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London EC4A 1BO(GB)(54) **Integrally-formed safety umbrella runner.**

(57) An umbrella lower runner (4) slidably held on an umbrella central shaft (1) includes a spring button plate (44) integrally formed with the runner (4) normally extending outwardly for shielding a spring catch (5) resiliently held in the central shaft (1) of the umbrella and operatively depressing the spring catch (5) for lowering the runner (4) for closing the umbrella, so that a depression of the spring button plate (44) on the spring catch (5) will not injure a user's fingers for safety purpose.

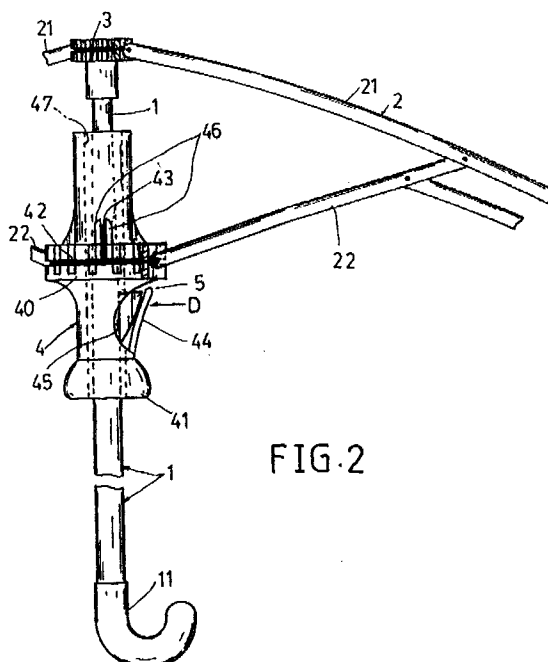


FIG.2

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The present invention relates to a safety umbrella runner.

A conventional lower runner 4 as shown in Figure 1 is slidably held on a central shaft 1 of an umbrella having a rib assembly 2 with a top rib 21 and a stretcher rib 22 respectively pivotally secured to an upper notch 3 and the lower runner 4, which however has the following drawbacks:

1. When it is intended to close the umbrella, the spring catch 5 should be first depressed to disengage a lower periphery 41 of the lower runner 4. The spring catch 5 is generally made as a thin plate so that the depression of such a thin-plate catch 5 may injure a user's finger.
2. A ring-shaped wire 42 is circularly disposed around the runner 4 for pivotally mounting each stretcher rib 22 of the rib assembly 2, of which two free ends of the wire 42 are tied to form a knot 43 which may stick a user's finger to cause his or her injury.

The present inventor has found the drawbacks of the conventional umbrella runner and invented the present safety umbrella runner.

According to the present invention, there is provided an umbrella lower runner having a spring button plate integrally formed with the runner normally extending outwardly for shielding a spring catch resiliently held in a central shaft of the umbrella and operatively depressed for depressing the spring catch for lowering the runner for closing the umbrella, so that the depression of the spring button plate on the spring catch will not injure a user's fingers for safety purpose.

Embodiment of the present invention will be described with reference to the accompanying drawings, in which:

Figure 1 shows a prior art of a conventional umbrella runner;

Figure 2 is an illustration of the present invention mounted on an umbrella; and

Figure 3 is a perspective view of the runner in accordance with the present invention.

As shown in Figures 2, 3, the present invention comprises: a lower runner 4 slidably held on a central shaft 1 of an umbrella which includes a rib assembly 2 secured with an umbrella cloth having a plurality of top ribs 21 pivotally secured to an upper notch 3 fixed on a top portion of the shaft 1, and a plurality of stretcher ribs 22 each rib 22 pivotally secured between the lower runner 4 and each top rib 21, a spring catch 5 resiliently held in the shaft 1 for retaining the runner 4 when extending and opening the umbrella, and a grip 11 formed on a lower end portion of the shaft 1.

