Dec. 3, 1940. F. H. HILLIER 2,223,957

FASTENING DEVICE

Filed July 26, 1939

Fig. 1.

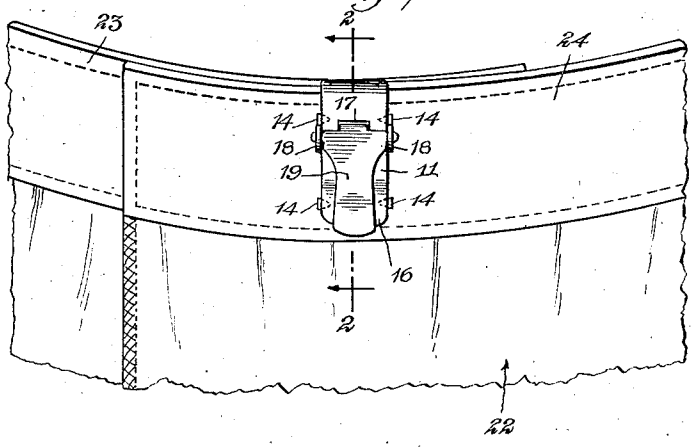


Fig. 2.

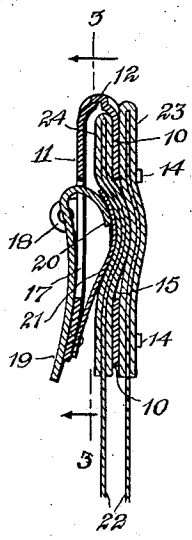


Fig. 3.

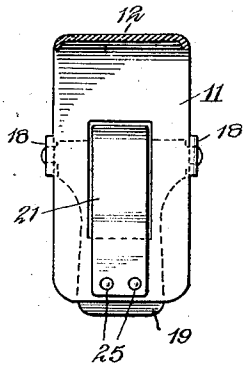
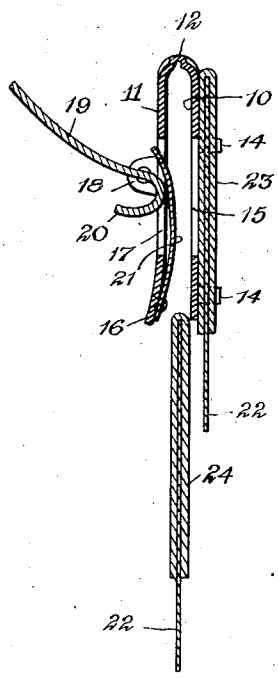


Fig. 4.



WITNESSES

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FASTENING DEVICE

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1 Claim. (Cl. 24—258)

This invention relates to an improved fastening device, particularly a fastening device for releasably holding garments and similar articles in assembled relationship.

It is an object of the invention to provide an improved fastening device which eliminates the necessity for using cooperating fastening members and which can be used to releasably hold a garment or other article in assembled relationship without mutilating or otherwise injuring the article.

A further object is the provision of an improved fastening device of relatively simple construction which will not readily get out of order, which is easy to apply to a garment or similar article, and which not only can be readily fastened and released but also may be used to adjust the garment or other article to various sizes.

In many articles, particularly articles of wearing apparel, it is necessary to releasably hold the article in assembled relation and also to adjust or vary the size of the article when assembled. For example, shampoo capes are worn by persons of different sizes and the cape must be adjusted to the size of the person wearing it and then releasably held in assembled relationship. Various means have been utilized to adjust the assembled size of the capes and to releasably hold the capes in assembled position. However, these devices have been more or less unsatisfactory in that they only provide for a limited amount of adjustment or they are difficult to apply and to release or they mutilate or othewise damage the cape to which they are applied.

It is a prime object of the present invention to overcome the difficulties which have heretofore been encountered in this respect and to provide an improved fastening device for use on garments or the like of the above character which will provide for a wide range of adjustment and which may be readily released or fastened without injuring the garment.

In the accompanying drawing—

Fig. 1 is a front elevation of a fastening device illustrating it as applied to the neck band of a shampoo cape and showing the device in assembled relationship;

Fig. 2 is a longitudinal sectional view in the direction of the arrows on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view in the direction of the arrows on the line 3—3 of Fig. 2, showing the back of the guard plate; and

Fig. 4 is a view similar to Fig. 2 but showing the device in released position.

My fastening device comprises a base plate 10 which is preferably rectangular in shape and a guard plate 11 of substantially the same shape and size and spaced from and parallel to the base plate. The base plate and guard plate may be made of any desired material such as plastics or metal and may be formed in one or more pieces although I prefer to form them in one piece integrally connected along one of the narrower edges as indicated at 12 and free from connection along the other three edges.

The base plate is adapted to be connected to the portion of the article of wearing apparel or the like which is adapted to be fastened to another portion of the article and for this purpose the base plate may be provided with suitable attaching means such as the prongs 14 which may be extended through the article and folded flat against the opposite surface thereof as indicated in the drawing so as to hold the fastening device securely in position. Of course it should be understood that the prongs 14 are merely illustrative of one type of means for attaching the fastening device in position and that other means, such as adhesive or stitching extending through apertures in the base plate, may be utilized. The center of the base plate is formed with a cutout portion 15 which serves as a clearance opening to accommodate the gripping shield and lever and the portion of the article which is frictionally engaged thereby as will be more fully explained.

