Aug. 23, 1932. M. F. CARR 1,873,870

FASTENER SOCKET

Filed Dec. 30, 1929

Fig. 1.

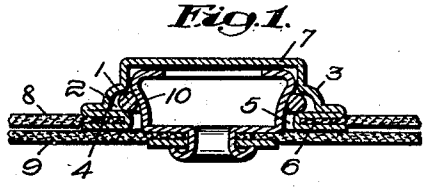


Fig. 2.

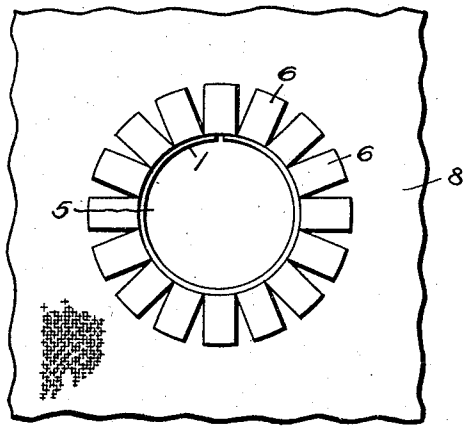


Fig. 3.

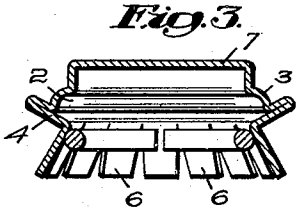


Fig. 4.

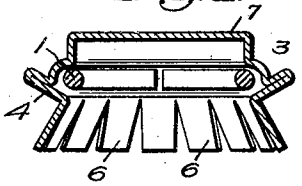
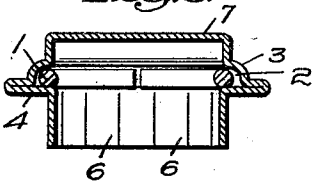


Fig. 5.



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UNITED STATES PATENT OFFICE

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FASTENER SOCKET

Application filed December 30, 1929. Serial No. 417,310.

My invention aims to provide improvements in sockets, socket installations for such fasteners and the method of assembling the spring member in the socket.

In the drawing, which illustrates a preferred embodiment of my invention:—

Figure 1 is a section through a complete snap fastener installation embodying my invention;

Fig. 2 is a plan view of the socket installation as viewed from the side at which the stud enters; and

Figs. 3, 4 and 5 illustrate the manner in which the spring is assembled with the casing of the socket.

Referring to the particular embodiment of my invention illustrated by the drawing, I have shown a socket of the same general type as that illustrated and described in United States Letters Patent No. 1,070,113.

My invention is an improvement as to assembly of the parts, attachment to the carrying medium and formation of the casing without in any way affecting the advantages of the type of fastener disclosed in the above mentioned patent.

The socket which I have selected for illustration of my invention comprises a casing part pressed from a single piece of sheet metal and a spring member 1. The spring member may be of any desired form, but I prefer a split ring-like type made of wire.

The casing part has an internal groove 2 in which the spring is located and in which it is free to expand and contract. This groove 2 is formed by means of a curved wall 3 and a flange 4. The flange 4 is of substantial width and surrounds a stud-receiving aperture 5 in the casing and has attaching means in the form of a series of closely arranged fingers 6 extending from its inner edge. Extending from the curved wall 3 in the opposite direction from the fingers 6 is a cup-shaped portion 7 preferably having a closed bottom, as shown in Fig. 5.

So far I have merely attempted to enumerate the elements of my socket device and I now proceed to describe the features which constitute my invention. Referring to Figs. 3, 4 and 5, which illustrate the method of assembling the spring 1 with the casing, it will be noted that the flange 4 of the casing is first formed to lie in a plane at an angle to a plane which is normal to the axis of the casing, as shown in Fig. 3. Therefore, the stud-receiving aperture 5 is somewhat larger in diameter than when the socket assembly is complete, as shown in Fig. 5. While not essential, the normal diameter of the spring 1 is slightly larger than the enlarged diameter of the stud-receiving aperture (Fig. 3) and, therefore, the spring must be contracted to force it past the edge of the flange 4 as the spring is forced to the position shown in Fig. 4. Thereafter the flange 4 is flattened to a plane normal to the axis of the casing and the stud-receiving aperture 5 assumes its normal diameter, whereby the spring is held in place and cannot be accidentally removed.

By the above described method of assembling the spring with the casing, I can produce a socket which is closed at one side and which has the attaching means extending from the open side of the casing, the casing and attaching means being formed from a single piece of sheet metal.

In assembling the socket to a carrying meduim 8 (Figs. 1 and 2), I first provide a hole in the carrying medium and then the attaching fingers 6 are passed through the hole and their ends bent outwardly against the carrying medium. Thus, the casing is located at that side of the carrying medium 8 opposite the side from which the stud enters and the carrying medium is gripped firmly between the outwardly bent fingers 6 and the flange 4.

With the installation shown in the patent referred to above the carrying medium for the stud is spaced from the carrying medium for the socket, whereas with my installation the improved socket permits the carrying medium 8, for the socket, to lie close to the carrying medium 9, for the stud 8 (Fig. 1), when the snap fastener members are engaged.

My improved socket installation is simple, durable and requires fewer parts than any other socket of its type heretofore known to me.

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 claims.

1. A snap fastener socket comprising, in combination, a casing having means providing an annular internal groove adjacent to a stud-receiving aperture, a spring member assembled in said groove and intersecting the said stud-receiving aperture, and bendable attaching means normally extending from the means providing the annular internal groove parallel with the axis of the socket, said attaching means being located adjacent to the stud-receiving aperture and extending from that side of the casing adjacent to where a stud is adapted to enter the stud-receiving aperture and being adapted to be bent outwardly to engage a carrying medium and press it against a portion of the means providing the groove for the spring member thereby together forming the only means for securing the casing to the carrying medium.

2. A snap fastener socket comprising, in combination, a casing formed from a single piece of metal and having a stud-receiving aperture, cooperating continuous walls forming a spring-receiving groove adjacent to the stud-receiving aperture, a series of independently bendable attaching fingers extending from one of said walls and parallel to the axis of the socket prior to attachment of the socket to a support and adjacent to that side of the socket where the stud-receiving aperture is located and a spring member assembled within the groove of said casing.

3. A snap fastener socket comprising, in combination, a one-piece casing having continuous uninterrupted means providing an annular groove adjacent to a stud-receiving aperture in the casing, flange material extending integrally from the means providing the annular groove and doubled upon itself to provide a support-engaging surface, attaching means extending from the casing adjacent to the stud-receiving aperture at that side adjacent to where the stud enters and generally parallel with the axis of the socket prior to attachment to a supporting structure, said attaching means being adapted to be bent outwardly to clamp the supporting structure between the attaching means and the support-engaging surface provided by the laterally extending flange means and a spring member assembled within the groove of said casing for engagement with a cooperating stud.

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

MOSES F. CARR.