The lower runner 4 includes: a lower periphery 41 formed on a lower portion of the runner 4 resiliently held on the spring catch 5 for extending or opening the umbrella of the present invention as

shown in Figure 2, a middle ferrule flange 40 formed on a middle portion of the runner 4 having a ring-shaped wire 42 circumferentially wound on the ferrule flange 40 for pivotally mounting each stretcher rib 22 thereon in which a knot 43 is tied at two free ends of the wire 42, a spring button plate 44 integrally formed on the runner 4 by protruding outwardly upwardly from the lower periphery 41, a slot 45 which is directly cut in the runner 4 for forming the spring button plate 44 and prejectively disposed around the button plate 44, a pair of shielding protrusions 46 integrally formed on the runner 4 disposed on a right and a left side of the knot 43 for preventing injury to a user, and a central hole 47 formed through the runner 4 for slidably holding the runner 4 on the central shaft 1.

The spring button plate 44 of this invention is designated "spring" because the plate 44 is directly formed on the runner 4, which may be made of plastic materials having suitable elastic property, by cutting the slot 45 in the runner 4. The catch 5 is extended outwardly from the shaft 1 to engage the slot 45 so that the runner 4 and the rib assembly 2 can be stably held on an upper portion of the central shaft 1 when extending the rib assembly 2 and opening the umbrella of the present invention. The outwardly protruded spring catch 5 is shielded and protected by the button plate 44.

When it is intended to close the umbrella which had already been opened as shown in Figure 2, the spring button plate 44 is depressed in direction D as shown in Figure 2 to depress the catch 5 inwardly to disengage the runner 4 from the catch 5 so as to lower the runner 4 and retract the ribs 2 for closing the umbrella.

Since the thin-plate catch 5 is shielded by the button plate 44, the depression of catch 5 is indirectly done by the user because the catch 5 is depressed inwardly as urged by the button plate 44 when depressed by the user, so that a user's finger will not contact the thin-plate catch 5 to prevent any injury caused to the user.

The present invention is superior to any conventional umbrella runner with the following advantages:

1. The depression of a spring catch for retracting an umbrella ribs for closing an umbrella is indirectly done by depressing the button plate 44 without contacting the catch 5, thereby preventing injury to a user. Otherwise, a direct depression on the catch 5 made of thin plate may injure a user's fingers.
2. The button plate 44 is directly formed on the runner 4 to provide a safety runner, but having production and assembly convenience when making the umbrella.
3. The shielding protrusion 46 may protect a user's finger to prevent his or her injury as stuck

by any wire end of the wire 42 wound on the runner 4.

Claims

1. A safety umbrella runner comprising:

a lower runner (4) slidably held on a central shaft (1) having a plurality of stretcher ribs (22) of a rib assembly (2) secured with an umbrella cloth thereon and pivotally secured to said runner (4), and a plurality of top ribs (21) pivotally connected with said stretcher ribs (22) pivotally secured to an upper notch (3) formed on a top portion of said central shaft (1); said lower runner (4) including a spring button plate (44) integrally formed with said runner (4) normally protruding outwardly upwardly from a lower periphery (41) of said runner (4), and a slot (45) formed in said runner (4) projectively disposed around said button plate (44) for engaging a spring catch (5) which is normally resiliently protruded outwardly from said central shaft (1) for holding said runner (4) and said rib assembly (2) for opening an umbrella, said spring catch (5) protruded outwardly from said shaft (1) to be shielded by said button plate (44), whereby upon a depression of said spring button plate (44) to depress said spring catch (6) inwardly, said lower runner (4) is disengaged from said spring catch (5) to retract the rib assembly (2) to close the umbrella, thereby preventing a direct contact of a user's finger with the spring catch (5) for safety purpose.
2. A safety umbrella runner according to Claim 1, wherein said spring button plate (44) is integrally formed on said lower runner (4) by directly cutting said slot (45) in said runner (4) to form said button plate (44).
3. A safety umbrella runner according to Claim 1, wherein said lower runner (4) is made of elastic plastic materials for forming said spring button plate (44).

