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(54) **Bundling tape device with electrostatic adhesion**

(57) A bundling tape device (2) includes: a tape (21) wound into a plurality of loops one around the other and having an electrostatic adhesion property. The tape (21) includes a plurality of first tearing lines (22), and a plurality of bundling sections (23) divided by the first tearing lines

(22). Each of the bundling sections (23) has a label portion (232) adjacent to one of the first tearing lines (22). The bundling sections (23) are separable along the first tearing lines (22). Each of the bundling sections (23) can be wound and self-adhered to form a ring adapted to extend around an object.

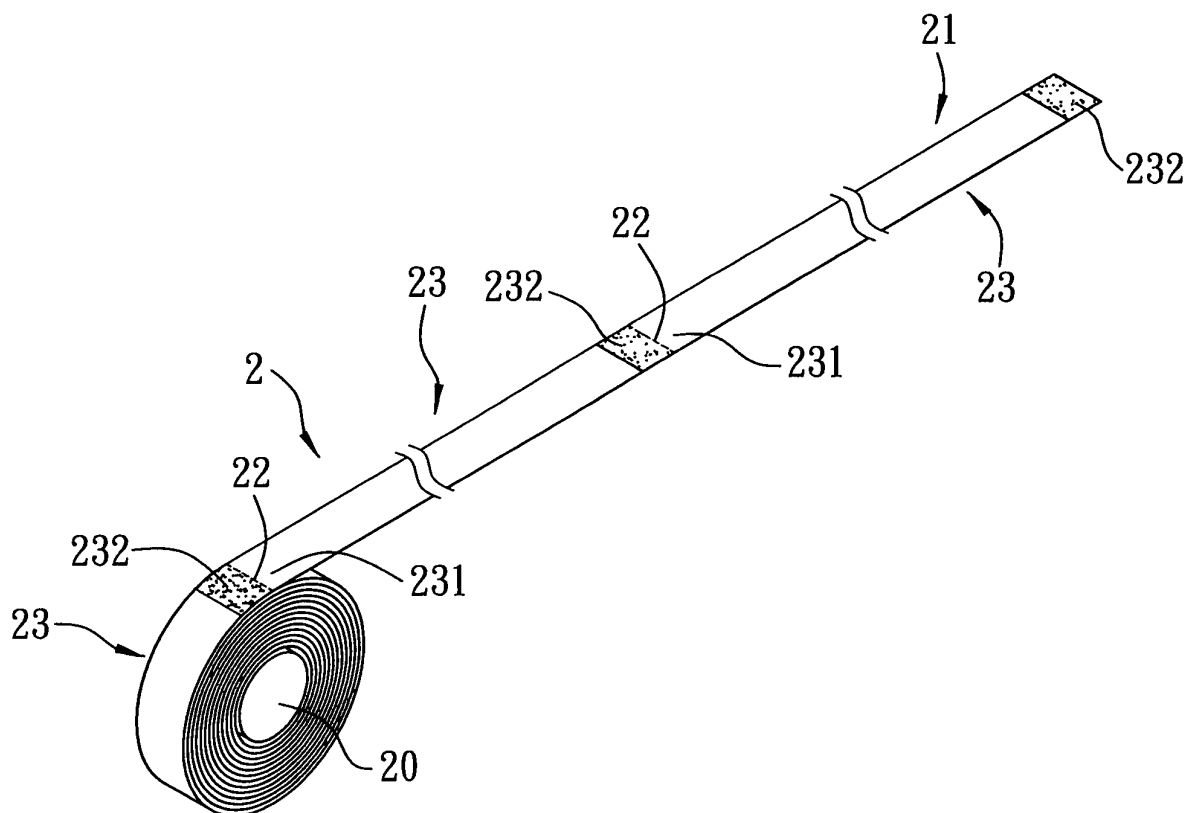


FIG. 3

Description

[0001] This invention relates to a bundling tape device, more particularly to a bundling tape device including a tape having an electrostatic adhesion property.

