A fastener-fabric assembly in which a torsion member holds a section or sections of fabric securely against a rigid post, without penetrating the fabric or causing it damage.
FASTENER-FABRIC ASSEMBLY AND METHOD OF USE THEREOF

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims benefit of U.S. Provisional Patent Application Serial No. 60/813,923, entitled "Fabric Fastener," filed June 15, 2006, which is incorporated by reference herein in its entirety.

BACKGROUND

This invention relates generally to fasteners and, more particularly, to fasteners for securing a section or sections of fabric.

Many popular items of clothing, such as scarves, throws and sarongs, require a means for securing one or more fabric sections around the neck, torso or other body part. These items of clothing, which are often made of light-weight material fabric, are frequently made without the use of buttons or zippers, and therefore require securing by means of an external fastener. One common example of such a fastener is a safety-pin type fastener. The problem with such safety-pin type fasteners, however, is that they are invasive to what is often delicate fabric and may cause material damage with long term use. Furthermore, while utilitarian, safety-pins are not decorative enough to be aesthetic pleasing on a scarf, throw, sarong or other such items of fabric. Many varieties of decorative pins can also be used as fasteners, but even these may cause damage and material wear to delicate fabric when secured through it.

It would therefore be useful if the wearer of a scarf, throw or sarong, or other such items of fabric, could secure that item of fabric around the body with an aesthetically-pleasing decorative fastener that was not invasive or that would not cause material damage to the fabric being secured. Other advantages of such a fastener would include its ready availability, its ease of manipulation, and its ability to be decorated as the wearer prefers.
SUMMARY

The present invention is a fastener-fabric assembly in which a torsion member holds a section or sections of fabric securely against a rigid post, without penetrating the fabric or causing it damage. The fastener portion of this invention may be decorated with beads, ribbons, feathers and the like to suit the taste of the wearer.

Several embodiments of the fastener-fabric assembly are described below. However, those of skill in the art will appreciate that many other configurations may be utilized other than those described.

BRIEF DESCRIPTION OF THE FIGURES

For a better understanding of the present invention, reference is made to the accompanying detailed description and figures, wherein:

Figure 1A is a front view of the fastener-fabric assembly in accordance with an embodiment of the present invention;

Figure 1B is a back view of the fastener-fabric assembly in accordance with an embodiment of the present invention;

Figure 2A is a front view of the fastener in accordance with an embodiment of the present invention;

Figure 2B is a back view of the fastener in accordance with an embodiment of the present invention;

Figure 2C is a top view of the fastener in accordance with an embodiment of the present invention;

Figure 2D is a side view of the fastener in the closed position in accordance with an embodiment of the present invention.

Figure 3 is a side view of the fastener in the open position in accordance with an embodiment of the present invention.
Figure 4 is a front view of the fastener in accordance with another embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The present invention is now described more fully hereinafter with reference to the accompanying drawings, in which an illustrative embodiment of the present invention is shown. The following configuration description is presented for illustrative purposes only. Any materials and configuration of materials satisfying the requirements herein described may be suitable for implementing the fastener-fabric assembly of the present invention.

Referring now to Figure IA, a fastener-fabric assembly in accordance with the present invention is shown and indicated generally by the numeral 10. A section of a sheet of fabric 20 is secured to another section of the sheet of fabric 20 (not shown), or to a second sheet of fabric 30. (It is to be understood that "fabric" as used herein includes all materials used for clothing, including textiles, woven or unwoven, as well as leather and leather substitutes.) Also shown are a hub 101 and, in one embodiment, a decorative layer 104 covering a torsion member 102. The torsion member 102 consists of a mid-section surrounded by a first end 105 and a second end 106, both of which ends are integrally connected to the hub 101. The connection of the first end 105 and the second end 106 to the hub 101 is shown in more detail in Figures 2A and 2B. The torsion member 102 may be composed of metal but can also be composed of any one of a number of materials, such as plastic or wood, that has adequate rigidity, strength and resilience for the fastener's intended use. An assembly that has been found to be useful for the present invention is a particular industrial lynchpin sold by Innovative Components, Inc., Schaumburg, IL, USA, in its "Quick Release Pins" catalog as "Lynch Pins."

A back view of the fastener-fabric assembly 10 is shown in Figure IB. A post 103 is integrally connected to the hub 101 such that the post 103 and hub 101 form a rigid pairing.

