20 rolled over at its top to form a rounded bead 21. The bead 21 is disposed below and rearwardly of the curved portions 19, Figures 3 and 4. The body portion 15 of the clasp plate is formed to provide a horizontal, long, narrow slot 22 having rearwardly-projecting lips 23, and the slot extends for substantially the entire length of the clasp plate, as shown. Below the locking tongue 20, and in its bottom edge, the body portion 15 is bent to form a longitudinal, forwardly-offset portion 24 for a purpose to be described.

The buckle further comprises a pivoted button-holding loop 25 which is generally U shape and normally extends below the frame 10 and clasp plate 14, as shown. The loop 25 has upper horizontally-aligned extensions or trunnions 26 pivotally engaging within the knuckles 16 of the clasp plate, Figure 2.

In use, the clasp plate 14 is swung to an open position, Figure 3, and the free end of the suspender strap 9 is passed below the bar 11, and over the tops of the clamping hooks 18. The buckle is adjusted so as to be straight upon the strap 9, and then the free end of the strap may be folded down over the front face of the clasp plate 14. The buckle is grasped at its top corners with the fingers and the clasp plate 14 is pressed toward the frame 10, the locking tongue 20 will

snap below the bar 11 and become arranged slightly rearwardly of and below the bar 11, Figure 4. When this occurs, the clamping hooks 18 press the strap 9 rearwardly into tight clamping engagement with the bar 11. The bead 21 is disposed so that it will just pass beneath the bar 11, when the clasp plate 14 is closed without any overall strap. When the buckle is applied to the strap 9, and its thickness is between the bead 21 and bar 11, the bar and locking tongue 20 must yield slightly to permit the bead 21 to snap under the bar. Both the bar 11 and tongue 20 are somewhat resilient to permit this action to take place. The free end of the suspender strap 9 is now passed rearwardly through the slot 22, and extends downwardly adjacent to the rear side of the buckle. The lowermost end of the strap 9 may be arranged on the inside of the bib 6, Figure 4. When the buckle has been applied to the overall strap 9, as described, and properly adjusted, the button 7 is passed through the loop 25, and the button shank 8 engages within the bottom of the loop 25 to detachably secure the suspender strap 9 to the bib 6. As clearly shown in Figures 3 and 4, the lower portion of the loop 25 is bent so as to be forwardly offset for a distance substantially equal to the length of the button shank 8. This arrangement permits the button 7 to lie flat at all times and not be twisted upwardly when engaged within the loop 29. The fact that the loop 25 is pivoted within the knuckles 16 also aids the button 7 and buckle to lie flat and permits the loop 25 to freely adjust itself to various positions, such as shown in broken lines in Figure 3. The forwardly-offset portion 24 provides additional clearance for the loop 25 to swing in.

As is obvious, the buckle is easy to apply to and remove bodily from the strap 9, and can be readily adjusted longitudinally of the strap before the clasp plate is pressed closed, Figures 1 and 4. To open the buckle for removing or adjusting it, it is merely necessary to pull the free end of the strap out of the slot 22 and then grasp the overall strap 9 above and below the buckle and place the strap under tension. When this is done, the buckle will snap open, no prying of parts with a blade or other implement being necessary. When the buckle is closed, Figure 4, the strap 9 will not slip, and no damage is done to the strap by the buckle closing upon it. The buckle is simple, neat and attractive and very effective.

In Figure 5, I have shown a slight modification of the invention, wherein the button-holding loop 25 is formed integrally with the lower side 27 of the frame 10. In this form of the invention, the loop 25 is not free to swing, as in Figure 3, but is rigid upon the frame 10. Also, the forwardly-offset portion 24 is omitted. All other parts and their functions are identical with those shown and described in the first form of the invention.

It is to be understood that the forms of my invention herewith shown and described are to be taken as preferred examples of the same, and

that various changes in shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:

1. A buckle for overall suspender straps, comprising a frame including top and bottom bars, a clasp plate pivotally mounted upon the bottom bar of the frame and adapted to swing toward and away from the frame, the clasp plate having a slot disposed generally parallel to the top bar, an upstanding locking tongue secured to the top of the clasp plate and adapted to snap beneath the top bar of the frame and be arranged rearwardly of and below the top bar, an upstanding clamp element secured to the top of the clasp plate and adapted to engage the top bar forwardly of the locking tongue when the tongue snaps beneath such bar, and a depending loop secured to the bottom bar of the frame and adapted to be detachably secured to a button of the overalls.

2. A buckle for overall suspender straps, comprising a frame including top and bottom bars, a clasp plate hingedly connected with the bottom bar and adapted to swing toward and away from the frame, the clasp plate having apertured knuckles adjacent to its bottom edge pivotally receiving the bottom bar and a longitudinal slot extending generally parallel with the top bar, an upstanding rearwardly-inclined locking tongue secured to the top edge of the clasp plate and being rounded at its top and adapted to pass beneath the top bar and be arranged rearwardly of the top bar, rearwardly-curved upstanding clamp hooks secured to the clasp plate upon opposite sides of the locking tongue and adapted to engage the forward side of the top bar when the locking tongue passes beneath such bar, and a depending substantially U-shaped loop secured to the bottom bar of the frame and adapted to be connected with a button of the overalls.

3. A buckle for overall suspender straps, comprising a frame including a top bar, bottom longitudinally-spaced extensions and ends connecting said top bar and extensions, a swingable clasp plate for movement toward and away from the frame and including apertured knuckles pivotally receiving the extensions, the clasp plate having a longitudinal slot, an upstanding resilient locking tongue secured to the clasp plate for passage beneath the top bar to a locked position rearwardly of the top bar, an upstanding clamp element secured to the clasp plate for engagement with the top bar when the locking tongue is in the locked position, and a depending generally U-shaped loop arranged at the bottom of the buckle and having trunnions pivotally mounted within the apertured knuckles inwardly of the spaced extensions so that the loop may swing relative to the frame, the loop receiving a button of the overalls.

JAMES C. ULMER.

No references cited.