March 24, 1936. L. W. JOYCE 2,035,433

UNITARY METALLIC AND ELASTIC SLIDE AND BUTTON LOOP

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Fig. 1.

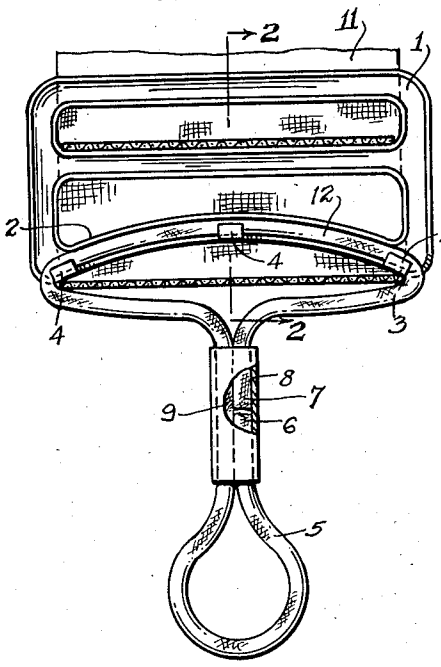


Fig. 2.

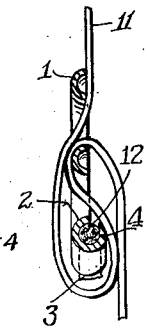


Fig. 3.

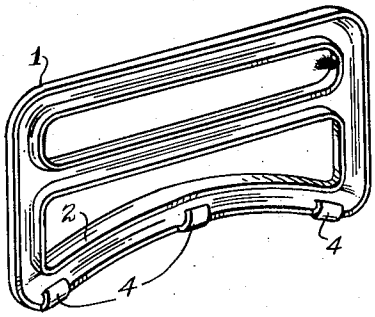


Fig. 4.

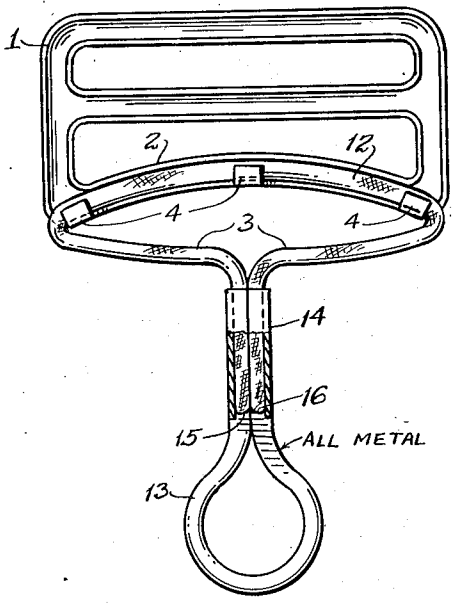
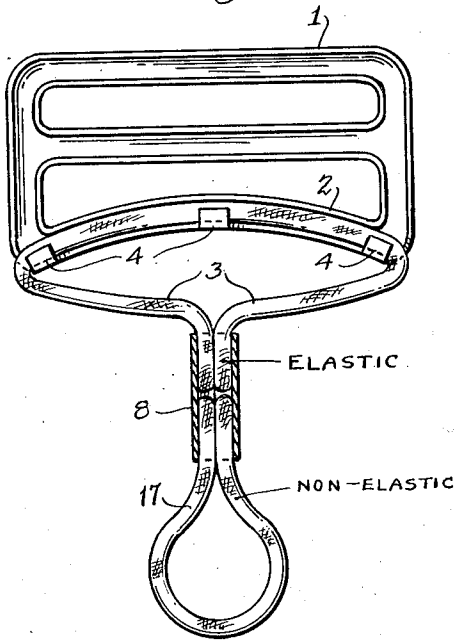


Fig. 5.



Inventor

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UNITARY METALLIC AND ELASTIC SLIDE AND BUTTON LOOP

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Fig. 6.

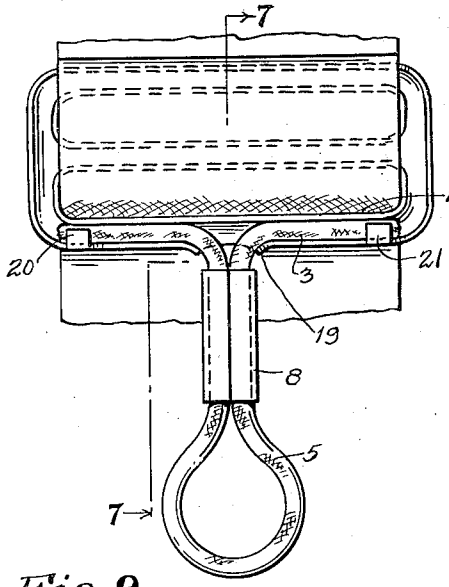


Fig. 7.