In one embodiment, a slip-cover 107, which may be composed of a soft material, such as felt, suede or leather, is secured to the post 103, such that any part of the post 303 is covered by
the slip-cover 107. The post 103 may be straight in configuration and have a smooth surface, but other shapes and surface designs may be used within the scope of this invention.

Figure 2A is front view of the fastener portion of the fabric-fastener assembly 10 and Figure 2B is a back view of the fastener portion of the fabric-fastener assembly 10. As shown in Figures 2A and 2B, the first end 105 of the torsion member 102 is integrally connected to a surface of the hub 101 at seat 121 and the second end 106 of torsion member 102 is integrally connected to an opposite surface of the hub 101 at seat 122. Seats 121 and 122 are separated vertically along the axis of the hub 101 by a distance 125 as shown in Figures 2A and 2B, and horizontally along the axis of the hub by a distance 126 as shown in Figure 2C. The vertical distance 125 and the horizontal distance 126 between seat 121 and 122 provide a force to the torsion member 102 to hold the torsion member 102 against the post 103 and resisting separation from the post 103.

Figure 3 is a side view of the fastener portion of the fastener fabric-assembly 10 in an open position. The torsion member 102 may be separated from the post 103 to insert the fabric 20 or 30 (not shown) being secured, or reconnected to post 103 to hold the fabric 20 or 30 (not shown) against the post 103, as shown in Figure 2D.

The torsion member 102 can be circularly-shaped but other shapes are also feasible, such as ovals (not shown) or polygons, as shown in Figure 4. In this embodiment, a torsion member 102' having a first end 105" and a second end 106' is integrally connected at said first end 105' to the hub 101 at seat 122 and at said second end 106' at seat 121.

Any of the torsion member 102, the hub 101 and the post 103 may be decorated by various means, such as plating, enameling, painting, rubberizing, dipping or coating. Various decorative objects, such as beads, crystals, stones, shells, ribbons, wire, leather, feathers, wood, felt and honeycomb may be attached to any of the torsion member 102, the hub 101 or the post 103 by means of soldering or wrapping, or other securing means.
While the invention has been described in connection with the preferred embodiments described above, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

It is claimed:
CLAIMS

1. A fastener-fabric assembly, comprising:

a post integrally connected to a hub, wherein said post and said hub together
form a rigid pairing;

a torsion member having a generally rigid mid-section defining a first pin end
and a second pin end directed towards each other wherein said first pin end is
integratedly connected to said hub at a first seat on one side of said hub and said
second pin end is integrally connected said hub at a second seat on a second
side of said hub opposite to said first seat wherein said first seat and said
second seat are separated vertically along the axis of said hub by a first
distance and horizontally along the axis of said hub by a second distance, such
that the torsion member is rotatable on an axis approximately connecting said
two pin ends and subject to a force tending to rotate said torsion member to a
position with a portion of its mid-section abutting said post; and

at least one sheet of fabric with a section positioned between said torsion
member and said post held securely in that position as an effect of said force.

2. The fastener-fabric assembly of claim 1 wherein said midsection of said torsion
member is of generally uniform cross-section with a single longitudinal axis connecting said
two pin ends.

3. The fastener-fabric assembly of claim 1, wherein any surface of said post is covered
by a fabric slip-cover.

4. The fastener-fabric assembly of claim 1, wherein any of the torsion member, the hub
and/or the post is covered by decoration using processes selected from a group consisting of
plating, enameling, painting, rubberizing, dipping or coating.
5. The fastener-fabric assembly of claim 1, wherein one or more decorative objects, such objects selected from a group consisting of beads, crystals, stones, shells, ribbons, wire, leather, feathers, wood, felt and honeycomb, are attached to any of the torsion member, the hub and/or the post.

6. A method of securing at least two sections of fabric to one another comprising the steps of:

   rotationally opening an assembly comprising a post integrally connected to a hub, wherein said post and said hub together form a rigid pairing and a torsion member having a generally rigid mid-section defining a first pin end and a second pin end directed towards each other wherein said first pin end is integrally connected to said hub at a first seat on one side of said hub and said second pin end is integrally connected said hub at a second seat on a second side of said hub opposite to said first seat wherein said first seat and said second seat are separated vertically along the axis of said hub by a first distance and horizontally along the axis of said hub by a second distance, such that the torsion member is rotatable on an axis approximately connecting said two pin ends and subject to a force tending to rotate said torsion member to a closed position with a portion of its mid-section abutting said post;

   positioning at least two sections of fabric between said torsion member and said post; and

   rotating said torsion member to said closed position with said at least two sections of fabric secured between said torsion member and said post.