[0002] Various household appliances are equipped with electrical cords that are likely to get entangled with each other, thereby adversely affecting aesthetics and safety.

[0003] Referring to Fig. 1, a twist metal tie 1 enclosed by a plastic material is primarily used to wind around excessive electrical cords 2. However, there still exists a problem of aesthetics during use.

[0004] Referring to Fig. 2, a hook-and-loop band 3 is used to bundle up the electrical cords 2, and then is affixed in a hook-and-loop engaging manner. However, the manufacturing costs of the hook-and-loop band 3 are relatively high.

[0005] Moreover, inconveniences, such as untidiness and a large storage volume, are encountered when a number of the twist metal ties 1 and the hook-and-loop bands 3 are stored.

[0006] Therefore, an object of the present invention is to provide a bundling tape device that can overcome the aforesaid drawbacks associated with the prior art.

[0007] According to the present invention, a bundling tape device comprises a tape wound into a plurality of loops one around the other and having an electrostatic adhesion property. The tape includes a plurality of first tearing lines, and a plurality of bundling sections divided by the first tearing lines. Each of the bundling sections has a label portion adjacent to one of the first tearing lines. The bundling sections are separable along the first tearing lines. Each of the bundling sections can be wound and self-adhered to form a ring adapted to extend around an object.

[0008] Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments of this invention, with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view illustrating electrical cords bundled by a twist metal tie;

Fig. 2 is a perspective view illustrating electrical cords bundled by a hook-and-loop band;

Fig. 3 is a perspective view of the first preferred embodiment of the bundling tape device according to this invention;

Fig. 4 is a perspective view illustrating cords bundled by a bundling section that is separated from a tape of the first preferred embodiment; and

Fig. 5 is a perspective view of the second preferred embodiment of the bundling tape device according to this invention.

[0009] Before the present invention is described in greater detail with reference to the accompanying pre-

ferred embodiments, it should be noted herein that like elements are denoted by the same reference numerals throughout the disclosure.

[0010] Referring to Figs. 3 and 4, the first preferred embodiment of a bundling tape device 2 according to this invention includes a tape 21 that is wound into a plurality of loops one around the other. The tape 21 extends around a mandrel 20 of rounded cross-section and has an electrostatic adhesion property. In this embodiment, the tape 21 is made of a flexible sheet material such as polyethylene (PE), polyvinyl chloride (PVC), etc. The color of the tape 21 is dark. Of course, the tape 21 can be transparent or other colors.

[0011] The tape 21 includes a plurality of first tearing lines 22, and a plurality of bundling sections 23 divided by the first tearing lines 22. The first tearing lines 22 are parallel and spaced apart from each other along a length of the tape 21 such that the bundling sections 23 are interconnected to each other along the length of the tape 21. Each of the bundling sections 23 has a substantially dark color, and includes a label portion 232 adjacent to one of the first tearing lines 22, and an attachment end 231 opposite to the label portion 232. The bundling sections 23 are separable along the first tearing lines 22. Each of the bundling sections 23 can be wound and self-adhered by electrostatic adhesion to form a ring.

[0012] In use, when an electrical cord 4 is to be bundled to a neat and compact stored configuration, the tape 21 is reeled out, and one of the bundling sections 23 is separated from the tape 21 by tearing along one of the first tearing lines 22 so as to obtain an individual bundling section 24. After attaching the attachment end 231 of the individual bundling section 24 to the electrical cord 4, the individual bundling section 24 is wound around the electrical cord 4 until it forms a ring. The individual bundling section 24 is tightly affixed to itself by virtue of electrostatic adhesion. The label portion 232 may be a non-adhering portion or an adhering portion. In this embodiment, the label portion 232 has a color different from that of the remaining portion of the bundling sections 23.

[0013] By virtue of the label portions 232 of the bundling sections 23, a user can easily and clearly identify a start point for unreeling one of the bundling sections 23, or a point for tearing off one of the bundling sections 23. Furthermore, when the electrical cord 4 is bundled partially using the individual bundling section 24 and has an unbundled portion in use, the length of the unbundled portion can be lengthened or shortened by handling the label portion 232 to unwind the individual bundling section 24 so as to release the bundled portion of the electrical cord 4. Thereafter, the electrical cord 4 can be bundled again using the individual bundling section 24.

