

United States Patent

Kawano

[15] 3,660,872

[45] May 9, 1972

[54] FASTENERS FOR ATTACHING CLOTHES TO RIBS OF UMBRELLAS

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[22] Filed: Sept. 28, 1970

[21] Appl. No.: 75,936

[30] Foreign Application Priority Data

Dec. 26, 1969 Japan.....45/1549

[52] U.S. Cl.....24/75 PF, 135/36 F

[51] Int. Cl.....A44b 21/00, A45b 25/18

[58] Field of Search24/73 PF, 150 FP, 90 W;
135/33 R, 36 F

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[57]

ABSTRACT

A fastener for attaching the cloth to the ribs of a umbrella is made of deformable material and comprises a neck, a transverse rod integrally connected to one end of the neck and a substantially inverted U-shaped anchor connected to the other end of the neck. The outer ends of the legs of the anchor are folded back inwardly to form grooves to receive the rib.

4 Claims, 5 Drawing Figures

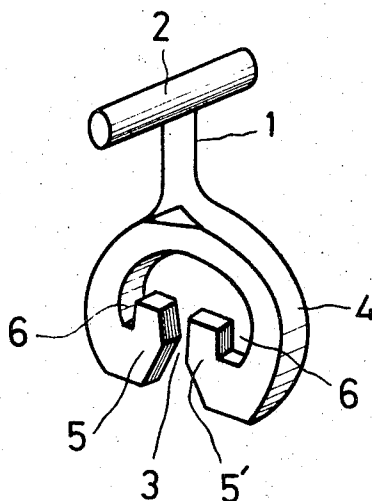


FIG. 1

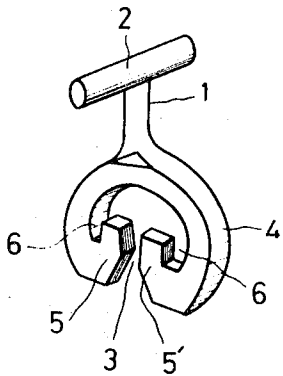


FIG. 2

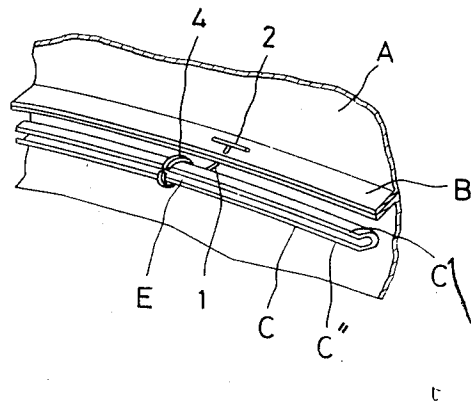


FIG. 3

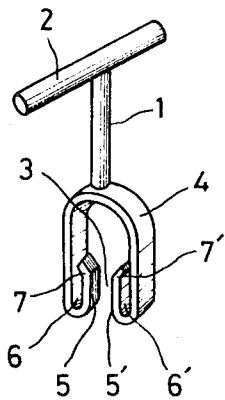


FIG. 4

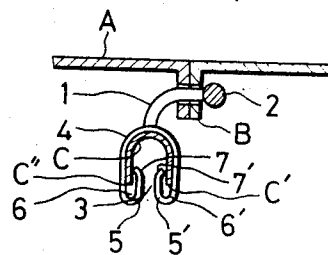
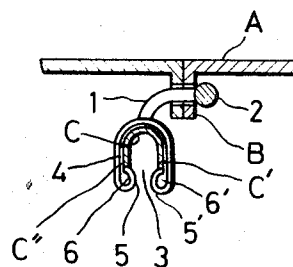


FIG. 5



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FASTENERS FOR ATTACHING CLOTHES TO RIBS OF UMBRELLAS

BACKGROUND OF THE INVENTION

This invention relates to a novel fastener for attaching the cloth of an umbrella to its ribs.

