

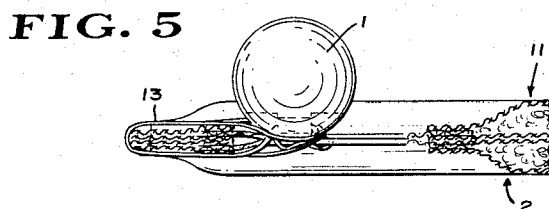
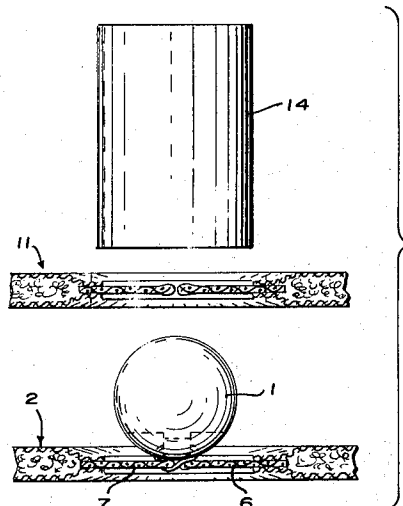
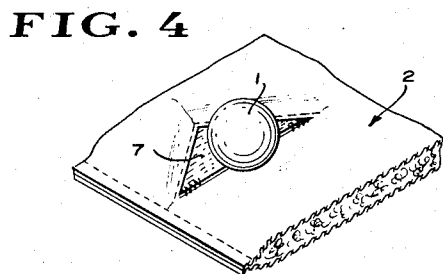
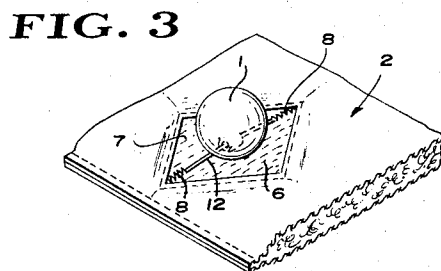
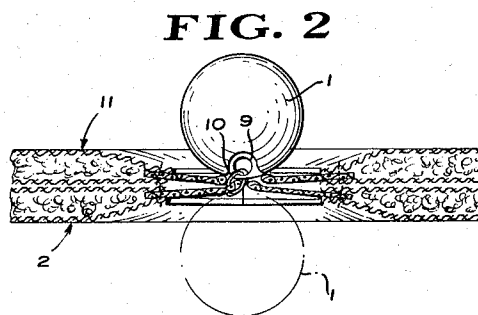
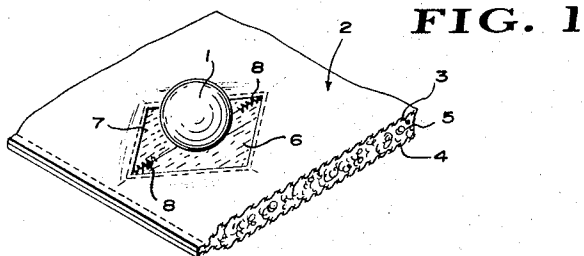
Dec. 26, 1967

J. E. TUVERT

3,359,603

BUTTON FASTENER

Filed Aug. 31, 1965



JOHAN E. TUVERT  
INVENTOR.

BY *Seed & Berry*

ATTORNEYS

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**BUTTON FASTENER**  
Johan E. Tuvert, Kungssportsavenyen 22,  
Goteborg, Sweden  
Filed Aug. 31, 1965, Ser. No. 483,999  
5 Claims. (Cl. 24-90)

## ABSTRACT OF THE DISCLOSURE

A button fastener for fastening two layers of material together wherein one or both of the edges of the button holes is formed of elastic material inset into the associated layer. The button member is fastened to one of the elastic edges of one of the button holes and is so formed as to readily pass by the elastic edges of the button holes when light pressure is exerted on the button normal to the plane of the layers of material. The button is capable of passing through both button holes in the layers and in one modification may be carried on an independent strand extending parallel to the associated button hole. When the button holes are located adjacent to the edge of the layers of material, an elastic band member may be extended about the base of the button member, passed through the button holes and about the respective edges of the layers of material and extend a second time about the base of the button member to act as a locking device. A method for engaging the convexly shaped button with a button hole is provided by positioning the elastic material with the button hole overlying the button and placing a hollow tubular member having an internal diameter slightly greater than the outside diameter of the button over the button hole. When pressure is exerted on the tube the button is inserted into the tubular member and the elastic material is forced about the button.