[0014] Moreover, by virtue of the first tearing lines 22, the bundling sections 23 are wound into a roll prior to use, which is convenient for saving storage space and transport, and which can be readily separated into the individual bundling sections 24 during use.

[0015] Referring to Fig. 5, the second preferred em-

bodiment of the present invention differs from the first preferred embodiment in that the tape 21 further includes a plurality of second tearing lines 25 that are spaced apart from each other in a direction transverse to the first tearing lines 22. In this embodiment, the tape 21 is wound around a mandrel 20' having a plate-like cross-section. There are three sub-tapes 21' that are arranged in parallel and that are divided by the second tearing lines 25. Each sub-tape 21' has the first tearing lines 22 and the bundling sections 23.

Claims

1. A bundling tape device (2) **characterized by:**
 - a tape (21) wound into a plurality of loops one around the other and having an electrostatic adhesion property, said tape (21) including a plurality of first tearing lines (22), and a plurality of bundling sections (23) divided by said first tearing lines (22), each of said bundling sections (23) having a label portion (232) adjacent to one of said first tearing lines (22), said bundling sections (23) being separable along said first tearing lines (22), wherein each of said bundling sections (23) can be wound and self-adhered to form a ring adapted to extend around an object.
2. The bundling tape device of Claim 1, **characterized in that** said first tearing lines (22) are parallel and spaced apart from each other along a length of said tape (21).
3. The bundling tape device of Claim 1, further **characterized by** second tearing lines (25) that are spaced apart from each other in a direction transverse to said first tearing lines (22), said second tearing lines (25) dividing said tape (22) into a plurality of sub-tapes (21') each of which has said first tearing lines (22) and said bundling sections (23).

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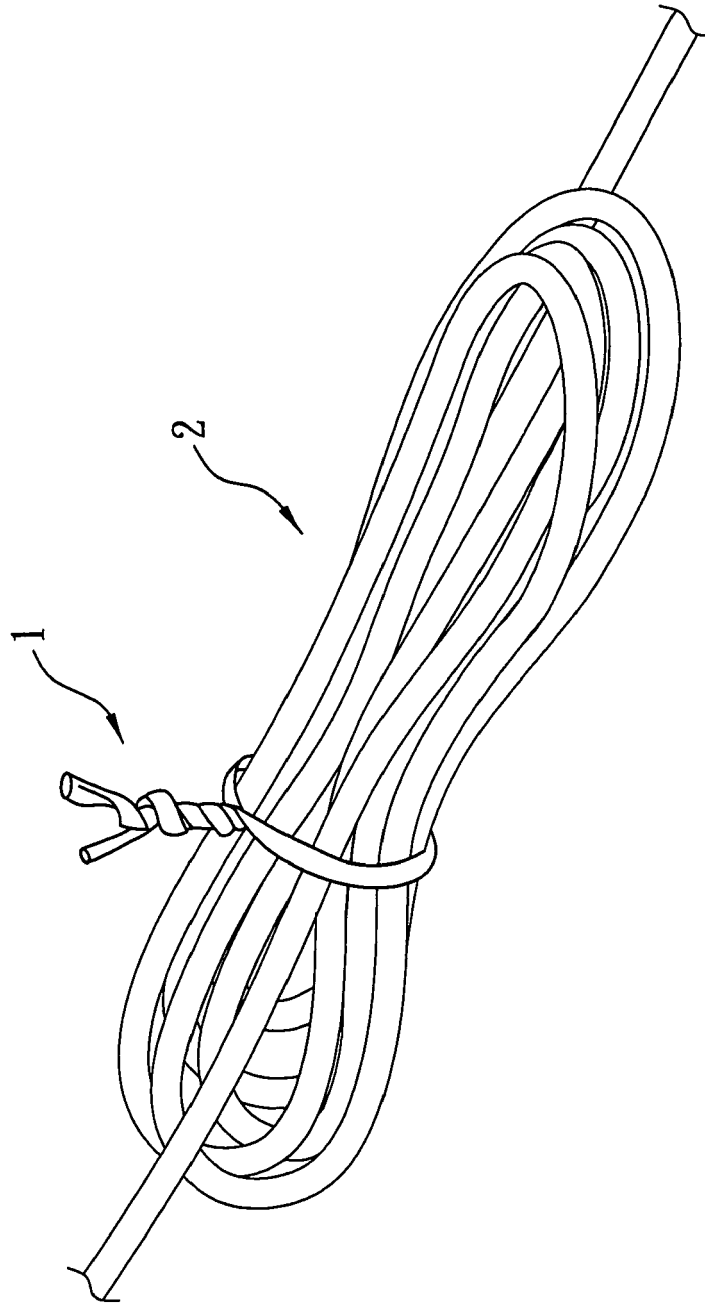


