Jan. 22, 1935. P. E. FENTON 1,988,890

STRAP SLIDE

Filed Feb. 7, 1934

Fig. 1.

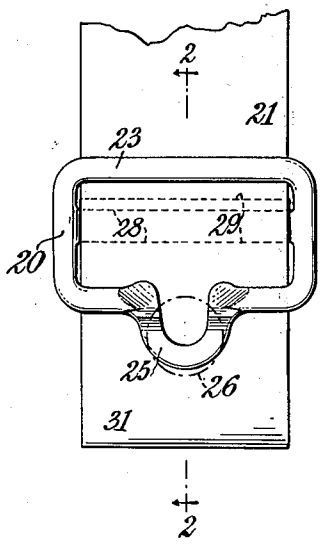


Fig. 2.

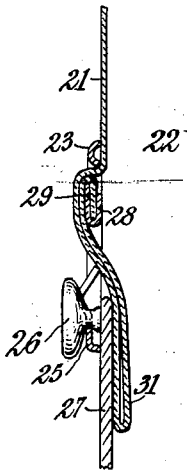


Fig. 3.

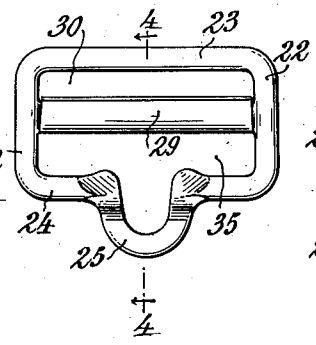


Fig. 4.

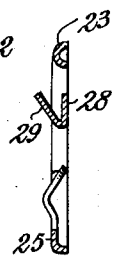


Fig. 8.

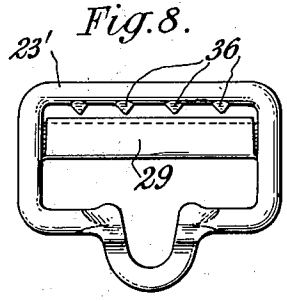


Fig. 5.

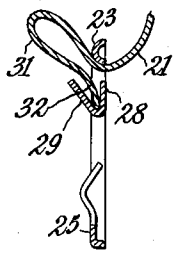


Fig. 7.

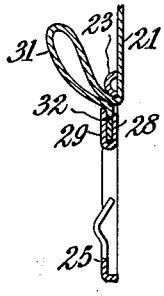


Fig. 6.

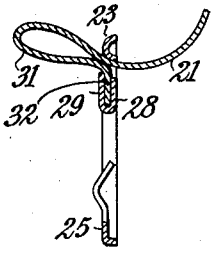


Fig. 9.

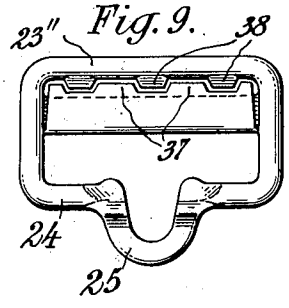
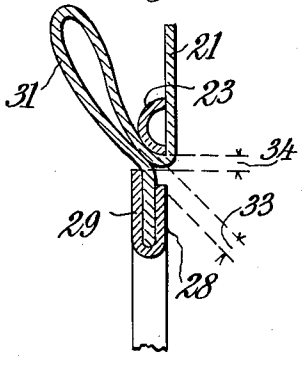


Fig. 10.



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STRAP SLIDE

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Application February 7, 1934, Serial No. 710,057

14 Claims. (Cl. 24—200)

This invention relates to improvements in strap-slides of the character of those commonly used in the making of suspenders for overalls and other garment supporters and fastening means.

It is an object of the invention to provide a slide which may be permanently secured to the end of a strap, yet quickly and readily adjusted to any desired position along the end portion of the strap.

In the drawing illustrating the preferred form and various modified forms of the invention,—

Figure 1 is a front view of a slide embodying the invention in assembled relation with the end portion of a strap.

