March 26, 1929. L. N. HAYDEN 1,707,189

FASTENER

Filed Nov. 18, 1924

Fig. 1.

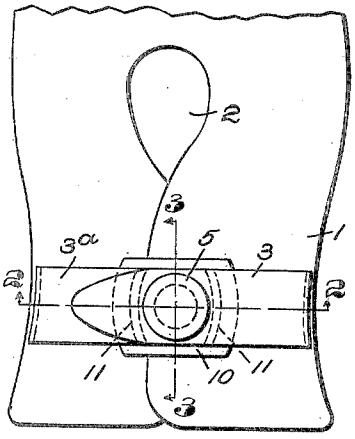


Fig. 2.

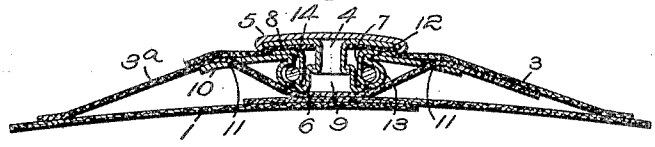


Fig. 4.

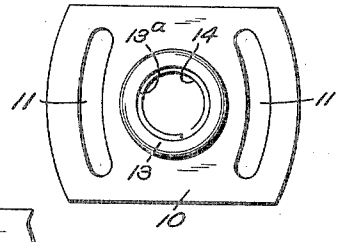


Fig. 6.

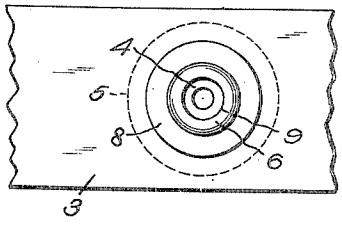


Fig. 3.

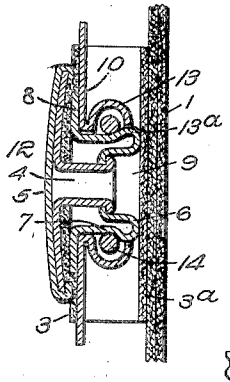


Fig. 5.

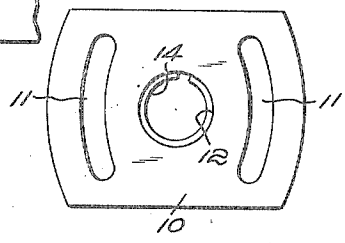


Fig. 7.

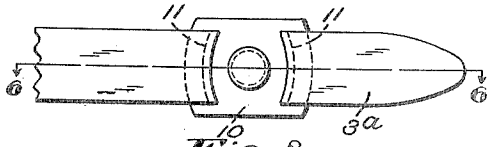
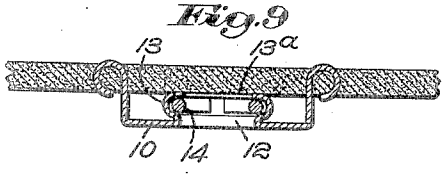


Fig. 8.



Fig. 9



Inventor:
Lester N. Hayden,
by Emery Booth Janney & Varney
Attys.

Patented Mar. 26, 1929. 1,707,189

UNITED STATES PATENT OFFICE.

LESTER N. HAYDEN, OF ARLINGTON, MASSACHUSETTS, ASSIGNOR TO CARR FASTENER COMPANY, OF CAMBRIDGE, MASSACHUSETTS, A CORPORATION OF MAINE.

FASTENER.

Application filed November 18, 1924. Serial No. 750,593.

This invention aims to provide an improved separable fastener.

In the drawings, which illustrate two preferred embodiments of my invention:—

Figure 1 is an elevation of the fastener in use with a glove, part of the glove lining being broken away.

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 is an elevation of one side of the preferred form of socket;

Fig. 5 is an elevation of the opposite side of the socket shown in Fig. 4;

Fig. 6 is an elevation of the stud;

Fig. 7 is an elevation of the second form of stud;

Fig. 8 is a section on the line 8—8 of Fig. 7; and

Fig. 9 is a sectional view of a second form of socket showing the casing secured to a flexible fabric by a plurality of attaching prongs.

Referring to the drawings, I have shown a snap fastener particularly, though not exclusively, useful in adjustably securing together the ends of a strap or straps. One part of the fastener may be secured in a fixed relation to one end of the strap or belt and the cooperating part may be slidable relative to the other end, thereby to permit adjustment of the strap or belt.