FIG. 1

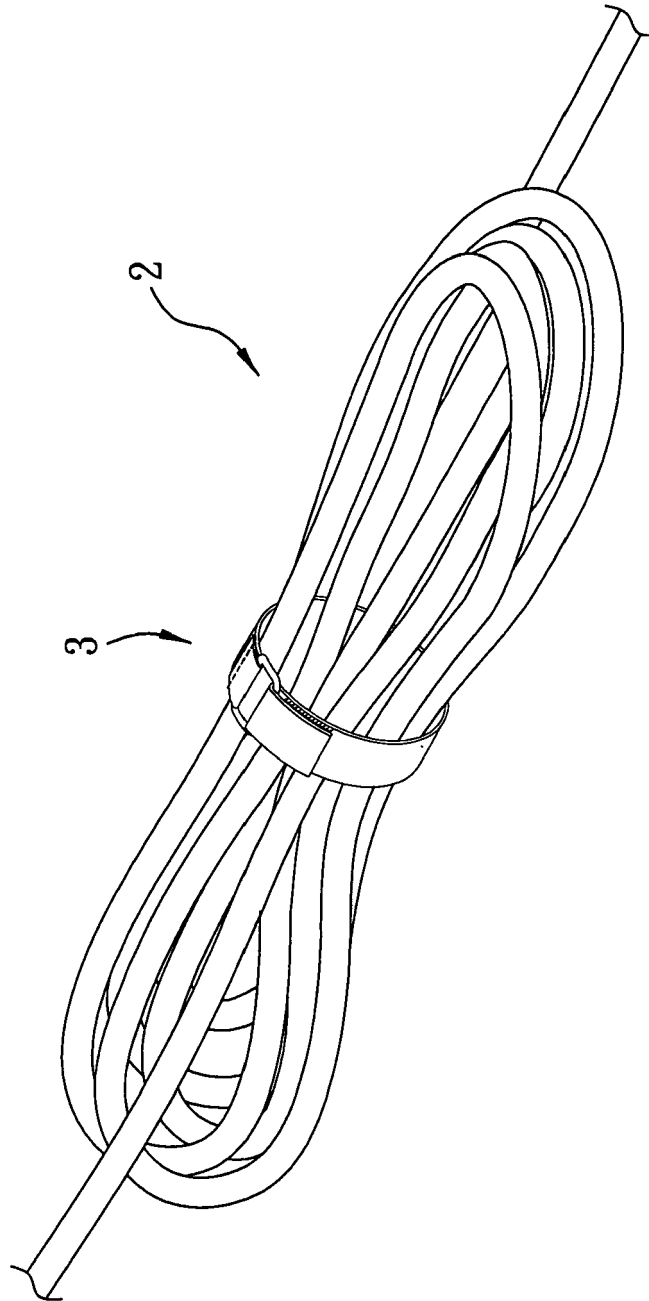


FIG. 2

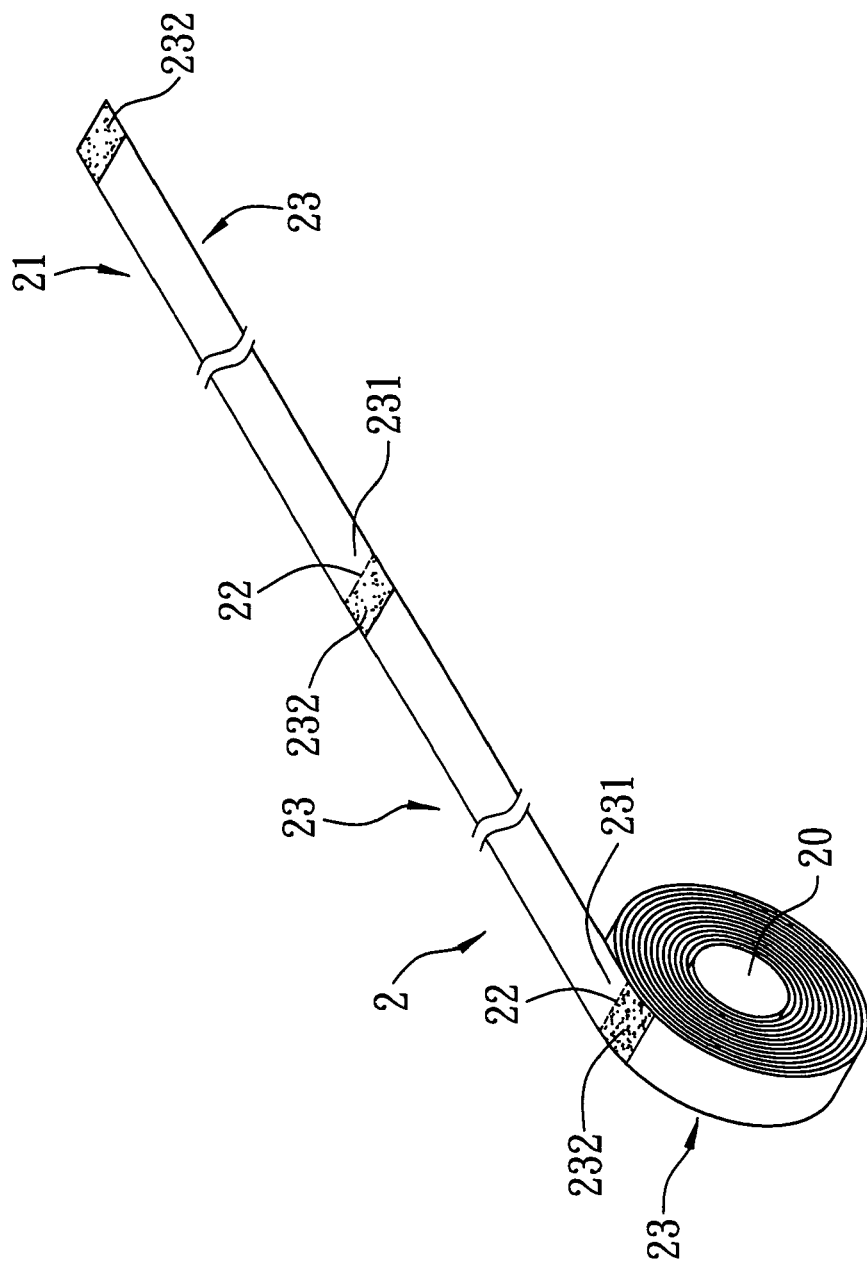


FIG. 3

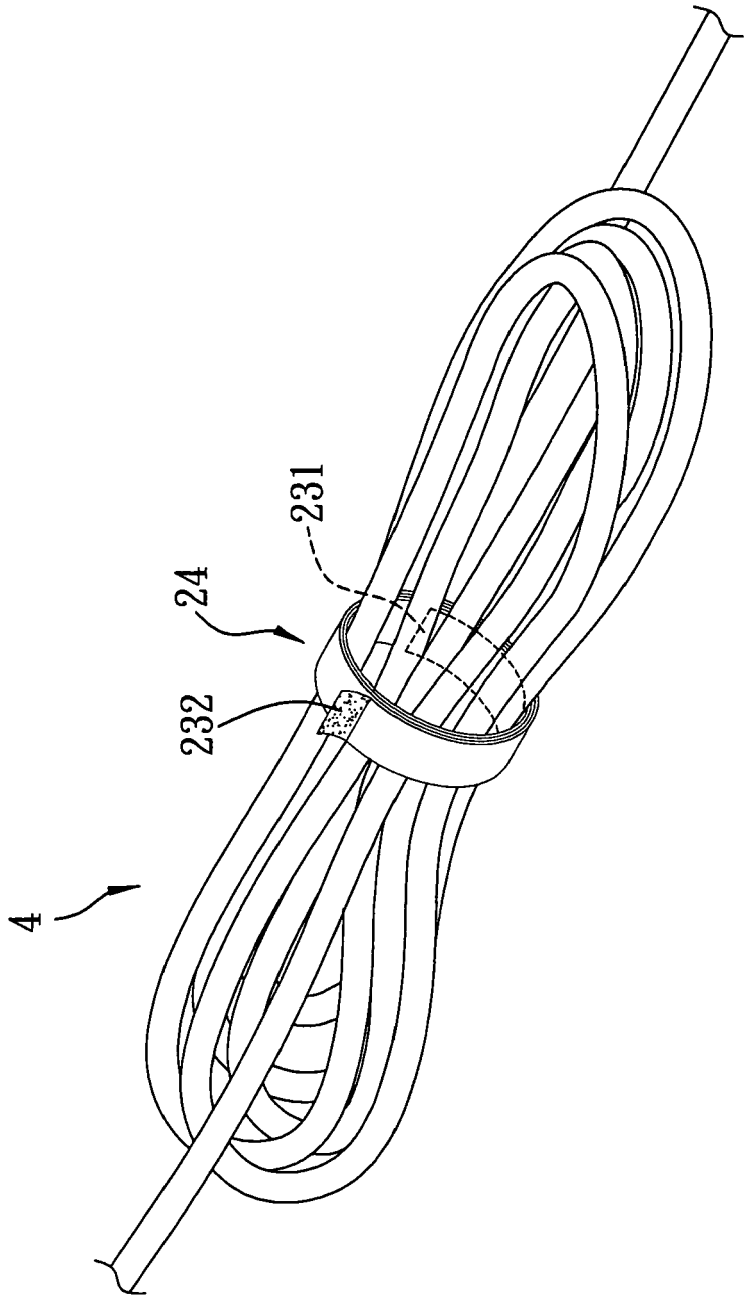


FIG. 4

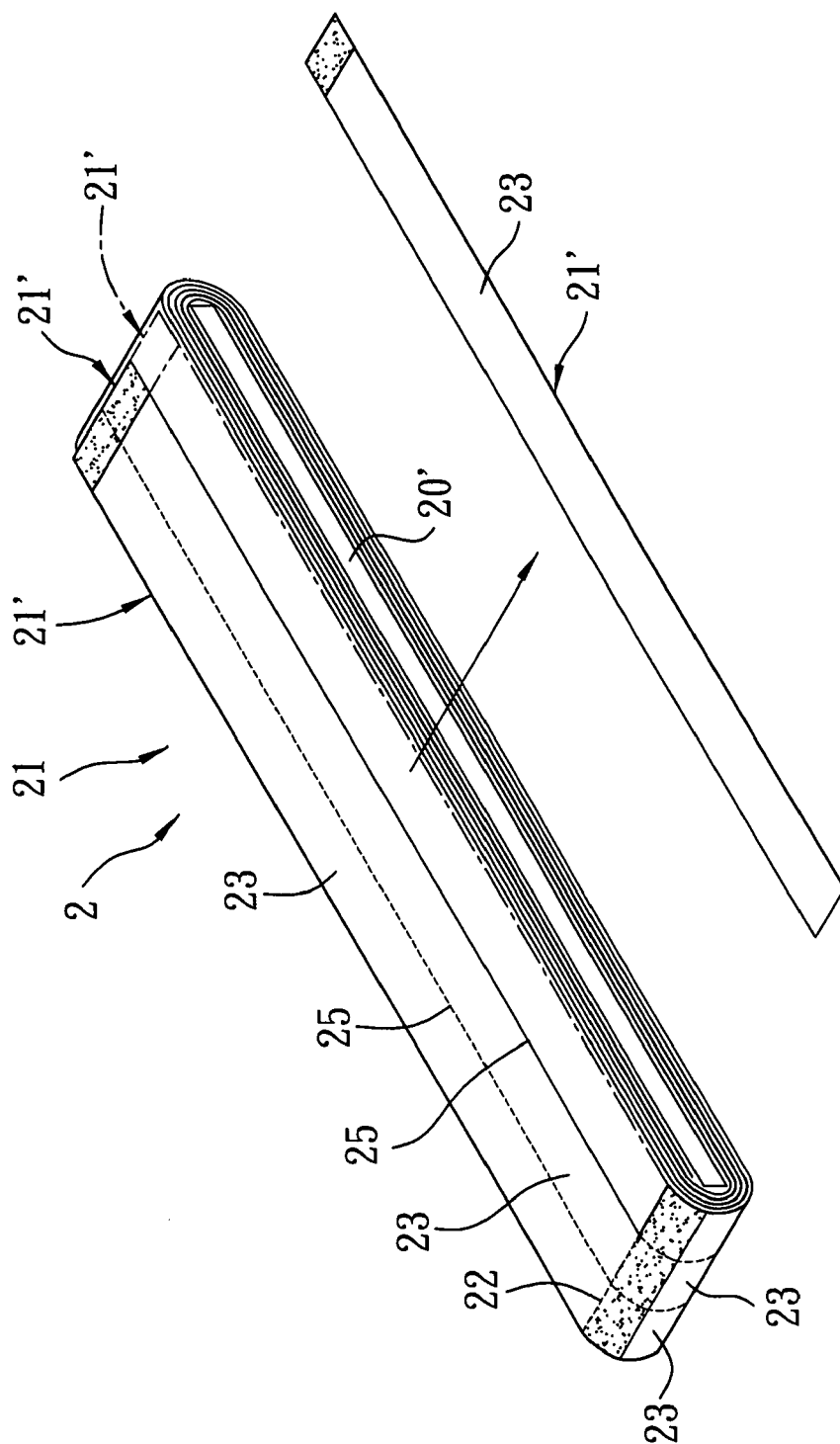


FIG. 5



EUROPEAN SEARCH REPORT

Application Number
EP 09 09 0010

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	DE 29 09 276 A1 (COHAUSZ HELGE B) 18 September 1980 (1980-09-18) * page 6, paragraph 2 - paragraph 3 * * page 9, paragraph 2 - page 10, paragraph 1 * * figures 3,4 * * claims 1,6 *	1-3	INV. B65D63/10 C09J7/04
Y	US 3 967 022 A (HASEI TAEKO) 29 June 1976 (1976-06-29) * abstract * * column 2, line 29 - line 43 *	1,2	
Y	GB 2 415 646 A (LISHAK ROZ [GB]) 4 January 2006 (2006-01-04) * page 6, paragraph 3 - page 7, paragraph 2 * * page 10, paragraph 4 * * figures 1,2,7 *	1,3	
A	US 2 303 144 A (STEPHENSON WALTER E) 24 November 1942 (1942-11-24) * claims 1,2 * * figures 1,2 *	1,2	TECHNICAL FIELDS SEARCHED (IPC) B65D C09J B65H F16L G09F
The present search report has been drawn up for all claims			
Place of search Berlin		Date of completion of the search 18 November 2009	Examiner Schaeffler, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 09 0010

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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18-11-2009

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US 2303144	A	24-11-1942	NONE

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82