Fig. 2 is a sectional view of the slide and strap illustrated in Fig. 1, the section being taken along the line 2—2 and viewed in the direction indicated by the arrows.

Fig. 3 is a front view of the slide illustrated in Figs. 1 and 2 prepared in readiness to be applied to a strap.

Fig. 4 is a sectional view of the slide illustrated in Fig. 3, the section being taken along the line 4—4 and viewed in the direction indicated by the arrows.

Fig. 5 is a cross-sectional view of a slide conforming with that illustrated in Fig. 4, the end portion of a strap being represented as having been passed through the upper opening of the slide and the end of the strap inserted in the channel between the central bar and an upturned portion adapted to serve as a clamping jaw.

Fig. 6 is a cross-sectional view of the slide and strap end represented in Fig. 5, the jaw being indicated as having been clamped against the end of the strap.

Fig. 7 is a view of the slide and strap end represented in Fig. 6, the portion of the strap at the right side of the slide being indicated as having been subjected to tension by a downward pulling of the slide such as would be experienced in use.

Fig. 8 is a front view of a modified form of slide having protuberances in the form of teeth extending from the lower margin of its upper cross-bar.

Fig. 9 is a front view of a modified form of slide having protuberances extending in alternation along the upper margin of its strap-securing jaw and the lower margin of the upper cross-bar.

Fig. 10 is a large-scale cross-sectional view through the upper and central cross-bars of the slide and the end portion of an attached strap.

In Figs. 1 to 4, inclusive, 20 represents a slide embodying the invention as secured to the end portion of a strap 21.

The slide, which may be stamped or otherwise formed from a single piece of metal, may comprise a pair of side bars 22, an upper bar 23, and a lower bar 24, a portion 25 of which may be of a form such as to serve as a button-loop into and from which a button 26 of a garment 27 may be readily inserted and removed as indicated in Fig. 2.

The slide may also be provided with an intermediate bar 28 having a strap-clamping jaw 29 preferably bent or extended forward from its lower margin and up in front of the bar 28.

The jaw 29 may be cut from the material of the slide below the intermediate bar 28, and the width of the jaw, the width of the intermediate bar 28 and the width of the space 30 between the bar 28 and the bar 23 should be so related that the jaw will be wider than the bar 28 and will partly close the space 30 when bent to its clamping position, as hereinafter described.

The width of the space between the upper margin of the bar 28 and the lower margin of the bar 23 of the slide should be such that the end portion of the strap 21 may be readily thrust through the space and doubled upon itself, as indicated at 31, to form a loop, after which the strap end 32 may be inserted in the channel between the bar 28 and the jaw 29 (see Fig. 5) and the jaw bent to the position indicated in Fig. 6 so as to firmly clamp the end of the strap to the slide.

The form of the slide should preferably be such that the upper end of the jaw 29 may be offset with respect to the lower margin of the bar 23, and the dimensions of the jaw should be such that the space between the most closely adjacent surface-portions of the jaw and the upper bar will be substantially equal to two thicknesses of the strap material, as indicated at 33 in Fig. 10, whereas the vertical distance between the upper margin of the jaw and the lower margin of the bar 23 will be materially less than a double thickness of strap material, as indicated at 34, Fig. 10.

With the parts of the slide apportioned as they have been described above, the jaw will cause the loop 31 of the strap 21 to be bent upwardly around the lower portion of the bar 23 so that, when a downward pull is exerted on the slide by the button of a garment in engagement with the button-loop and the strap is held from above, the strap will be drawn at a sharp angle around the lower margin of the bar 23 as indicated in Figs. 2, 7 and 10, so as to produce an effective bight adapted to oppose relative movement between the strap and the slide.

One manner of providing a relatively sharp angle at the rear under surface of the upper cross-bar 23 of the slide is to make the frame

of the slide of relatively thin metal bent to a curved form in cross-section, as is clearly indicated in all of the sectional views of the drawing.

