Jan. 26, 1932. M. F. CARR 1,842,386

SEPARABLE FASTENER

Filed Jan. 18, 1930

Fig. 1.

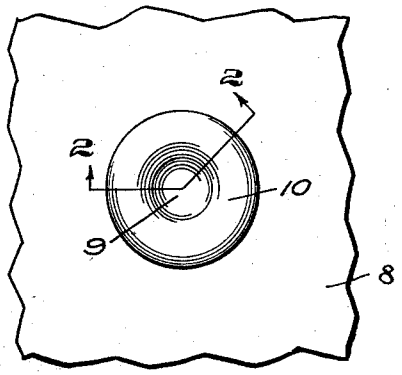


Fig. 2.

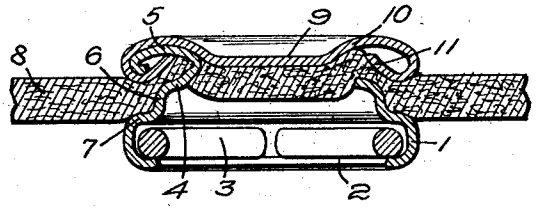


Fig. 3.

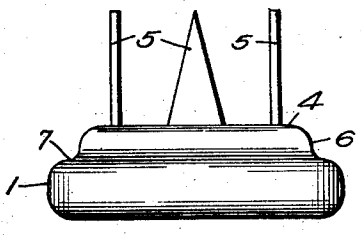
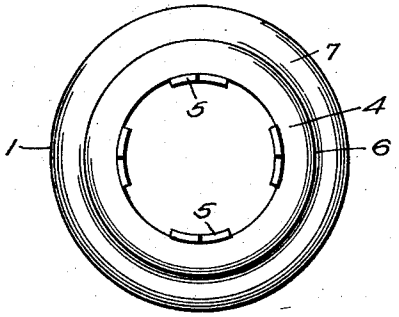


Fig. 4.



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UNITED STATES PATENT OFFICE

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SEPARABLE FASTENER

Application filed January 18, 1930. Serial No. 421,757.

My invention aims to provide improvements in fasteners and fastener installations.

In the drawings which illustrate a preferred embodiment of my invention:—

Figure 1 is an elevation view of a preferred form of fastener installation;

Fig. 2 is an enlarged section taken on the line 2—2 of Figure 1;

Fig. 3 is a side elevation of a socket member prior to attachment to a support; and

Fig. 4 is a plan view of the socket member shown in Fig. 3.

Referring to the embodiment of my invention selected for illustration by the drawings, I have shown a snap fastener socket secured to a flexible carrying medium by a novel, efficient and durable construction and arrangement of elements. It should be understood that any type of snap fastener element, button or like member may be attached in the same manner and, therefore, that my invention is not limited to the socket structure shown and hereinafter described.

The socket illustrated has a one-piece casing 1 pressed from sheet metal and having a stud-receiving aperture 2 intersected by an annular split-ring spring 3. The casing 1 is generally cup-shaped and has a base 4 which has the greater portion thereof pressed out to provide a number of attaching prongs 5 spaced inwardly from the edge of the base so that there is an annular carrying medium engaging portion of the base located outside of the circle of prongs 5, as shown in Figs. 2 and 4.

From the peripheral edge of the base 4 the metal curves downwardly to provide a wall 6 and then outwardly again to provide a ledge 7 substantially parallel with the base 4. The entire outer surface of the base 4, wall 6 and ledge 7 provides a support-engaging surface which does not present any sharp corners to the medium to which the socket is to be attached.

The attaching prongs 5 are pointed and therefore may easily penetrate the carrying medium 8 and engage the cap or attaching part located at the opposite side of the carrying medium, as shown in Fig. 1. This cap or attaching part is pressed from a single piece of metal and has a central depressed portion 9 providing an annular anvil portion 10 generally curved in cross-section. The peripheral portion of the attaching part is curved and the edge is turned underneath to provide a flange 11 extending inwardly and upwardly toward the anvil wall 10, as clearly shown in Fig. 2.

When the parts of the installation are secured together the prongs 5 are forced through the carrying medium 8 and against the anvil portion 10 which turns them outwardly and downwardly as shown in Fig. 2. Thus the carrying medium is gripped between two surfaces which do not present any abrupt or sharp angles opposite each other to cut the material when the parts are clamped between setting dies.

The cap has been made approximately the same diameter as the casing 1, rather than larger in diameter than the casing so that the leverage exerted upon the ends of the prongs 5, by an upward pull on the carrying medium 8, will be reduced to a minimum.

The result of my invention is an attachment for fastening devices which reduces to a minimum the possibility of cutting or tearing the material either during or after the attachment and a reduction in the possibility of an upward strain bending the prongs to loosen the attachment.

The entire installation is reduced to a minimum number of parts and minimum thickness. Furthermore the parts are so simple as to require a smaller number of operations in manufacturing and assembling while increasing the efficiency over other well-known types of fastening elements and fastener installations.

While I have illustrated and described a preferred embodiment of my invention, I do not wish to be limited thereby, because the scope of my invention is best defined by the following claim.

I claim:

A fastener installation comprising, in combination, a fastening member having a one-piece sheet metal part, a number of attaching prongs extending therefrom through a carrying medium, thereby leaving the carrying

medium imperforate except where the prongs pass through an annular carrying medium engaging surface extending outwardly, downwardly and then outwardly again from adjacent to said prongs, said annular carrying medium engaging surface presenting smoothly rounded curved surfaces at the bends, and a one-piece attaching plate located at the opposite side of the carrying medium, said attaching plate having prong turning and clenching means receiving and upsetting the said prongs to secure the parts of the installation together.

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

MOSES F. CARR.