The present invention relates to button fasteners in general and in particular to an improved button fastener for securing two layers of material in overlapped relationship with the button being secured to one piece of the material and being capable of application from either side of the material to which it is fastened.

According to the present invention, a button may be applied to a piece of cloth or other material in such a manner as to cooperate with a button hole in a second piece of material in order to fasten the two pieces together regardless of the direction from which the second piece of material is applied. The button may be applied to the material in combination with an elastic inset which provides a slit or opening therethrough for the passage of the button from one side to the other of the material. In this manner, the button arrangement is made reversible and its utility is greatly increased and, at the same time, a decorative effect may be produced. The button arrangement may also be easily locked into engagement with a button hole in a second sheet of material by means of a simple elastic band arrangement.

The object of the present invention is, therefore, to provide an improved button fastener arrangement which is reversible and universal in its application, easy and economical to install, pleasing in appearance and efficient in its holding function.

The means by which the foregoing objects and other advantages, which will be apparent to those skilled in the art are accomplished, are set forth in the following specification and claims and are illustrated in the accompanying drawings in which:

FIG. 1 is a perspective view of the button arrangement according to the present invention;

FIG. 2 is a partially sectioned detail showing the button fastener in the engaged position;

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FIG. 3 illustrates a modified form of attachment for the button;

FIG. 4 shows a modification wherein only one elastic inset is used to mount the button;

FIG. 5 illustrates the application of an elastic band locking member for the button arrangement; and

FIG. 6 is an exploded view illustrating one method for applying the fastener.

Referring now to the drawings wherein like reference numerals indicate identical parts in the various views, FIGS. 1 and 2 illustrate the preferred embodiment of the invention wherein a spherical button member 1 is illustrated as being applied to a piece of cloth material or the like 2. In this instance, the material 2 is illustrated as comprising two layers of fabric, 3 and 4, with an intermediate filler or pad 5. It will be understood of course, that the material 2 may comprise a single layer of fabric and that the exact shape and configuration of the button 1 may be varied.

As illustrated, the material 2 is provided with two sections of elastic material 6 and 7 which form a button hole as well as an attaching means for the button member. The elastic material is preferably of the type comprising interwoven fabric and elastic strands but may comprise any equivalent material. The sections 6 and 7 may be identical in form as illustrated or may vary in shape as desired and are attached to the layers of the material 2 by means of conventional stitching. The aligned adjacent end edges of the sections may be stitched together as at 8 with the extent of the stitching determining the length of the button hole or opening between the sections. As seen in FIG. 2, both layers of material to be fastened together are provided with identical button hole structures and, as will be presently explained, the button member 1 may be attached to either button hole structure.

As illustrated most clearly in FIG. 2, the button member 1 has an eyelet 9 and the button is secured to the free edge of the elastic sections in a conventional manner by means of the thread or group of threads 10. FIG. 2 illustrates the fastener arrangement in the secured or buttoned position for holding the two pieces of material 2 and 11 together. As previously mentioned, and as will be evident from FIG. 2, it is immaterial as to which of the four elastic sections of the two pieces of material is used to secure the button member 1. The relative size and shape of the button member 1 and the elastic sections 6 and 7 may be properly chosen so as to provide a highly efficient holding arrangement which is extremely difficult to break by moving the pieces of material away from each other and which is nearly impossible to remove by sliding the pieces of material relative to one another in any direction. To button the two pieces of material 2 and 11 together it is merely necessary to align the button hole structures in each piece of cloth and to push the button member from the dotted line position shown in FIG. 2 to the full line position. If the second piece of material 11 is to be initially applied on the surface of the material 2 from which the button extends, it is merely necessary to press the sides of the elastic section about the button 1 until the button passes through the hole.

FIG. 3 illustrates a modified form of attachment for the button member 1 to the button hole structure wherein an attaching cord 12 is passed through the eyelet of the button and secured to the sides of the elastic sections by means of the normal stitching 8. The cord 12 may be either a heavy thread or an elastic band. With this arrangement, the button is more centrally located and is not fixed entirely to either one of the elastic sections but fastened therebetween.

FIG. 4 illustrates another embodiment similar to FIG. 1 utilizing only one elastic section 7 to which the button 1 may be attached in the same manner as shown in FIGS.

1, 2 and 3. With this structure, it is possible to greatly simplify the fastener and is desirable when the character of the material being fastened permits.

