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F. G. PURINTON

2,327,554

SNAP FASTENER

Filed March 7, 1942

Fig. 1.

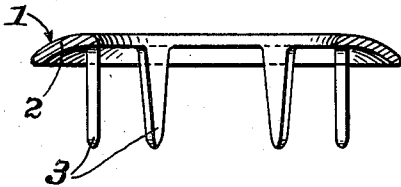


Fig. 2.

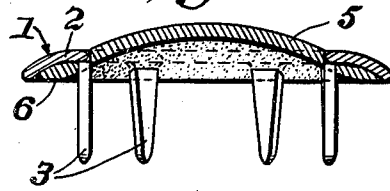


Fig. 4.

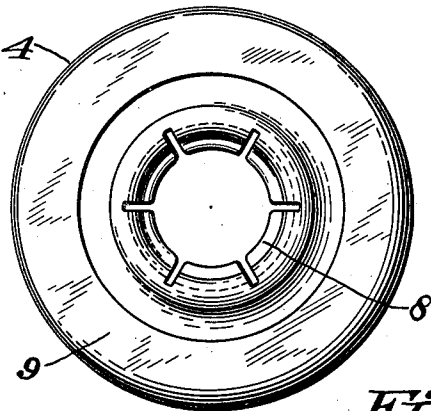


Fig. 3.

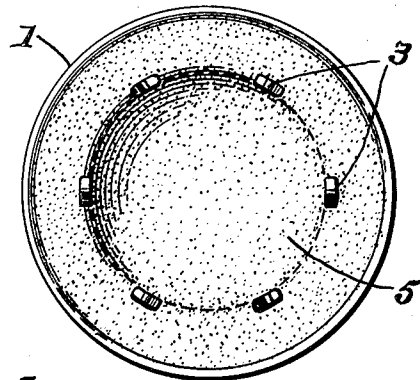


Fig. 5.

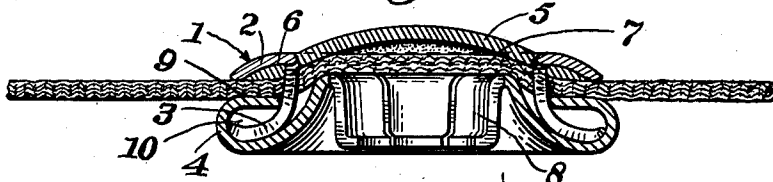
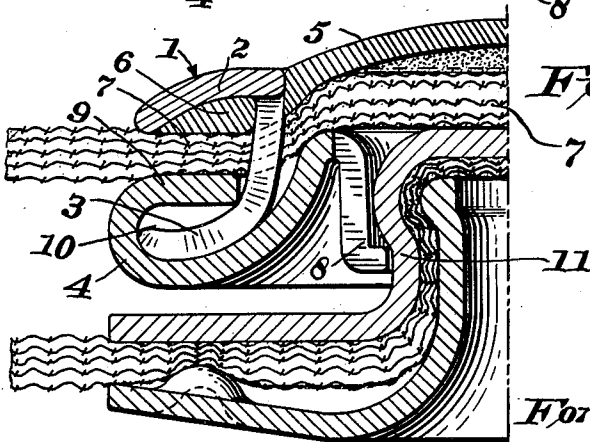


Fig. 6.



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SNAP FASTENER

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4 Claims. (Cl. 24—216)

My invention relates to a new and useful improvement in snap fasteners, and in its broadest aspect is similar to the snap fastener illustrated and described by me in Patent No. 2,256,850, of September 23, 1941, entitled "Snap fasteners."

In the patent above mentioned, the socket member was provided with prongs which in turn were engaged and held by a ring member, which ring member in turn was inserted in a plastic that formed the head of the ring member. The plastic provided a pleasing appearance inasmuch as it was chosen to harmonize with the garment to which the snap fastener was attached.

One of the objects of the present invention is to somewhat simplify the construction, and provide a ring prong member which is provided with a plastic face or covering, which prong member, in turn, is associated with the socket member.

Another object of the invention is to provide an exceedingly simple prong member which consists of a metal rim that is slightly curved or dished, while from the inner periphery of the rim extends the prongs. Also seated in the under surface of the ring member and forming an arch or dome-shaped face, is a plastic of the desired color to match or harmonize with the color of the garment to which the fastener is attached.

Associated with the prong member is a ring or socket member that may be of any desired type, provided it has a central hub to receive the stud or male member of the fastener, and also has an outwardly extending curled rim to receive the prongs of the prong member.

Still another object of the invention is to provide the socket member, together with the prong member, the prong member having a plastic insert or face which when once molded about the ring member will remain in place and last throughout the life of the snap fastener.

Another object of the invention is to provide a ring or prong member, wherein the prongs form a double function. First and most important, they are the means by which the prong member is secured to the socket member when the fastener is attached to the cloth; and second, the prongs form a plurality of anchoring points for the plastic filler that is used as the face of the prong member.

Thus when the plastic is embedded or molded to the ring member, not only does the ring member (slightly arcuate in cross section) act as a chamber in which the edge of the plastic is set, but also the plastic flowing around the upper ends of the plurality of prongs will be well anchored and

prevent the plastic from becoming loose from its ring member.