The forward end of the guard plate 11 preferably flares outwardly as indicated at 16 so as to facilitate the insertion and removal of the portion of the article which is to be gripped by the device. At its center the guard plate is provided with an opening 17 in registry with and of substantially the same size and shape as the opening 15 in the base plate. Adjacent the opening 17 and at the two sides of the guard plate a pair of forwardly projecting lugs 18 are provided on which the gripping lever 19 is pivoted.

The lever 19 is provided with an exposed handle portion positioned above the guard plate, as shown, which curves outwardly at its free end so as to facilitate manipulation thereof and with a hooked or curved gripping portion 20 which is adapted to extend between the guard plate and base plate when the device is in clamping position as shown most clearly in Fig. 2. The handle of the lever 19 depends downwardly and rests against the outer surface of the guard plate when the device is in gripping or clamping position and the gripping portion 20 preferably extends substantially across the space between the base plate and guard plates and projects into the opening

15 or to a point adjacent the top of the opening. It will thus be seen that when a portion of the article which is to be held in position is inserted between the two plates and lever 19 shifted to the position shown in Figs. 1 and 2 the gripping portion 20 thereof will force the said portion of the article into the opening 15 and in that way it is frictionally held in position. In order that the frictional engagement be sufficient to hold the garment or other article in assembled relationship it is important that the clearance between the sides of the gripping portion 20 and the sides of the opening 15 be of a rather limited character. To release the fastening device the lever 19 is shifted upwardly in the manner shown in Fig. 4 with the result that the gripping portion 20 of the lever shifts away from the opening 15 and from the space provided between the base and guard plates thereby releasing the frictional engagement on the portion of the article which has been inserted between the plates and permitting its removal therefrom.

In order to prevent the gripping portion 20 of the lever from injuring the portion of the article inserted between the guard and base plates I preferably provide a shield 21 in the form of a flexible resilient strip which may be made of metal or the like. The shield is suitably held in position as by being riveted to the undersurface of the guard plate adjacent the flared end thereof as indicated at 25 and it extends between the base and guard plates beyond the gripping portion 20 of the lever. The shield prevents the gripping portion 20 from coming into direct contact with the portion of the article which is to be gripped thereby preventing the chewing or pulling action which might possibly result from direct contact between the gripping portion and the article.

In using my improved fastening device the base plate is suitably attached to the article which is to be fastened to another article or to another portion of the same article. The lever 19 is then shifted to the position indicated in Fig. 4 and the other article which is to be fastened thereto is inserted between the guard and base plates. The lever 19 is then depressed to the position shown in Figs. 1 and 2 with the result that the gripping portion 20 of the lever acting through the shield 21 forces a portion of the article into the opening 15. The resulting frictional engagement prevents the fastened articles from being accidentally separated and yet it will be appreciated that the lever 19 may be readily released so as to permit the separation of the articles when desired.

In the accompanying drawing I have illustrated my improved fastening device as applied to a shampoo cape 22 (only a small portion of which is illustrated). The shampoo cape is of conventional construction being provided with a neck band portion made of textile material and having two ends 23 and 24 which are assembled in overlapping relationship around the wearer when the device is in use, as shown in Fig. 1. The base plate 10 of the fastening device is suitably attached adjacent one end 23 of the neck band portion in the manner shown with the connecting portion 12 between the two plates disposed at the top and with the flared end 16 of the guard plate depending downwardly. When the shampoo cape is placed around the wearer, the neck band is adjusted, with the ends in overlapping relationship, to the proper size and the end 24 is then inserted between the base plate and guard plate as shown and the lever 19 pressed downwardly to the position shown in Figs. 1 and 2. A portion of the end 24 of the neck band is forced into the opening 15 and the neck band will be releasably held in position due to the frictional engagement between the several parts. When desired, the neck band can be released by shifting the lever 19 upwardly to the position shown in Fig. 4 thereby permitting the end 24 of the neck band to be withdrawn from between the guard and base plates. Due to the fact that only a single fastening device is needed and that no cooperating fastening elements are required it will be appreciated that the neck band can be adjusted to a wide range of sizes, being limited only by the length thereof. It will also be appreciated that the shield 21 prevents any damage to the fabric or other material gripped by the device which might otherwise result from the chewing or pulling action of the gripping portion 20 of the lever.

While I have illustrated my improved fastening device as applied to a shampoo cape it will of course be appreciated that it may be used in association with many different types of garments and with other articles. It will also be appreciated that on occasion the shield 21 may be dispensed with and that other attaching means may be substituted for the prongs 14.

While in the accompanying drawing I have illustrated the preferred embodiment of my invention it should be understood that modifications may be made without departing from the invention as set forth in the accompanying claim.

I claim:

A fastening device comprising a U-shaped supporting structure formed of a relatively flat base plate and a relatively flat guard plate spaced from the base plate, the plates, each having an opening in line with each other, the said plates being connected together at one end and open at the opposite end and the guard plate flaring outwardly at its open end, a flexible resilient shield strip connected at one end to the guard plate adjacent the open end thereof and extending between the guard and base plates, and a lever pivotally mounted at a fixed point on the guard plate adjacent the opening and formed with a protruding end portion engageable with but free from connection with the shield strip for forcing the free end of the strip into the opening in the base plate, said lever being shiftable from gripping position with the free end of the shield strip to an inoperative position when the free end of the shield strip will move into the opening in the guard plate.

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