If desired, the tractive effect between the strap and the slide may be increased by turning the loop 31 downward and by thrusting it from front to back through the space 35 between the jaw-supporting bar 28 and the bar 24 which includes the button-loop.

The making of the jaw 29 of a width greater than the bar 28 not only serves as a satisfactory means for partly closing the space 30 so as to provide the necessary tractive effect between the slide and the strap, but the removal of the material from which the jaw is formed from the part of the slide below the bar 28 results in the production of a relatively wide space 35 through which the loop 31 of the strap may be very quickly and easily thrust. The wide space 35 also provides ample room for the free insertion and withdrawal of the button into and from the button loop 25.

The space between the bar 28 and the bar 23 when the clamping jaw is in the position in which it is illustrated in Fig. 4 is sufficiently great to permit the end of the strap to be very readily inserted during the assembling of the strap with the slide, but the length of the jaw is such that when it has been clamped against the strap end, as indicated in Fig. 7, it will so contract the space between the jaw and the upper bar of the slide and will so bend the loop of the strap around the upper cross-bar as to provide a reasonably ample degree of tractive effect between the slide and the strap, even though the loop be not thrust through the lower space 35 between the jaw-supporting bar and the lower bar of the slide. It is therefore unnecessary to provide an amount of strap material such as will permit the loop to be thrust downwardly through the lower space of the slide. On the contrary, the loop may be left in the position in which it appears in Fig. 7, in which case an adjustment of the position of the slide on the strap may be very quickly and readily effected by relieving the slide from tension so that the strap may be bent downwardly to the position indicated in Fig. 6, after which the strap material may be drawn through the space between the jaw and the upper slide bar to a position such as will correspond with any desired adjustment. As soon as the slide is again suspended from the strap so as to bring the parts back to the relative positions indicated in Figs. 7 and 2, the garment-supporting traction will again be effective.

No attempt has been made to illustrate or describe the usual teeth or indentations such as would ordinarily be used along the upper marginal portion of the bar 28 or jaw 29, or both, to insure the attachment of the strap end to the intermediate bar, since such details of construction are well-known expedients of the prior art.

If desired, the tractive effect between the slide and the strap may be increased by providing either the upper margin of the jaw or the lower margin of the upper bar 23, or both, with teeth or protuberances of any suitable form adapted to be embedded in the adjacent portions of the strap and increase the frictional engagement between the strap and the slide.

In Fig. 8 is illustrated a modified form of slide having strap-engaging teeth 36 extending downwardly from the lower margin of the upper bar 23'.

In Fig. 9 the upper margin of the jaw and the lower margin of the bar 23'' are provided with alternately-disposed protuberances 37, 38, which would tend to slightly corrugate portions of the strap at the neck of the loop immediately in front of the upper cross-bar 23'' and prevent it from freely moving under the cross-bar.

It will be apparent from the foregoing description that a slide embodying the invention may be permanently attached to a strap and ready for use by merely passing the end portion of the strap once through an opening in the slide and clamping its end between two portions of the slide. If desired, it may be used in this manner without any further threading of strap material through openings in the slide. However, should it be deemed preferable to tuck the end of the loop 31 out of sight in back of the slide, this may very easily be effected in view of the relatively wide width of the space 35.

The invention is not intended to be limited to the forms in which it has been disclosed herein for purposes of illustration, but should be regarded as including other modifications and variations thereof within the scope of the appended claims.

What is claimed is:—

1. A one piece strap-slide comprising an upper cross-bar, a lower cross-bar spaced therefrom to an extent such as to leave an intervening slot of a width equal to more than twice the thickness of the strap material with which the slide is to be used and a strap-clamping jaw, cut from the material of the slide below the lower bar and bent up from its lower margin to a position such as to be offset with respect to the upper bar, the jaw being of a width greater than that of the lower bar to an extent such that when clamped against a strap end inserted between the lower bar and the jaw it will contract the space between said bars to a maximum clear width not greater than twice the thickness of the strap material with which the slide is to be used, so that, due to the offset relation between the jaw and the upper bar, the vertical distance between horizontal planes passing through any lower horizontal marginal portion of the bar and the opposed upper marginal portion of the jaw will be materially less than twice the thickness of the strap material.

