

United States Patent

Kawano

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[54] **FASTENERS FOR ATTACHING CLOTH
TO RIBS OF UMBRELLAS**

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[51] Int. Cl.....A44b 21/00

[58] Field of Search...135/34; 24/16 PB, 150 FP, 102
A, 24/30.5 PB, 73 CF, 73 PF, 208 A

[56] **References Cited**

UNITED STATES PATENTS

1,693,536 11/1928 Woodley.....135/34

1,945,932 2/1934 Caley.....24/16 PB UX
2,087,756 7/1937 Farkas 135/34
3,110,647 11/1963 Tong 24/16 PB x
3,399,432 9/1968 Merser.....24/150 FP UX

FOREIGN PATENTS OR APPLICATIONS

701,336 1/1965 Canada 24/150 FP

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[57]

ABSTRACT

A fastener for attaching the cloth to the ribs of an umbrella made of deformable material and comprising a neck, a transverse rod integrally connected to one end of the neck and being twistable to align with the neck for piercing the cloth, and an anchor having an opening for receiving the rib and connected to the other end of the neck.

1 Claim, 6 Drawing Figures

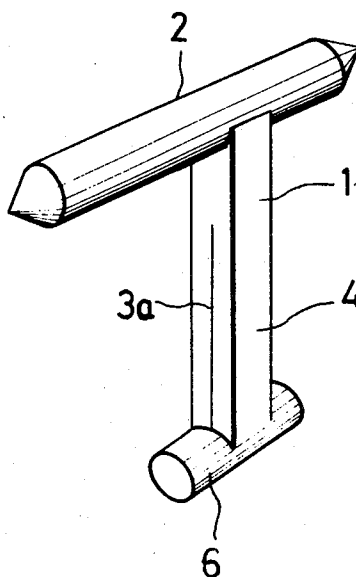


FIG. 1

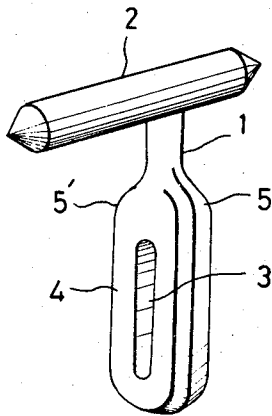


FIG. 2

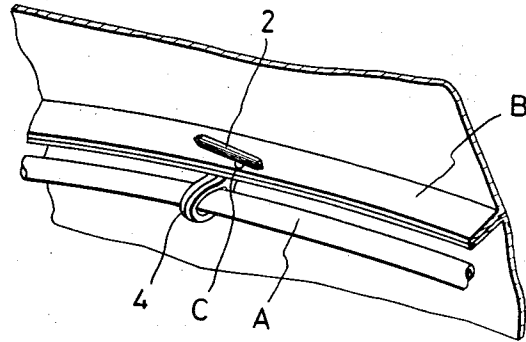


FIG. 3

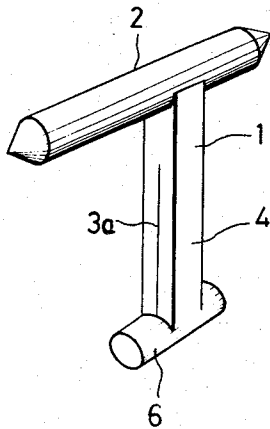
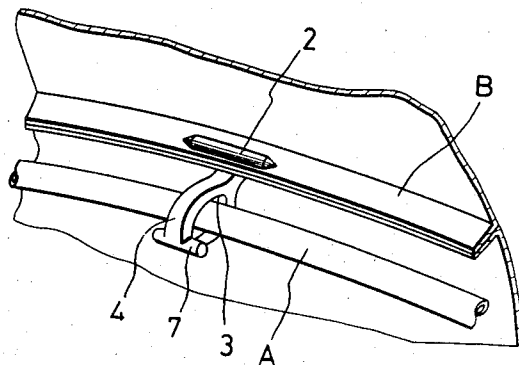


FIG. 4



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FIG. 6

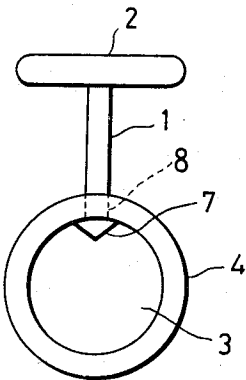
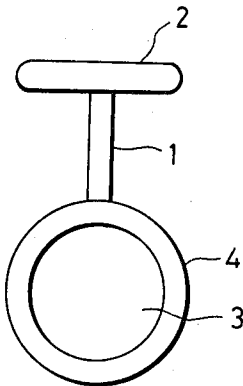


FIG. 5



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1

FASTENERS FOR ATTACHING CLOTH TO RIBS OF UMBRELLAS

BACKGROUND OF THE INVENTION

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

The fastener embodying this invention comprises a neck, a transverse rod integrally connected to one end of the neck, said transverse rod being twistable to substantially align with the neck for piercing the cloth of the umbrella and an anchor having an opening for receiving the rib and connected to the other end of said neck.

BRIEF DESCRIPTION OF THE DRAWINGS

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

FIG. 1 shows a perspective view of a fastener embodying this invention;

FIG. 2 shows the fastener shown in FIG. 1 when it is used to attach a seam between pieces of the cloth to a rib;

FIG. 3 is a perspective view of a modified fastener;

FIG. 4 shows a manner of attaching a seam between pieces of cloth to a rib by using the fastener shown in FIG. 3 and

FIGS. 5 FIGS. 6 are front views of still other modifications of this invention.

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 with at least one end pointed and a ring shaped anchor 4 connected to the lower end

2

of the neck 1 and provided with an elongated slot 3 adapted to receive a rib of the umbrella. The transverse width of a shoulder 5 is wider than the diameter of neck 1. Of course component parts 1, 2 and 4 are made as an internal piece.

To attach the cloth to a rib, first the rib A is inserted through slot 3 of the anchor 4, then after bending horizontal rod 2 into alignment with neck 1, the pointed end of rod 2 is pierced through the seam B between pieces of umbrella cloth. Thereafter the horizontal rod 2 is twisted back to the original position or to the direction of the seam. Of course, a suitable number of fasteners are used at predetermined spacing to attach one seam to one rib.

In the modified embodiment shown in FIG. 3, an additional horizontal anchor 6 shorter than rod 2 is provided at the lower end of rod 1 of square cross-section. In this case a longitudinal slit 3a is formed over a substantial length of the rod 1. When the material of rod 2 on the opposite sides of slit 3a is spread apart an opening similar to slot 3 in FIG. 1 is formed. Then the fastener can be used to attach the cloth to the rib as shown in FIG. 4 in the same manner as has been described in connection with FIG. 2.

In the construction shown in Fig. 5, the anchor 4 is constructed as a circular annulus while in another modification shown in FIG. 6 neck 1 and anchor 4 are made as independent members. More particularly, neck 1 is inserted through an opening 8 in the anchor and is provided with a triangular head 7 at its lower end which prevents removal of the neck.

Thus this invention provides a novel fastener which can readily attach the cloth to the rib of a 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 cloth to the rib of an umbrella comprising:

- a. a neck;
- b. a first transverse rod (2) with at least one pointed end, integrally connected to one end of said neck, said first transverse rod being twistable substantially into alignment for piercing said cloth;
- c. a first anchor (4) having an elongated slit opening adapted to receive a rib, said anchor being connected at one anchor end to the other end of said neck; and,
- d. a second anchor in the shape of a second transverse rod shorter than said first transverse rod connected at about its center to the second anchor end.

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