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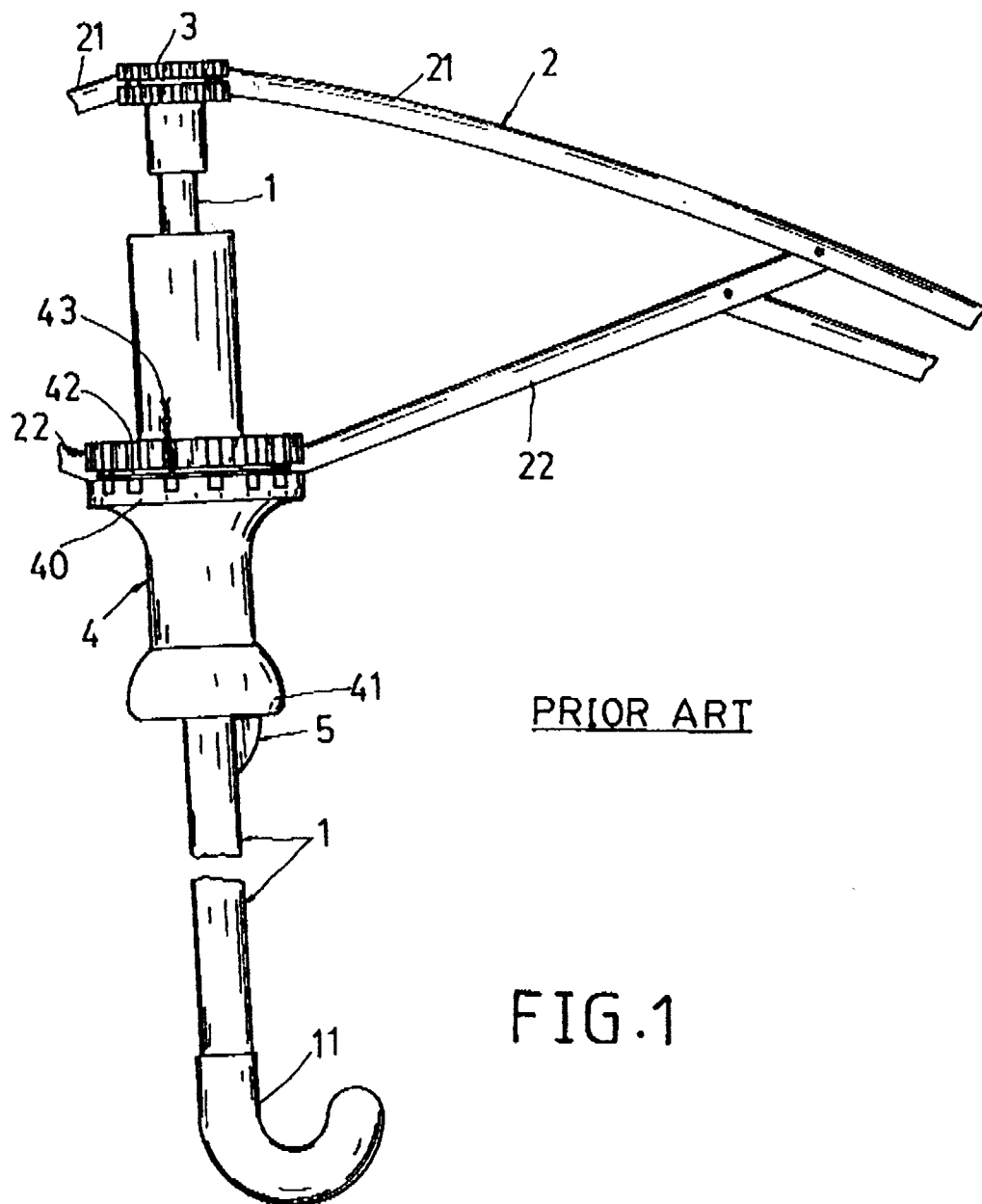
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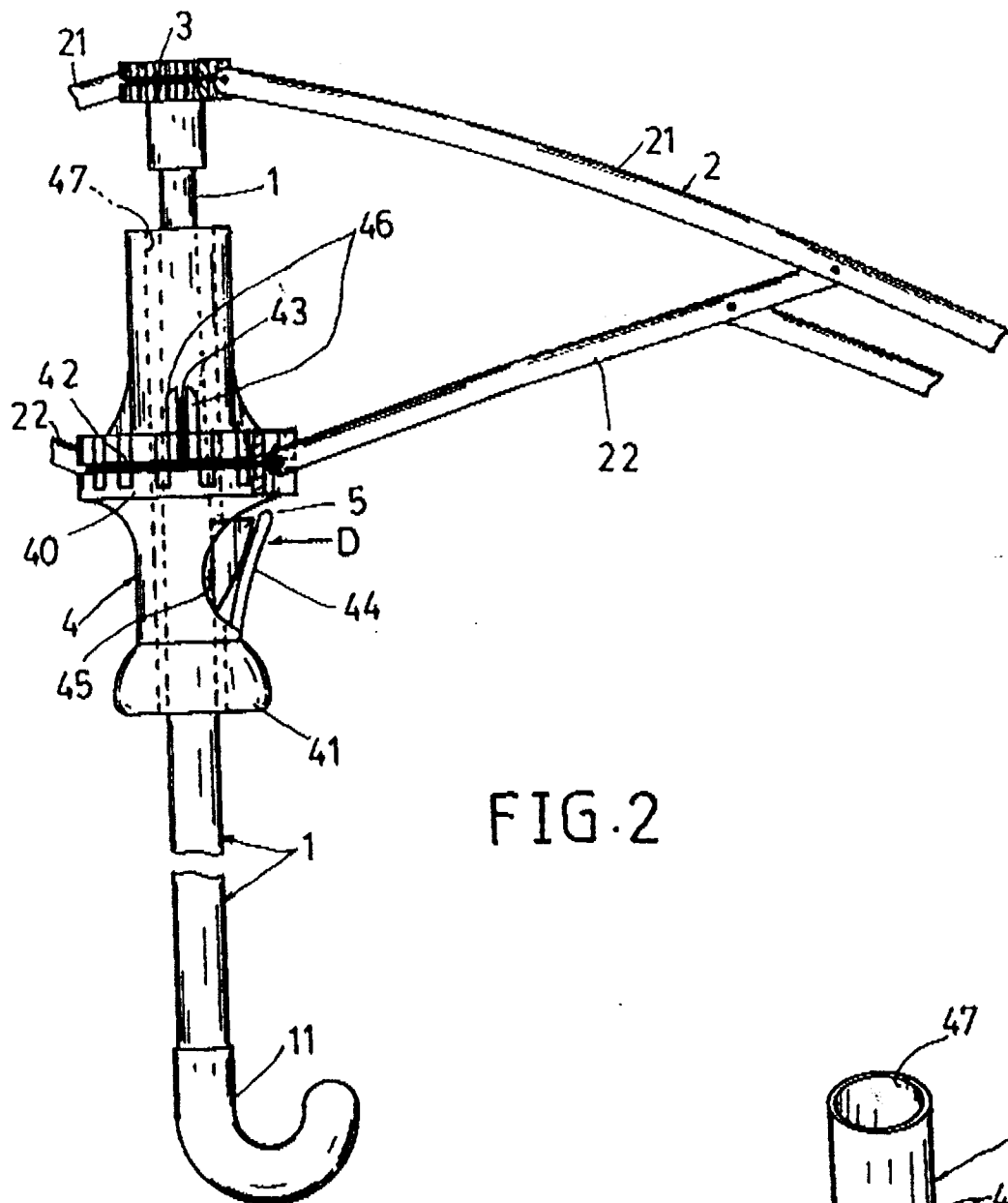


FIG. 2

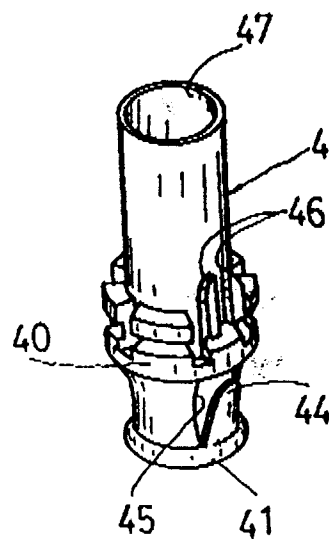


FIG. 3



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 91 30 0032

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	FR-A-1 515 169 (MILLET) * the whole document * ---	1-3	A45B25/06
X	DE-U-8 327 307 (KORTENBACH & RAUH) * page 9, line 18 - page 10, line 16; figures 1-3 * ---	1-3	
A	GB-A-2 151 917 (KORTENBACH) ---		
A	GB-A-918 830 (KORTENBACH) ---		
A	DE-B-1 948 981 (BREMSHEY) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A45B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 AUGUST 1991	Examiner SIGWALT 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	