F. A. NEIDER.

SNAP FASTENER.

APPLICATION FILED APR. 30, 1917.

1,243,859. Patented Oct. 23, 1917.

Fig. 1.

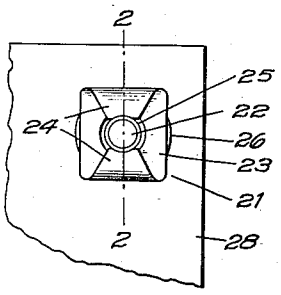


Fig. 2.

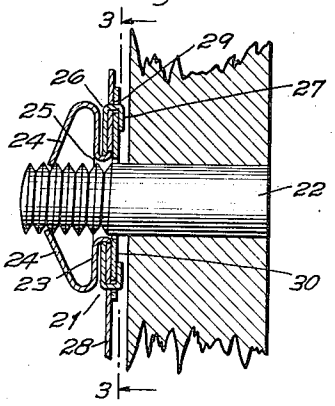


Fig. 3.

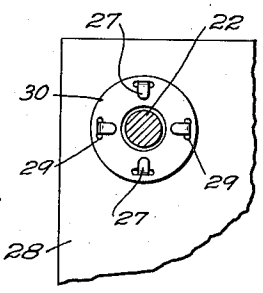


Fig. 4.

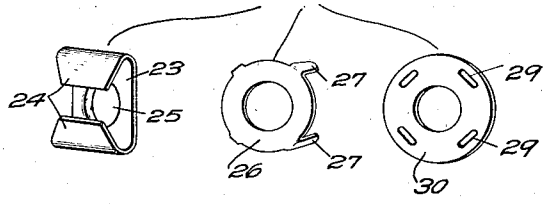


Fig. 5.

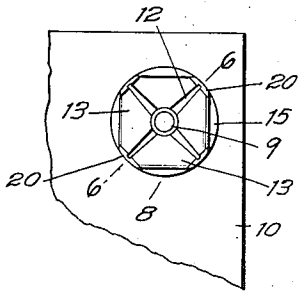


Fig. 6.

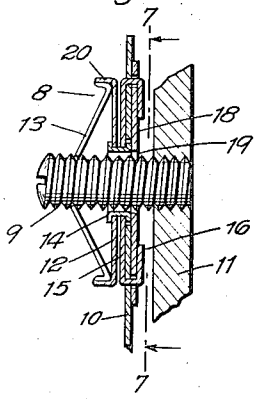
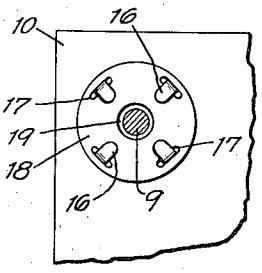


Fig. 7



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SNAP-FASTENER.

1,243,859. Specification of Letters Patent. Patented Oct. 23, 1917.

Application filed April 30, 1917. Serial No. 165,353.

To all whom it may concern:

Be it known that I, FRED A. NEIDER, a citizen of the United States of America, and resident of Augusta, in the county of Bracken and State of Kentucky, have invented a new and useful Improvement in Snap-Fasteners, of which the following is a specification.

An object of my invention is to produce an improved snap fastener adapted for use in fastening vehicle curtains, gloves, dresses, etc.

A further object is to produce a snap fastener which may be fastened by a single pushing movement upon the socket of the fastener, but which requires a movement of a different character to effect its unfastening.

A further object is to produce a snap fastener adapted to be manufactured from sheet metal and not requiring the use of any expensive metal drawing dies.

These and other objects are attained in the snap fastener described in the following specification and illustrated in the accompanying drawings, in which:

Figure 1 is a front elevation of a fastener embodying my invention.

Fig. 2 is an enlarged sectional view of the fastener embodying my invention taken on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken upon the line 3—3 of Fig. 2 and upon a reduced scale.

Fig. 4 is a composite perspective view of the elements of the socket of my improved fastener.

Fig. 5 is a front elevation of the preferred form of my improved fastener.

Fig. 6 is an enlarged sectional view taken on the line 6—6 of Fig. 5.

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6 and upon a reduced scale.

The preferred form of my improved fastener illustrated in Figs. 5 to 7 inclusive consists of a socket 8 adapted to be mounted upon the stud 9. Socket 8 is attached, in the case of a vehicle curtain which is illustrated in the drawings as an example, to the curtain cloth 10. The stud 9 with which socket 8 coöperates is secured to some relatively stationary portion of the vehicle body. Stud 9 preferably consists of a screw threaded member such as illustrated in Figs. 2 and 6, although the socket of my improved fastener is adapted to grip the walls of a smooth stud efficiently.

The socket of my improved fastener, illustrated in the preferred form disclosed in Figs. 5 and 6, consists of a clip 12 having an aperture centrally located therein and having a series of spring fingers 13 extending therefrom. Located in the aperture of clip 12 is an eyelet 14, the upper end of which is flanged to retain clip 12 thereon, and the inner end of which is flanged to retain a pronged plate 15 thereon. Either clip 12 or plate 15 or both are rotatively mounted upon eyelet 14 so that they may rotate relatively to one another. Prongs 16 of plate 15 are adapted to pass through the curtain material 10 and through slots 17 in a backing disk 18 which is placed against the back of the curtain material to reinforce it. This disk is provided with a centrally located aperture 19 which registers with the aperture of eyelet 14 so as to permit passage therethrough of stud 9. The disk is held in position upon the curtain by having the prongs 16 of plate 15 bent into engagement therewith as disclosed in Figs. 6 and 7. Clip 12 is formed of a square sheet of metal by having the corners of the sheet turned over to positions such that their edges coöperate and lie upon the central or body portion of the sheet. The corners 20 of the folded member thus formed are then turned up as disclosed in Figs. 5 and 6 to form lugs for engagement with the operator's fingers so that clip 12 may be rotated with relation to the plate 15. The points of the corners originally turned over to form spring fingers 13, are then cut off to leave an opening between the lugs materially smaller than the diameter of stud 9. After eyelet 14 has been formed to retain plate 15 and clip 12 in rotative connection with one another, and after the socket has been secured to the curtain 10 as previously described, it may be secured to the stud by pressing it upon the stud until fingers 13 spring to the positions disclosed in Fig. 6, in which positions they grip the screw threads of the stud and prevent removal of the socket in the same manner in which it was placed thereon. In order to remove the socket it is then necessary to grasp lugs 20 and rotate clip 12 upon the