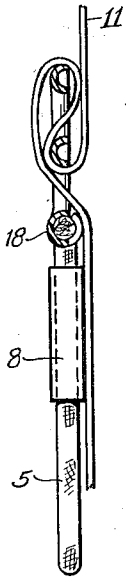


Fig. 8.

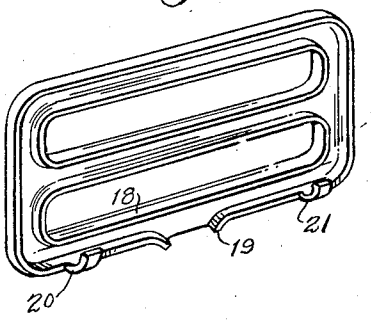


Fig. 9.

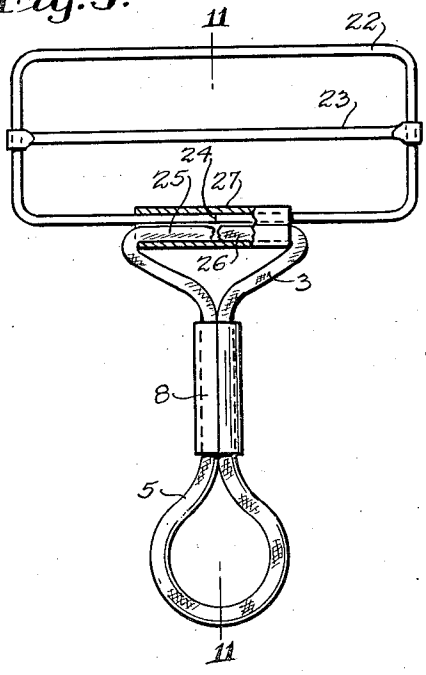


Fig. 10.

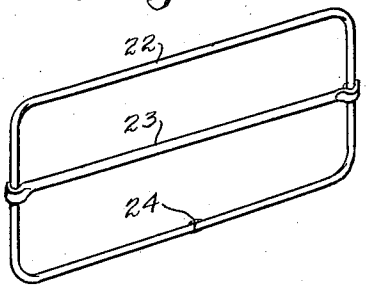


Fig. 11.

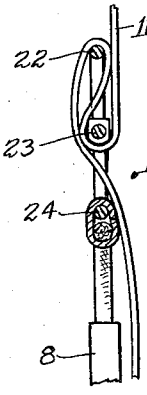
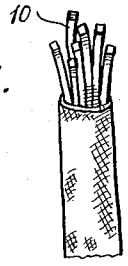


Fig. 12.



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Patented Mar. 24, 1936

2,035,433

UNITED STATES PATENT OFFICE

2,035,433

UNITARY METALLIC AND ELASTIC SLIDE AND BUTTON LOOP

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Application March 27, 1934, Serial No. 717,663

9 Claims. (Cl. 241—25)

This invention relates to suspender elements, of general usefulness, and particularly adapted to the shoulder straps of overalls.

One of the objects of the invention is the provision of a unitary metallic slide and elastic button loop.

Another object of the invention is to provide in a device of the character described a cord elastic button loop unitarily associated with the slide.

A further object of the invention is to provide a reservoir of elasticity within the bounds of the metallic slide upon which the button loop can draw when stretched, enabling the button loop to be made short and yet have the elasticity of a longer loop.

Still another object of the invention contemplates a unitary structure in which the slide and button engaging portion are rigid or of metal, being connected by an elastic linkage.

Other objects of the invention will appear as the following description of preferred and practical embodiments thereof proceed.