With these and other objects in view, the invention consists in certain new and novel arrangements and combination of parts as will be hereinafter more fully explained and pointed out in the claims.

Referring now to the drawing showing a preferred embodiment:

Figure 1 is a sectional view of the prong member on a greatly enlarged scale;

Figure 2 is a similar view but showing the plastic face as molded to the prong member;

Figure 3 is a bottom plan view of the same;

Figure 4 is a top plan of the socket member that receives the prongs of the prong member;

Figure 5 is a sectional view of the completed female portion or socket, as assembled on the garment; and

Figure 6 is a further enlarged sectional view of one-half of the entire fastener, showing the socket and its prong member attached to the garment, and with the cooperating stud.

Referring now to the gist of the invention and for the moment to Figs. 1 and 2, there is shown on a greatly enlarged scale what I term the prong member 1, which is in the form of a ring preferably formed of brass, the ring being slightly arcuate as at 2, while spaced around the inner periphery of the ring there is provided a plurality of prongs 3, which, in turn, are to be received by a ring member 4. (See Fig. 5.)

Referring now more particularly to Fig. 2, it will be seen that there is provided a plastic face 5, which may be a urea-formaldehyde composition, such as Plaskon, and may be transparent, translucent, or even opaque, and may be of any desired color, preferably, however, one that will harmonize with the color of the garment to which it is to be attached.

It will also be understood that I may select a plastic having "high flow" characteristics, so that if desired insignia, or a design might be molded in this plastic face. As is well known, the plastics that have the characteristic of "high flow" will reproduce with great fidelity the engraving in the mold or die cavity in which the plastic is molded.

It will also be noted in Fig. 2, that the plastic composition 5 will be well anchored beneath the rim 2, as may be seen at the point 6. It will also be seen that the plastic during the molding operation will flow about the proximal ends of the multiplicity of prongs 3, so that after the plastic once hardens or sets, it will never loosen or become detached from its prong fastener ring.

Also by forming the plastic face 5 slightly arcuate in cross section, the cloth material 7 where it passes under the ring and the plastic, will not become jammed or injured during the attaching operation.

It might be mentioned that when the prong member is attached to the socket member, the face of the plunger or die of the attaching machine will also be slightly concave, so that the pressure will be exerted upon the ring, rather than on the dome of the plastic.

Referring now briefly to the socket member as shown in Figs. 4 and 5, it might be mentioned that this may be of any desired construction, providing it will receive the prongs of the ring member, and, of course, receive the stud or male member of the fastener.

I have shown one form of conventional ring 4 having the split tube 8, while the outer portion or periphery of the ring is turned upwardly and inwardly, as at 9, to thus form the resultant chamber 10 for the prongs 3, so that after the prong member is once attached the two parts in reality become an integral structure.

In Fig. 6 I have shown one-half of the socket member and also a half of the stud member 11, to show the two parts in their snap or closed position.

It may also be noticed from Fig. 6 that the plastic at the area 6 provides a flat face to tightly clamp against the cloth 7, while the opposite surface of the cloth will be clamped by the surface of the upturned rim 9 of the socket member.

From the foregoing, it will be seen that I have provided a snap fastener which is economical to manufacture, and wherein a plastic face of pleasing design or color, and/or having insignia molded therein is secured to the prong member in such a manner that it will never work loose from its member after it is once molded in place. Also, that even if the plastic, due to its water-absorption factor, might shrink, still there is no possibility of the plastic face 5 becoming detached from its molded position due to the fact that not only is it anchored under the rim, but it is anchored about the bases of the many prongs that are used to secure the ring member with relation to the socket member.

Many slight changes might be made without

departing from the spirit and scope of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a socket for a snap fastener, a ring member having an outwardly and downwardly extending wall, a plurality of downwardly extending prongs spaced about the inner periphery of said ring member, a plastic head extending over the center of the said ring, and said plastic head anchored beneath the downwardly extending wall and also anchored about the proximal ends of the plurality of prong members.

2. In a socket for a snap fastener, a prong member consisting of a ring having a downwardly overhanging extending wall, a plurality of prongs extending from the inner periphery of the said wall, a plastic head anchored under the downwardly extending wall and about the proximal ends of the said downwardly extending prongs and the proximal ends of the prongs being rectangular in cross section.

3. In a snap fastener a ring member having a downwardly extending outer peripheral wall, a plurality of downwardly extending prongs spaced about the inner peripheral wall of said member, a dome-shaped plastic head extending over the open space of the ring member and under the downwardly extending wall and anchored thereto and about the proximal ends of said prongs, the plastic material beneath the ring presenting a flat clamping surface, and the prongs adapted to be received and deflected in a cooperating socket.

4. In a snap fastener a plastic head, a ring member extending over the periphery of said plastic head, a plurality of prongs extending downwardly through said plastic head, the outer periphery of the plastic head molded to the under surface of said ring and presenting a flat clamping surface, a socket having an upturned inwardly extending peripheral wall forming a receptive space for said prongs, the upper surface of said inturned wall presenting a cooperating clamping surface with the clamping surface of the plastic head, when the plastic head and its ring member are permanently attached to said socket.

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