July 20, 1965 C. F. ASH II 3,195,201

ORNAMENTAL SNAP FASTENER ASSEMBLY

Filed April 17, 1963

Fig. 1.

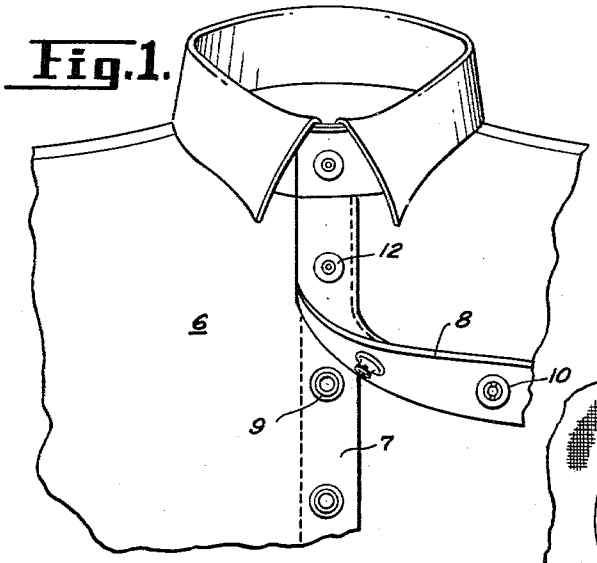


Fig. 4.

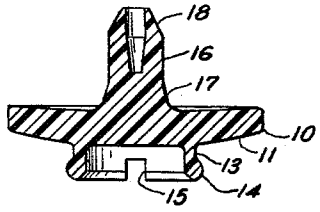


Fig. 5.

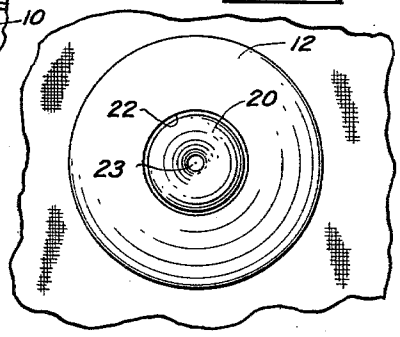


Fig. 2.

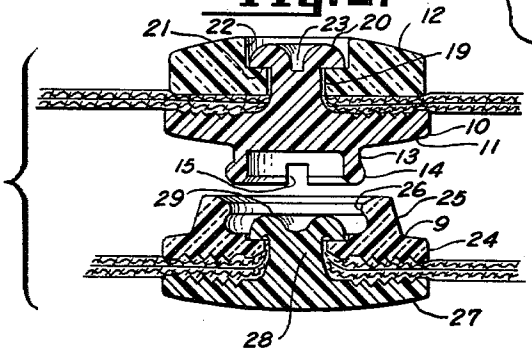
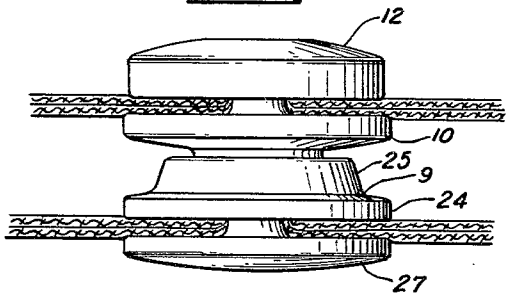


Fig. 3.



United States Patent Office 3,195,201 Patented July 20, 1965

3,195,201

ORNAMENTAL SNAP FASTENER ASSEMBLY

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Filed Apr. 17, 1963, Ser. No. 273,754
2 Claims. (Cl. 24—208)

This invention relates to snap fastener assemblies, particularly useful for wearing apparel, such as shirts.

It deals especially with snap fastener assemblies where each of the fastener members is a unitary molded piece of plastic. The head or engaging portion of at least one of the elements of such a fastener must have portions which yield radially inwardly so that the fastener may be easily engaged and disengaged. This requires, then, that such an element be of thermo-plastic material rather than a rigid type of material, such as the thermo-setting plastics. On the other hand, the ornamental portion of the assembly should be made of a rigid heat-resistant material, preferably one of the thermo-setting plastics; e.g., a polyester material which may be given an ornamental pearl-like sheen.

One of the objects of the invention, therefore, is to provide an improved construction of a fastener assembly of the kind described, wherein the ornamental portion of the fastener exposed to the front of the garment may have a button-like appearance with decorative or highly polished surface, and preferably, with a central eye which may be of contrasting color.

Another object of the invention is to provide an improved fastener element assembly wherein an integral portion of the thermo-plastic fastener member can be deformed against the central portion of the ornamental member, but in such a way that it will not be permitted to come in contact with a hot iron which may be pressed against the outer surface of the ornamental part. At the same time, this deformed portion may provide the eye-like appearance in a depressed or counterbore section of the ornamental piece.