2. A strap-slide, as defined by claim 1, of which the jaw is bent forward from the lower margin of the lower bar so as to extend up in front of said bar.

3. A strap-slide, as defined by claim 1, having a series of protuberances along the under margin of the upper bar.

4. A strap-slide, as defined by claim 1, having a series of protuberances along the upper margin of the jaw.

5. A strap-slide, as defined by claim 1, having protuberances disposed in alternation along the adjacent margins of the jaw and the upper bar.

6. The combination, with a slide like that defined by claim 1, of a strap having an end portion passed through the space between the bars and folded on itself to form a loop, and its end clamped between the lower bar and the jaw, the interengaging relation between the slide and the strap being such that the inner surfaces of the looped portion of the strap will be directly opposed to each other, so as not to be separated by any intervening part of the slide from the fold of the loop to its neck, where the end por-

tion is turned directly in between the jaw and the lower bar and the opposed portion passes through the slot between the jaw and the upper bar.

7. The combination, with a slide like that defined by claim 1, having its jaw bent forward so as to extend up in front of the lower bar, of a strap having its end portion passed through the space between the bars from back to front and folded on itself to form a loop, and its end turned back over the top of the jaw from front to back and clamped between the lower bar and the jaw.

8. The combination, with a slide like that defined by claim 1, of a strap having an end portion passed through the space between the bars and folded on itself to form a loop the inner surface portions of which are directly opposed to each other throughout without interference by any intervening structural element, and its end clamped between the lower bar and the jaw, the lower margin of the upper bar being provided with protuberances adapted to embed themselves in the adjacent strap material and increase the tractive effect between the strap and the slide.

9. The combination, with a slide like that defined by claim 1, of a strap having an end portion passed through the space between the bars and folded on itself to form a loop the inner surface portions of which are directly opposed to each other throughout without interference by any intervening structural element, and its end clamped between the lower bar and the jaw, the upper margin of the jaw being provided with protuberances adapted to embed themselves in the adjacent strap material and increase the tractive effect between the strap and the slide.

10. The combination, with a slide like that defined by claim 1, of a strap having an end portion passed through the space between the bars and folded on itself to form a loop the inner surface portions of which are directly opposed to each other throughout without interference by any intervening structural element, and its end clamped between the lower bar and the jaw, the opposed margins of the jaw and the upper bar being provided with alternating protuberances adapted to embed themselves in the adjacent strap material and increase the tractive effect of the strap and slide.

11. A strap-slide, as defined by claim 1, having a third cross-bar below and spaced from the jaw-supporting bar.

12. The combination, with a slide like that defined by claim 1, having a third cross-bar below and spaced from the jaw-supporting bar, of a strap having its end portion passed through the space between the jaw-supporting bar and the upper bar and folded on itself to form a loop, and its end clamped between the jaw-supporting bar and the jaw, the loop of the strap being bent downwardly and thrust through the opening between the jaw-supporting bar and the underlying cross-bar.

13. A strap-slide, as defined by claim 1, of which the jaw is bent forward from the lower margin of the lower bar so as to extend up in front of said bar, said slide having a third cross-bar below and spaced from the jaw-supporting bar.

14. The combination, with a slide like that defined by claim 1, having its jaw bent forward so as to extend up in front of the lower bar, and having a third cross-bar below and spaced from the jaw-supporting bar, of a strap having its end portion passed through the space between the upper bar and the jaw-supporting bar from back to front and folded on itself to form a loop, and its end clamped between the jaw-supporting bar and the jaw, the loop of the strap being bent down and thrust from front to back through the space between the jaw-supporting bar and the underlying cross-bar.

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