Nov. 29, 1932.

D. I. REITER

PRONGED FASTENER SLIDE

Filed Feb. 3, 1931

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

INVENTOR

Daniel I. Reiter

BY

Harry Johnson

ATTORNEY
This invention relates to fastener slides of the type designed to slide on a belt or strap, and adapted to be secured, by means of a snap fastener element such as a socket carried by the slide, at the desired position thereon, to determine the effective length of the belt or strap.

My invention contemplates the provision of a simple pronged and slotted slide carrying a snap fastener element, and adapted to be produced in large quantities at minimum cost, and through which the strap may be readily passed and secured, the slide carrying part of the strap being adapted to be secured in place by the insertion of a cooperating snap fastener element into the fastener element of the slide.

The various objects of my invention will be clear from the description which follows, and from the drawing, in which:

Fig. 1 is a front elevation of one form of my improved slide, showing the strap-holding teeth or prongs arranged on the outermost edges of the belt-receiving slots for holding the slide to the strap.

Fig. 2 is a sectional view of the same, showing the slide fixed in position on a belt or strap, and showing said slide engaged by the cooperating fastener element carried by another relatively stationary part.

Fig. 3 is a front view of another form of my improved slide showing the teeth or prongs formed from the material of the slide between the snap fastener element and the slots.

Figs. 4, 5, 6, 7, and 8 are similar views of other forms of my improved slide, showing various arrangements of the teeth or prongs thereon relatively to the strap slots.

Figs. 9 and 10 are similar views of other forms of slides, wherein the strap-receiving slot is T-shaped so that the strap may be inserted into the slot by movement in a direction longitudinally of the slot after it has first been creased or folded to enter the narrow portion.

In the practical embodiment of my invention illustrated in Figs. 1, 2 and 3 to 10 inclusive, the slide member is preferably made of a single piece of sheet metal provided with integral depending sides as 10, and a comparatively wide and preferably curved or convex slotted portion as 11 joining the sides. As illustrated, the strap-receiving slots are arranged transversely of the slide member and are preferably of generally rectangular outline, suitable strap-engaging teeth being provided on either of the transverse edges of either or both of the slots.

Arranged substantially centrally of the slotted portion 11 is the snap fastener element 12. As illustrated, said snap fastener element is preferably made in the form of a one-piece sheet metal socket, provided with an aperture as 13 at one end for the reception of a suitable stud as 14 carried by the strap or other part 15 to which the slide carrying part of the strap is to be adjustably and removably connected. The socket member 12 is provided with an annular wall as 16 surrounding the opening 13, and preferably semi-circular in cross-section to provide a groove or recess for the reception of the spring ring 17 or other suitable expansible and contractible fastener engaging element.

The diameter of said ring is such that it may expand into the groove or recess 18 on the passage of a stud through the opening 13 and on the consequent pressure put on the ring by the stud. Normally, however, in the absence of the stud, the spring ring contracts so that it slightly overhangs the edge of the aperture 13 and thereby engages and resists the entrance of the stud into the socket. The outermost diameter of the annular wall 16 is greater than the diameter of the aperture 19 in the slotted portion 11 of the slide member. A shoulder 24 is thereby formed at the upper end of the portion 16. Said shoulder, in its assembled position on the slide member, rests against the under face 20 of the portion 11 and forms with the part 22 a groove 23. To secure the socket 12 to the slide member, a preferably tubular flange or eyelet 21 extends from the shoulder 24. The outermost diameter of the flange before the socket has been attached to the slide member, is substantially the same as that of the aperture 10. The length of said flange is greater than the thickness of the
slide member. After said flange has been passed through the aperture, the peripheral portion 22 thereof, is spun, pressed or otherwise turned outwardly onto the uppermost surface of the portion 11 whereby the ring receiving wall 16 is permanently secured to the slide member with the shoulder 24 in firm contact with the under face 20, and that portion of the slide member surrounding the aperture 19 is retained permanently in the groove 23 between the portions 22 and 16.

As shown in Figs. 1 and 2, a plurality of comparatively closely spaced teeth 40 are formed on the outermost edges of the strap-receiving slots 41 and 42. Said teeth may be pressed or bent rearwardly at an angle to the front face as shown in Fig. 2, to better engage the strap 43 passed through said slots.

As shown in Fig. 3, the edges of the slots 50 and 51 may remain smooth or straight instead of serrated, and the teeth 52 may be formed of the material of the slotted portion 11 of the slide member by making suitable intersecting cuts 53 and 54 therein and then bending the material between the cuts rearwardly.

In Fig. 4, I have shown a pair of teeth 55 formed on the inner edge 56 of the slot 57. In this form of my improved slide, the strap is engaged by the teeth when the strap is tensioned in the proper direction, that is, by pulling the strap forward of the slot 57.