In the drawings which accompany and form a part of the following specification and throughout the several figures of which the same characters of reference have been employed to designate identical parts:

Figure 1 is an elevation partly in section showing one embodiment of the invention;

Figure 2 is a side sectional view taken along the line 2—2 of Figure 1 showing how the webbing of the suspender is looped through the slide;

Figure 3 is a perspective view of the slide divorced from the elastic button loop;

Figure 4 is a slightly modified form of the invention in which the immediate portion of the button loop which engages the button is metallic, the same being connected to the slide by an elastic link or section;

Figure 5 is another form of the invention in which the button engaging portion is non-elastic, non-metallic substance;

Figure 6 is another modification of the invention in which the elastic button loop extends from a central portion of the lower bar of the slide;

Figure 7 is a side sectional view taken along the line 7—7 of that form of the invention shown in Figure 6, illustrating the method of looping the suspender webbing through the slide in order to bring the lower bar at the front of the webbing;

Figure 8 is a perspective view of the slide shown in Figure 6;

Figure 9 is a front elevation partly in section of another modification of the invention;

Figure 10 is a perspective view of the slide shown in Figure 9;

Figure 11 is a section taken along the line 11—11 of Figure 9; and

Figure 12 is a perspective view of the cord elastic indicating its structure.

Referring now in detail to the several figures and first adverting to that form of the invention shown in Figs. 1, 2, and 3, the numeral 1 represents a three-bar metallic slide which may be of any desired construction, it being understood that where the term slide is used throughout the specification and claims it is to be regarded as sufficiently comprehensive to include any member having a sliding function upon the suspender web or shoulder strap, whether or not it functions also as a buckle. It is here shown as of sheet metal pressed into slightly channeled cross section insofar as the top, middle and side bars are concerned, but having the lower bar 2 deeply channeled for the reception of the cord elastic 3. The lower bar is provided with struck-over lugs 4 which may be bent over the cord elastic after the latter has been seated in the channeled lower member, holding the cord in place. It is contemplated that the cord will not be held fixed by the lugs 4, but shall be mobile with respect to said lugs when the cord is stretched. The elastic cord contemplated by the present invention consists as shown in Figure 12, of a plurality of rubber strands 10 covered while under tension so as to have a substantially circular cross section.

The elastic cord on the outside of the slide 1 is looped so as to form a button loop 5, the free ends 6 and 7 of the cord being brought together under a metallic clamp 8 which secures said free ends against slipping and also embraces the opposite side 9 of the cord constricting it into a substantially single shank or stem.

The unitary metallic slide and elastic button loop may be attached to the webbing 11 of the shoulder strap or suspender in the manner indicated in Figure 2, the webbing being brought back of the top bar, between the top and middle bars and beneath the lower bar, then upwardly along the rear of the lower bar, then passed between the lower bar and the middle bar around the front of the latter and then to the back of the middle bar the free end of the webbing extending downwardly from this point, behind the slide. It will thus appear that the portion 12 of the cord elastic which lies within the channel of the lower bar is concealed within the fold of the suspender webbing.

In use, the loop 5 engages a button secured to an inelastic portion of the overall, the cord elastic being thus put under tension. Although the portion of the elastic button loop which depends below the slide is relatively short, ample elasticity is provided by the portion 12 of the elastic cord which lies within the channel of the lower bar 2, and which adds its quota of expansive and contractive capacity to that of the entire elastic portion of the button loop.

The use of the cord elastic in place of elastic webbing also has the advantage of prolonging the life of the rubber since the cord elastic by virtue of the shape of its cross section, makes line contact with the body of the wearer and therefore absorbs the minimum of moisture from clothing wet with perspiration. Where woven elastic webbing is used every mesh in the webbing forms a capillary pore and greedily absorbs the perspiration resulting in quick deterioration and rotting of the rubber.

That part of the cord elastic which is enclosed in the channel of the lower bar 2 is kept from contact with the suspender webbing on one side by the metal of the lower bar, and on the other side by the lugs 4 so that even though the suspender webbing becomes wet, the cord elastic will remain relatively dry.

Figure 4 shows a form of the invention which differs from the form described in connection with Figures 1, 2, and 3, only in the fact that the button engaging loop 13 is made of metal and preferably integral with the clamp 14. The cord elastic 3 including the portion 12 which lies in the channel of the lower bar 2 terminates at the points 15 and 16 within the clamp 14.

Still another slightly modified form of the invention is shown in Figure 5, the button engaging loop 17 not being integral either with the cord elastic 3 or the clamp 8. Said button loop may therefore be made of any desirable material, for example an inelastic cord, or of metal or cellulose construction.