FIG. 5 illustrates a button fastener according to the present invention which may be locked against removal in any direction. It will be understood that the button placement and positioning of the elastic sections may be the same as that shown in FIGS. 1 and 2 or in any other of the embodiments described herein. The elastic 13 may be any suitable elastic band such as rubber or cloth covered rubber well known to the art. The band 13 is applied by initially placing the band about the base of the button 1 and then passing the button through the two holes in the respective pieces of material after which the band is passed about the aligned edges of the respective pieces of material and passed back over the button 1. It will be necessary, of course, to choose the size of elastic band which will hold a constant bias after it is applied. This arrangement is of special utility when the button fastening arrangement is used for children's clothing, bedding or in any situation where it is desired to insure that the fastener cannot be removed.

Although the button fastener according to the present invention may be easily secured by merely holding the pieces of material together and applying light pressure with the thumb or a finger to the button member to pass it through the button holes, the structure also adapts itself to a novel method of securing which may be useful to those suffering from infirmities of the hands or fingers such as arthritic patients. As illustrated in FIG. 6, this novel method is practiced with the aid of any hollow tubular objects such as the tube 14 which may be of plastic or any other inexpensive material. In assembling the fastener by this method, it is merely necessary to overlap the pieces of material 2 and 11 as shown with the button holes being aligned and to then press gently on the tube 14 with the hollow portion of the tube receiving the button 1. As illustrated in FIG. 6, the tube 14 would be pushed in a downward direction and it would be necessary to provide some backup object on the reverse side of the material 2. As can be appreciated, the method requires much less dexterity than is normally required to fasten conventional buttons.

From the foregoing it will be appreciated that the present invention provides significant improvements over prior art button fasteners of the type under consideration. It will also be apparent to those skilled in the art that the arrangements and structural components utilized in the invention may be subjected to numerous modifications well within the purview of this invention and applicant intends only to be limited to a liberal interpretation of the specification and appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A fastener device for securing two juxtapositioned layers of material together comprising; at least one generally triangular segment of elastic material inset into each layer of material, each of said elastic segments having at least one free edge forming one side of a button hole, a button member, means generally centrally connecting said button member to the free edge of one of said elastic segments, said button being so shaped as to

deform said segments and pass readily thereby when light pressure is applied normal to the plane of the layers, whereby said button member may be selectively passed through either or both of said button holes to secure the layers together.

2. The device according to claim 1 wherein the button hole in each layer of material is formed by inseting segments of elastic material by stitching said segments to the material, said segments having parallel free edges forming said button hole, said button member being attached to the free edge of one of the elastic segments in one of said layers of material.

3. The device according to claim 1 wherein said button holes are located adjacent an edge of the respective layers of material, a continuous elastic band member, said band extending about the base of the button member and passing through said button holes and about the respective edges of the layers of material and extending a second time about the base of the button member, whereby to lock the fastener device against removal.

4. A fastener device for securing two layers of material together comprising; means in each said layers of material forming a button hole opening, said button hole openings being capable of alignment when the layers of material are in juxtaposition, a button member including eyelet means, one of said layers of material including an independent strand extending parallel to the associated button hole and anchored to the material at its end portions adjacent the end portions of the hole, said strand extending freely through the eyelet in said button member to moveably anchor the same to the material, whereby said button member may be selectively passed through either or both of said button holes to secure the layers of material together.

5. A method for engaging a convexly shaped button on a first piece of material into a button hole on a second piece of material comprising; forming said button hole in elastic material, positioning said elastic material with the button hole overlying said button, placing a hollow tubular member having an internal diameter slightly greater than the outside diameter of the button over the button hole, and exerting pressure on said tube, whereby the button is inserted into the tubular member and the elastic material is forced about the button.

#### References Cited

##### UNITED STATES PATENTS

81,300	8/1868	Sedgwick.	
215,745	5/1879	Hill.	
365,841	7/1887	Meltzer.	
656,913	8/1900	Wade.	
696,626	4/1902	Cohen	24-245
815,906	3/1906	Croner	24-264
1,674,544	6/1928	Hertelendy.	
2,499,086	2/1950	Birnkrant et al.	24-103
2,857,645	10/1958	Vogelsang	24-245

##### FOREIGN PATENTS

98,648	8/1898	Austria.
114,061	8/1929	Austria.

DONALD A. GRIFFIN, *Primary Examiner.*