Similar spaced teeth 60 are shown on the edge of the slot 61 of the slide member illustrated in Fig. 5 whereby the engagement of the strap by the teeth is effected by pulling the strap in the opposite direction from that necessary with the form shown in Fig. 4.

As shown in Fig. 6, only one of the slots 62 is provided with the teeth 40, the other slot 65 being devoid of teeth or unserrated. In Fig. 7, the teeth 70 are arranged on the inner edges of the respective slots 71 and 72, and as shown in Fig. 8, the teeth 75 are arranged on the outermost edge 76 of the slot 77, while the teeth 78 are arranged on the inner edge 79 of the slot 80.

A T-slot 81, comprising the transverse slot 82, and the longitudinal slot 83, extending from the slot 82 to the outermost edge of the slide member, may be substituted for one or both of the strap-receiving slots previously described. In the form shown in Fig. 9, the teeth 84 are made on the inner edge of the slot 81. To insert the strap into the T-slot, the strap is folded double to reduce its width to a dimension substantially to twice the thickness of the strap, whereupon the strap portion may be inserted through the longitudinal slot 83 until it enters the transverse portion of the slot 82. When the strap is released, it automatically unfolds to its original width across the slot to be properly gripped by the teeth 84 on the proper tensioning of the strap.

In the form shown in Fig. 10, two T-slots 90 and 91 are provided, and in this form of my slide, the teeth may be entirely omitted or may, if desired, be provided on the outer edges of the slots as indicated.

It will be seen that I have provided a simple fastener slide designed to be adjusted in the desired position on the belt or strap, and designed to properly grip the strap to position the fastener element carried by the slide member at the proper point for engagement by a cooperating fastener element.

It will further be seen that my improved slide is well designed for economical manufacture in large quantities and that it meets the severe requirements of practical use, providing as it does, simple and effective means for fastening a socket in position in connection with a properly pronged slide member.

While I have shown and described certain specific embodiments of my invention, I do not wish to be understood as limiting myself thereto but intend to claim my invention as broadly as may be permitted by the state of the prior art and the scope of the appended claims.

I claim:

1. In a socket fastener slide, a slide member provided with opposed arcuate ends and with a central circular opening, and further provided with a substantially rectangular belt-receiving transverse slot between the opening and each of the ends, a flange depending from each of the edges of the slide member, a series of teeth projecting inwardly and downwardly from the outermost edge of each of the slots, and a socket member comprising an open-ended eyelet-like part with one end reduced and passed through said central opening and rolled down on top of the slide member and the other end beaded, and a spring ring yieldingly supported in said beaded end, said beaded end having a shoulder which shoulder comes into face to face contact with the slide member and serves to locate the relation of the socket to the slide and the spring to the beaded end.

2. In combination, a slide member having a central opening therein, arcuate ends on the slide member, arcuate edges on said member, a flange depending from each of said edges and integral with the remainder of the slide member, said slide member having a pair of substantially rectangular belt-receiving openings, each arranged transversely of the slide member between said arcuate edges and between the central opening and one of the arcuate ends, a snap fastener socket comprising a one-piece spring retainer formed of sheet metal, and having one end passed through the opening of, and flanged throughout its entire area on to one face of, the slide member, and engaging the periphery of the opening, the remainder of said retainer being bent first outwardly of the edge of the open-
ing into engagement with the other face of the slide member and then inwardly into substantially semi-circular cross-section, and thereby forming a groove of substantially the thickness of the slide member to receive the peripheral portion of the slide member surrounding the opening and to maintain the retainer permanently in position on the slide member against displacement therefrom, said semi-circular bent portion having an aperture in the end thereof arranged coaxially of the opening in the slide member for the passage of a stud, and a resilient ring arranged in the semi-circular portion, and adapted to expand therein to permit the passage of a stud therepast, and to contract to removably maintain the stud in the socket after its passage through the aperture, and teeth projecting inwardly and downwardly from the outermost edge of each of said transverse slots and toward each other to engage a belt passed through said slots and tensioned.

3. In a socket fastener slide, a slide member provided with opposed arcuate ends and with a central circular opening midway between said ends, and further provided with a substantially rectangular belt-receiving transverse slot between the opening and each of said ends, a flange depending from each of the edges of the slide member, a series of teeth projecting downwardly from one of the edges of at least one of the slots, and a one-piece socket member open at both ends thereof and passed through the opening and flanged at one end on to one face of the slide member, and beaded at its other end, and a spring ring yieldingly supported in said beaded end and inwardly overhanging the opening in said end to engage a stud passed into the socket member.

DANIEL I. REITER.