In the preferred form of my invention illustrated in Figs. 1 through 6, I have shown a snap fastener as applied to a glove having straps secured to the wrist portion of the glove. As illustrated in Figs. 1, 2 and 3, I have shown a portion of a glove 1 having a placket 2 at the wrist portion, and a pair of straps 3 and 3ª sewn or otherwise secured to the glove.

The stud member of the snap fastener is secured to the under side of the strap 3 by a rivet 4 which extends from a cap member 5 located at the upper side of the strap. The stud is pressed from a single piece of metal and has a ringlike head 6, a neck 7, a base portion 8 and a central depression 9. The central depression is located in the head 6 of the stud and presents an aperture through which the rivet 4 passes for securing the stud to the strap.

The socket casing (Figs. 4 and 5) is pressed from a single piece of metal and presents an attaching portion which comprises a slightly curved base plate 10 having strap-receiving slots 11, 11 located at each side of a central stud-receiving aperture 12.

It is important to have at least one of the slots 11, 11 curved, as illustrated, so that when the strap 3ª is passed through the slots, the curved walls thereof will provide a greater sliding friction between the socket and the strap, thereby maintaining the socket in position better than if straight slots were used. The casing includes a U-shaped spring-retaining portion 13 formed from the metal pressed out of the base plate 10, and it extends therefrom and surrounds the aperture 12 for positioning a spring 14 so as to intersect the stud-receiving aperture 12. The spring 14 also intersects an aperture 13ª presented by the casing 13 and located opposite the aperture 12. The socket is secured to the strap 4 by threading the strap downwardly through one slot 11 and then across the end of the casing 13 and upwardly through the other slot 11. Thus the socket is secured to the strap and can be shifted relative thereto by holding the strap and exerting an abnormal strain on the socket.

When the stud and socket are engaged, the head of the stud passes through the stud-receiving aperture 12 and the spring 14 engages the neck of the stud to maintain engagement of the stud and socket. When thus engaged, the placket in the glove is closed so that the glove fits tightly about the wrist of the wearer and the strap 3ª forms a cushion between the metal parts of the fastener and the glove. Thus it will be seen that the socket may be adjusted so that it will align with the stud for engagement therewith to suit the wearer of the glove, belt or other article to which the fastener may be applied. The strap may be tightened even after the stud and socket are engaged, thus insuring a snug fit about the wrist of the wearer of the glove.

Referring now to the second form of my invention, illustrated in Figs. 7 and 8, I have shown a stud which may be attached to a strap in substantially the same manner as the socket referred to in the first form of my invention.

The stud is pressed from the curved plate portion 10, as illustrated, and the strap passes through the slots 11, 11 so as to leave the head and neck portion of the stud free to engage the socket (not shown) which in this instance would be fixed relative to its carrying strap.

For some purposes the socket may be attached to other carrying mediums than straps. I have shown in Fig. 9 of the drawings a socket similar to those shown in the other figures in that it provides a one-piece casing having a base or attaching portion and a tubular projection therefrom forming a spring casing, the walls of the preferably tubularly projection being generally U-shaped in cross-section so that the lip (surrounding the aperture 12) between the base and the adjacent portion of the spring casing will retain the spring at one side while the opposite end of the preferably tubular projection retains the spring at the opposite side. Where, as in the preferred forms of my invention illustrated, the apertures 12 and 13ª are both slightly smaller than the spring 14, so that the latter will slightly intersect both apertures, the stud may be entered from either side of the casing.

While I have shown and described two preferred embodiments of my invention, it will be understood that changes involving omission, substitution, alteration and reversal of parts, and even changes in the mode of operation, may be made without departing from the scope of my invention, which is best defined in the following claims.

I claim:

1. A separable fastener comprising, in combination, a stud member secured to one end of a strap and a socket member secured to the other end of the strap, one of said members fixed relative to the strap and the other member slidable relative to the strap to permit engagement of said socket member with said stud member and to vary the length of the strap between the stud member and the socket member, the slidable member provided with generally curved slots to permit sliding movement relative to the strap while providing frictional means for holding the slidable member in position, and an annular spring-containing casing presented by the socket member for receiving the stud, said casing being U-shaped in cross-section.

2. A slidable fastener socket having a base portion, annular casing means extending from the base portion and surrounding a stud-receiving aperture, a spring retained in said annular casing, means for receiving a stud and generally curved strap-receiving slots located at opposite sides of the annular casing means and the edges of the curved slots adapted to have frictional contact with a strap thereby to hold the socket in a predetermined adjusted position relative to a strap when attached thereto.

In testimony whereof, I have signed my name to this specification.

LESTER N. HAYDEN.