Figure 6 shows a modification of the invention which is made possible by varying the inter-folding of the suspender webbing 11 with respect to the slide. In this form, the webbing is brought downwardly at the back of the top and middle bars, passed beneath the middle bar and upwardly in front of the middle bar, between the middle and top bar, back of, and above the top bar, then downwardly in front of both the top and middle bars through the space between the middle and lower bars and downwardly back of the lower bar. This puts the lower bar of the slide in front of the webbing instead of its being surrounded by the webbing as in the first described form of the invention. The lower bar which in this instance is designated by the reference character 18 is of deep channeled construction and has a hole 19 in the middle of the lower side of the channel. The cord elastic 3 is formed into a button engaging loop 5, the two sides of the cord elastic being pressed together by a clamp 8 and the end portions of the cord elastic passed through the hole 19 in the lower bar 18 and disposed in opposite directions in the channel of said lower bar. Said bar is provided near its ends with lugs 20 and 21 which are struck up against the end portions of the elastic cord with sufficient pressure to hold the cord in place. That part of the cord within the channel and between the lugs 20 forms an elastic continuation of the button loop.

Referring now to Figures 9, 10, and 11, still another modification of the invention is shown in which the three-part slide is formed of wire and comprises a rectangular frame 22 having the side elements thereof bridged by a middle bar 23 unitarily secured in known manner to the side members of the frame. The free ends of the wire constituting the frame are preferably welded together at the point 24 which will be concealed in the completed device.

The cord elastic 3 is formed into a button loop 5 by means of a clamp 8 in the same manner as is indicated in Figure 6 and the free ends 25 and 26 are introduced from opposite sides into the ends of a clamp 27 which embraces the lower bar of the frame 22. The clamp is constricted against the ends of the cord elastic holding it in place.

In this form of the invention the suspender webbing will be folded with respect to the slide, as is indicated in Figure 11 in the same manner as shown in Figure 7.

It is obvious that I have devised a unitary metallic slide and elastic button loop which can be applied cheaply and conveniently to suspenders or the shoulder straps of overalls and it is to be understood that the details of construction as shown and described are merely exemplary and not to be construed as limiting the invention to those specific forms herein disclosed.

What I claim is:

1. Unitary metallic slide and elastic button loop comprising a metallic slide frame including a transverse bar, and a loop of cord elastic having an endless bight portion secured to said bar and suspending a button loop.

2. Unitary metallic slide and elastic loop construction comprising a metallic slide frame including a transverse cross bar providing a housing, and a loop of cord elastic having a bight portion received within said housing and retained thereby and suspending a button loop.

3. Unitary metallic slide and elastic loop construction comprising a metallic slide frame including a transverse channeled cross bar and a loop having a cord elastic suspending portion slidably arranged within said channel, means for retaining said part of said elastic portion within said channel and a button loop suspended from said loop.

4. Unitary metallic slide and elastic loop construction comprising a metallic slide frame including a transverse lower cross bar upwardly arched and channeled, and a loop having a cord elastic suspending portion freely seated within said channel and means for retaining said cord elastic within said channel the lower end of said loop having a button receiving portion.

5. Unitary metallic slide and elastic loop construction comprising a metallic slide frame, including a transverse cross bar having side flanges forming a channel, the lower flange being formed with an intermediate opening, and a loop having a cord elastic suspending portion having part thereof received within said channel and extending through the opening in said flange, and means for retaining said cord elastic within said channel the lower end of said loop having a button receiving portion.

6. Unitary metallic slide and elastic loop comprising a metallic slide frame, including a transverse cross bar having a channel, and a loop having a cord elastic suspending portion, part of which being retained within said channel and constituting a reservoir of elasticity augmenting the extent of stretch of the part of said elastic portion outside of said channel.

7. Unitary metallic slide and elastic button

loop comprising a metallic slide frame, including a transverse cross bar, having a channel, a loop having a cord elastic portion, part of which is seated in said channel, and a suspender web enfolded with respect to said slide frame so as to conceal the channeled cross bar and the part of the cord elastic seated therein.

8. Suspender or shoulder strap comprising a length of fabric in enfolded relation with a unitary metallic slide frame and an elastic loop, said elastic loop having a portion freely retained by said frame and concealed within said enfolded fabric and having an exposed portion forming a button loop.

9. Suspender or shoulder strap comprising a length of fabric in enfolded relation with a unitary metallic slide and elastic loop, said slide having a transverse cross bar, said elastic loop having a portion freely retained by said cross bar and concealed within said enfolded fabric, and having a portion forming a button loop.

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