screw threads until the fingers 13 have become disengaged from the end of the stud, at which time the curtain is unfastened and ready for removal.

The modified form of my improved snap fastener and which is illustrated in Figs. 1 to 4 inclusive, consists of a socket 21 adapted to be mounted upon a screw threaded stud 22, the stud being substantially identical with stud 9 of the preferred form of my invention.

Socket 21 consists of a plate 23 having its ends 24 bent over toward one another and into substantially parallel relation with the body portion of plate 23. The aperture 25 is formed in plate 23 and the ends 24 are bent with relation to the aperture so that the space between the ends is materially less than the diameter of the aperture and of the stud, so that when the socket is passed over the stud, ends 24 may act as spring fingers to retain the socket in position in the same manner that fingers 13 of my preferred form retain the socket 8 in position on stud 9. Back of clip 23 a plate 26 is located, this plate having prongs 27 like prongs 16 of plate 15, which are adapted to be passed through the curtain material 28 and through slots 29 in a reinforcing disk 30 located against the back of the curtain material. To secure plate 26 upon clip 23 the inner edge of aperture 25 is flanged and turned over the inner edge of an aperture formed in plate 26 so that clip 23 is rotatively mounted with relation to plate 26. Thus when the socket 21 of the modified form of my improved construction is passed over stud 22, spring fingers 24 engage the screw threads of the stud and grip them to prevent displacement of the socket. To remove the socket it is necessary to rotate clip 23 in order to disengage its fingers 24 from the end of the screw threads of the stud.

In the illustrated embodiment of my invention I have shown sockets having but two and four spring fingers, but it would not be a departure from the spirit and scope of my invention to vary the number of fingers.

My improved snap fastener is adapted to be used in the fastening of gloves, dresses and the like, but it is particularly adapted for use in fastening vehicle curtains for the reason that it is quick in its application and positively holds the curtain against displacement even though in one's haste the spring fingers have been brought into engagement with but one screw thread of the stud. In cases of sudden storms the wind could not possibly displace the socket from the stud since an entirely different movement from that given the socket by the wind is necessary to displace it.

My improved fastener when used upon gloves and clothing will prevent disengagement of the fastener elements through any accidental catching of the garment or other strains brought to bear upon it, it being necessary to unscrew the socket from the stud before the fastener could be released. In its use for gloves and other garments the fastener construction would be modified materially to avoid the catching thereof in its spring fingers and other portions.

Having thus described my invention, what I claim is;

1. A snap fastener consisting of a stud and a socket adapted to receive the stud, said stud having screw threads formed thereon, said socket consisting of a plate having an aperture therein adapted to receive the stud and a series of springs extending from the edges of the plate toward the aperture and having their ends spaced apart a distance less than the diameter of the stud, and means adapted to mount the plate rotatively upon an article to be fastened, whereby when the socket is pushed over the stud, the springs will yield to permit the passage of the screw threaded end of the stud between their ends and whereby the gripping engagement of the springs with the screw threads will prevent removal of the socket from the stud except by rotation thereof to disengage its springs from the screw threads.

2. A snap fastener consisting of a socket and a stud adapted to receive the socket, said socket consisting of a plate having an aperture formed therein adapted to receive the stud, springs located on the plate and having their stud engaging ends extending toward one another and adapted to yield to permit passage of the plate over the stud when moved in one direction and to grip the stud in the opposite direction, and means adapted to mount the plate rotatively upon the article to be fastened, whereby the socket must be rotated to disengage the springs from the stud.

3. A snap fastener consisting of a socket and a stud, said socket consisting of a plate having a centrally located aperture adapted to receive the stud and having its edges bent toward one another to provide a series of springs adapted to engage the stud when the plate is moved in one direction over the stud and to prevent removal of the plate from the stud in the opposite direction, and means adapted to mount the plate rotatively upon the article to be fastened, whereby said plate will have to be rotated to disengage its springs from the stud.

4. A snap fastener consisting of a socket and a stud, said socket consisting of a plate rotatively mounted upon the article to be fastened and having an aperture adapted to receive the stud, the corners of the plate being bent toward one another to form springs and to bring their ends into position over the aperture of the plate, whereby

corners are formed at the points of bending between the springs and the remainder of the plate, said second mentioned corners being adapted to be bent to form lugs whereby the plate may be rotated, said springs being adapted to yield to permit the socket to be pushed over the stud when moved in one direction and to prevent removal of the socket from the stud in the opposite direction, whereby the lugs may be utilized to rotate the plate to disengage its springs from the stud.

In testimony whereof, I have hereunto subscribed my name this 27th day of April, 1917.

FRED A. NEIDER.

Witnesses:
WALTER F. MURRAY,
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