Another object is to provide an assembly of the kind described wherein only two parts are required, each of which may be readily molded from plastic material and which can be economically assembled with the flexible supporting material of the garment.

Other objects and advantages of the invention will hereinafter more fully appear.

In the accompanying drawing, I have shown for purposes of illustration, one embodiment which the invention may assume in practice. In the drawing:

FIG. 1 is a view of a shirt front equipped with fastener element assemblies in accordance with my invention;

FIG. 2 is a cross-section of one complete snap fastener where the fastener elements are disengaged;

FIG. 3 is a side elevation showing the fastener elements engaged;

FIG. 4 is a central vertical section of the fastener member of my improved fastener element assembly as it is molded preparatory to attachment to the garment; and,

FIG. 5 is a front view of the fastener element assembly indicating the appearance from the front of the garment.

The shirt front generally designated 6, has overlapping edges 7 and 8, provided respectively with socket and stud fastener elements 9 and 10. The assembly with which my invention is primarily concerned is that on the front overlapping edge 8 of a garment.

In the assembly shown, each of the front fastener assemblies consists of a fastener member having a base 11 bearing against the inner surface of the flexible supporting material, and an ornamental member 12 of

button-like appearance bearing against the outer surface of such piece of material opposite said base 11. The fastener member associated with the ornamental part 12 may be either the socket or stud, but preferably as here shown, it is the stud element. This consists of a fastener head in the form of an inwardly protruding flange 13 having a circular exterior bead 14 and interrupted by two or more slots 15 so as to give greater flexibility to the segments of the flange between the slots.

The snap fastener member has an integral outwardly extending post 16 which has a solid portion partially conically shaped as indicated at 17, where it joins the base 11, with its outer and hollow end preferably tapered as indicated at 18, to provide an end which will more easily penetrate the fabric of the supporting material during the operation of attaching the assembly to the garment. The solid portion of the post extends through a central hole 19 in the ornamental member 12, and the hollow end portion is deformed outwardly to form a ring of thermo-plastic material 20 bearing tightly against the outwardly facing shoulder 21 which results from a counterbore 22 extending a substantial distance into the ornamental piece from its front face. The counterbore 22 is deep enough so that the ring of material 20 remains somewhat below the front surface of the ornamental member. Thus, when a hot iron may be pressed against the outer surface of such member, it will not contact and damage the thermo-plastic ring 20.

The deformation of the outer hollow portion of the post 16 in this operation leaves a central depression 23 which further enhances the outward appearance, giving the effect of a button with a recessed eye.

The other snap fastener element on the inner edge 7 of the garment, which is herein shown as the socket element, may be of an already known type which consists generally of a base 24 bearing against the outer face of the material 7 and an outwardly extending flange 25 having an inwardly projecting lip 26 of somewhat less internal diameter than the external diameter of the stud bead 14 so that the stud will snap into or out of the socket.

In some cases, this socket member can be made of thermo-plastic material, but preferably, it is made of thermo-setting material so that it is not so readily damaged by contact with a pressing iron.

The socket member is attached by a post having a head 27 adapted to bear against the inner surface of the edge 7 of the flexible supporting material, and this post has a stem 28 projecting through the material, through a central hole in the socket member and formed over against the material of the socket member within the confines of the circular flange 25—this deformed material being indicated by the numeral 29.

What I claim is:

1. An ornamental snap fastener element assembly comprising a fastener member consisting of pliable thermo-plastic material having

(a) a base adapted to bear against the inner surface of a piece of flexible supporting material;

(b) a snap fastener head projecting inwardly from said base and having radially yieldable portions adapted for snap engagement with a mating snap fastener element; and

(c) a support-penetrating post integral with and projecting outwardly of the central portion of said base; in combination with

(d) an ornamental member of button-like appearance adapted to bear against the outer surface of said piece of supporting material opposite said base, said ornamental member consisting of relatively hard rigid and heat-resistant material as compared to the

material of said fastener member, said ornamental member having a centrally arranged hole with a counterbore extending inwardly a substantial distance from the outer surface thereof to provide an outwardly facing annular shoulder;

(e) said post extending through said hole and having its end deformed outwardly to provide a ring of thermo-plastic material bearing against said annular shoulder, said ring being positioned wholly below the top surface of said ornamental member whereby it will be protected from contact with a heated iron which may be pressed against the outer surface of said ornamental member.

2. An ornamental snap fastener assembly as defined in claim **1** wherein the outwardly deformed end of said post forms a ring of thermo-plastic material in the central

depressed portion of the ornamental button which is of a color contrasting to that of the outer surface of said ornamental member.

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DONLEY J. STOCKING, *Primary Examiner.*