To securely attach the cloth of the umbrella to its ribs it has been the practice to sew the seams between elongated triangular pieces of the cloth to the ribs but this method of sewing requires much labor and in addition the sewing threads tend to break. Moreover, to remove the cloth it is necessary to cut the sewing threads.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a novel fastener which can readily and quickly attach the cloth to the ribs of the umbrella without using any sewing operation.

Another object of this invention is to provide a novel fastener which is more durable than the ordinary sewing threads.

According to this invention there is provided a fastener made of deformable material and comprising a neck, a transverse rod integrally connected to one end of the neck and is twistable into substantial alignment with the neck for piercing the cloth and an anchor of substantially inverted U-shaped configuration, the anchor being connected to the other end of the neck and the outer ends of the legs of the anchor being folded back inwardly to form grooves to receive the rib of the umbrella.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention can be more fully understood from the following detailed description when taken in conjunction with the accompanying drawing in which:

FIG. 1 shows a perspective view of one embodiment of the novel fastener;

FIG. 2 shows a manner of attaching the cloth to a rib of an umbrella by utilizing the fastener shown in FIG. 1;

FIG. 3 shows a perspective view of a modified fastener and

FIGS. 4 and 5 are partial sectional views to show different manners of attaching the cloth to the rib by utilizing the fastener shown in FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The fastener of this invention is made of plastics, soft metals or other readily deformable material. The embodiment shown in FIGS. 1 and 2 comprises a vertical neck 1, a horizontal rod 2 connected to the upper end of neck 1 and a substantially inverted U-shaped anchor 4 connected to the lower end of the

neck in a plane substantially perpendicular to the longitudinal axis of the rod 2. The lower ends of the legs of the anchor are bent upwardly at 5 to define a gap 3 between the upwardly bent ends 5 and two grooves 6 to receive the rib as will be described later. The rod 2, neck 1 and anchor 4 are made as an integral unit. Preferably, at least one end of the horizontal rod is pointed to facilitate piercing through the cloth. Further, the horizontal rod can be readily twisted into alignment with the neck.

In the modified fastener shown in FIG. 3 the thickness of the anchor 4 is made smaller than that shown in FIG. 1 and the upper ends of intumed portions 5 are bent outwardly to towards side legs of the anchor as shown at 7 in FIG. 3.

To attach the cloth A to the rib C of an umbrella by using the fastener shown in FIG. 1 or 3, the horizontal or transverse rod 2 is twisted into substantial alignment with neck 1. Then the rod is pierced through a seam B between pieces of the cloth A and then twisted back to the original position thus fastening the fastener to the cloth. Then the rib is inserted into the anchor with its sides C' and C'' received in the grooves 6 as shown in FIGS. 2 and 4. Alternatively, the inwardly bent ends 7 may be rounded to engage the outer ends of sides C' and C'' of the rib, as shown in FIG. 5. If the anchor has sufficient resiliency instead of axially inserting the rib through the anchor, the rib may be slipped into the anchor through its opening 3.

Thus, this invention provides a novel fastener which can readily attach the cloth to the rib of an umbrella without a sewing operation. Piercing operation of the horizontal rod may be performed with a suitable tool. Moreover, the fastener made of metal or plastics is more durable than a sewing thread and permits easy removal of the cloth from the rib.

What is claimed is:

1. A fastener for attaching a cloth to the rib of an umbrella comprising a neck, a transverse rod integrally connected to one ends of said neck, said transverse rod being twistable substantially into alignment with said neck for piercing said cloth and an anchor of substantially inverted U-shaped configuration, said anchor being connected to the other end of said neck and the outer ends of the legs of said anchor being folded back inwardly to form grooves to receive said rib.

2. The fastener according to claim 1 wherein said transverse rod has at least one pointed end.

3. The fastener according to claim 1 wherein said fastener is made of deformable material selected from the group consisting of metal and plastics.

4. The fastener according to claim 1 wherein said folded back ends of the legs of said anchor are rounded to engage outer ends of the legs of a U-shaped rib.

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