

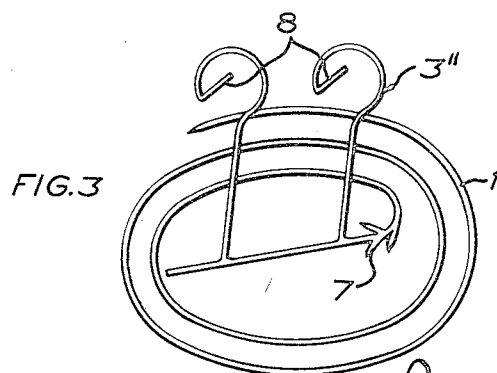
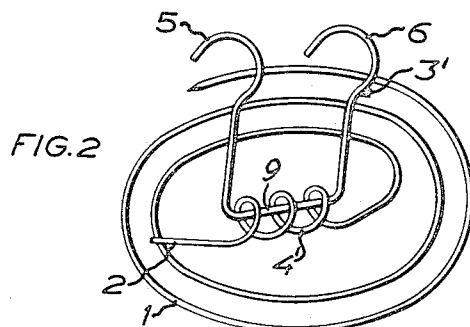
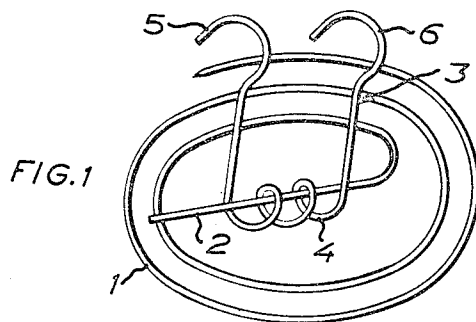
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FASTENING DEVICES FOR BUTTONS AND LIKE ELEMENTS

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1

## 3,406,432 FASTENING DEVICES FOR BUTTONS AND LIKE ELEMENTS

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### ABSTRACT OF THE DISCLOSURE

A button fastening device of plastic material having a spiral whose inner end is bent to extend diametrically across the spiral. It has an integral attaching element for a button, which element extends outwardly from the spiral. The attaching element has a bent end portion whose extremity is bent inwardly.

This invention relates to fastening devices for buttons and like elements.

The conventional means of fastening buttons is by way of sewing which is a time-consuming work and therefore contributes to increasing the cost of the garment. Several attempts have been made to eliminate the sewing operation and to fasten buttons by various arrangements, but these attempts have not been successful hitherto.

The object of the present invention is to provide a button fastening device of metal or plastics material, which can be rapidly and simply inserted in the garment by screwing, whereupon a button is readily attachable to the device in a manner to ensure reliable retention of the button to the garment.

For further elucidation of the invention some embodiments thereof will be described more in detail in the following with reference to the accompanying drawing in which:

FIGS. 1 to 3 are perspective views of three embodiments of the button fastening device.

The button fastening device illustrated in FIGS. 1 and 2 is made of metal wire and embodies a flat spiral having a pointed outer end for insertion in the garment and an inner end portion 2 so bent as to extend diametrically across the spiral. Said end portion 2 is straight in FIG. 1 but coil-shaped at 4' in FIG. 2. A button attaching means in the shape of a yoke 3 and 3' is arranged for connection with the flat spiral 1, more precisely the end portion 2 thereof, said yoke having a connecting portion which in conformity with the shape of the end portion 2 is coil-shaped as shown at 4 in FIG. 1 and straight as shown at 9 in FIG. 2, respectively, and two shanks 5, 6 which are integral with said connecting portion and have the ends bent back upon themselves.

FIG. 3 shows another embodiment of a button fastening device which is made from nylon or like plastics material. As distinct from the button fastening device shown in FIGS. 1 and 2 the device illustrated in FIG. 3 is constituted by a continuous member; that is to say, the spiral 1 and the button attaching means 3' are integral. Further, the part of the spiral 1 closest to the button attaching means is provided with portions 7 which extend obliquely towards the yoke and are adapted to prevent the spiral from being unintentionally rotated and thus coming loose from the garment, after it has been inserted therein. The upper ends of the yoke besides are of a slightly different shape in that the extremities 8 of the

2

bent portions are bent abruptly inwardly, i.e., in such a manner that the bent portions will have approximately doubled ends as shown in FIG. 3.

The button fastening devices described in the foregoing and illustrated in the accompanying drawing are mounted in the following manner: at the desired button location the free end of the flat spiral is inserted in the garment, whereupon the spiral is rotated until only the inner end portion 2 thereof is visible on the outer side of the garment. If the yoke 3 or 3' is not initially mounted on the end portion 2, it is placed in position now, and if that is deemed necessary the extreme point of the inner end portion 2 is inserted in the fabric beneath the inner loop of the flat spiral, as has been done in the embodiment shown in FIG. 1. A four-hole button is then placed with its reverse side against the ends of the bent portions of the shanks 5, 6, and said bent portions are introduced first through two of the four holes and then from the front side of the button through the remaining two holes. In the FIG. 3 embodiment the shank ends are introduced in a doubled state through the holes whereby the inwardly bent extremities 8 of the shanks will come into application with the reverse side of the button, ensuring a reliable retention of the button to the button fastening device.

The button fastening device may naturally be constructed in many different ways. The spiral 1 need not necessarily be flat but may, if desired, be conical. The embodiments according to FIGS. 1 to 3 are intended for a four-hole button. With a two-hole button it is possible to use the same fastening device after removal of one shank of the yoke, or a specially designed fastening device. A button fastening device having one shank is also used for example with covered buttons having an attachment eye on the reverse side, in which case the bent shank portion will have to be slightly modified for example by bending the outer end of the shank to form a loop for reliable retention of the covered button.

What I claim and desire to secure by Letters Patent is:

1. A fastening device for buttons and like elements comprising a spiral of plastics material having a pointed outer end and an inner end portion bent diametrically across said spiral, and attaching means integral with said spiral projecting from, and forming a substantially right angle with said inner end portion and having a portion connectable with a button, said spiral having ahead of said attaching means portions projecting obliquely towards said attaching means.

2. A button fastening device as claimed in claim 1, wherein said attaching means is a shank having a bent end portion the extremity of which in turn is bent abruptly inwardly.

3. A button fastening device as claimed in claim 1, wherein said attaching means comprises two shanks having bent free end portions, the extremities of which in turn are abruptly bent towards the adjoining portions of the bent ends.

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