



(11) EP 2 548 743 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
23.01.2013 Bulletin 2013/04

(51) Int Cl.:
B42D 3/12 (2006.01)
B42F 7/02 (2006.01)
B43L 3/00 (2006.01)

(21) Application number: 11174466.0

(22) Date of filing: 19.07.2011

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME

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(54) Folder device with a power supply

(57) A folder device with a power supply includes a folder body (10) having two panels (11, 12), a spine (13) interconnecting the panels (11, 12); and a battery case (20) having a base casing (21), a cover (22, 22'), and a battery chamber (24) confined by the base casing (21)

and the cover (22, 22'). The base casing (21) is fixed to the spine (13). The cover (22, 22') is connected detachably to the base casing (21). The battery case (20, 20') mounted on the spine (13) takes less space and may serve to improve the esthetic appearance of the folder device.

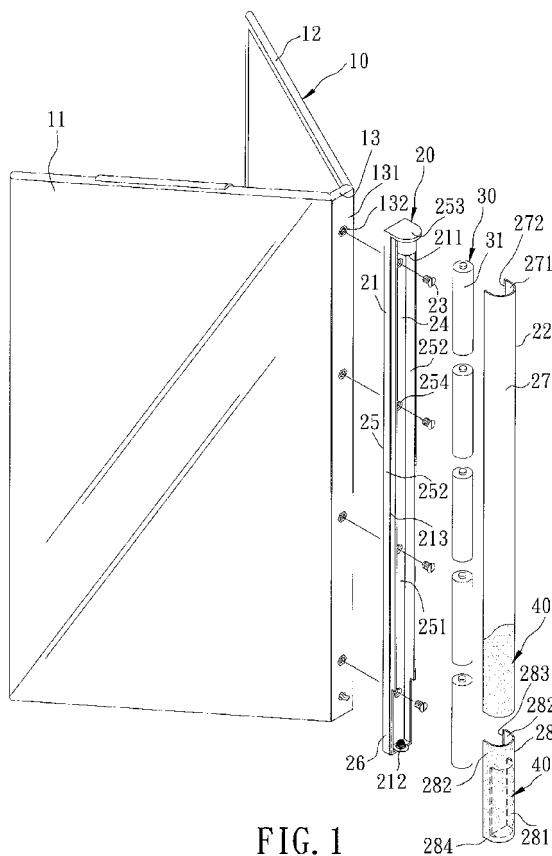


FIG. 1

Description

[0001] The invention relates to a folder device, more particularly to a folder device with a power supply mounted on a spine thereof.

[0002] In commercial venues, such as restaurants, cafes, etc., information sheets, such as menus, ordering sheets, bills, etc., are usually clamped on a folder for positioning purposes and for providing conveniences to customers to read/look at the contents of the information sheets, or to sign or write thereon. However, in some restaurants or cafes, because dim light is arranged in the premises in order to produce a romantic atmosphere, it is difficult for a customer to clearly see a menu or bill held by a folder handed by a waiter or to sign or write thereon.

[0003] An object of this invention is to provide a folder device incorporating a power supply for a light source.

[0004] Accordingly, a folder device with a power supply according to this invention comprises: a folder body having two panels, a spine interconnecting the panels, and an inner side defined by the panels and the spine; and a battery case having a base casing, a cover, and a battery chamber confined by the base casing and the cover. The base casing is fixed to the spine. The cover is connected detachably to the base casing.

[0005] Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiment with reference to the accompanying drawings, of which:

Figure 1 is an exploded perspective view of the first preferred embodiment of a folder device according to the present invention;

Figure 2 is a sectional view of the first preferred embodiment;

Figure 3 is a sectional view taken along line III-III;

Figure 4 is a sectional view taken along line IV-IV;

Figure 5 is an exploded perspective view of the second preferred embodiment of a folder device according to the present invention; and

Figure 6 is a sectional view of the second preferred embodiment.

[0006] Before the present invention is described in greater detail with reference to the accompanying preferred embodiment, it should be noted herein that like elements are denoted by the same reference numerals throughout the disclosure.

[0007] Referring to Figures 1 and 2, the first preferred embodiment of a folder device of this invention is shown to include a folder body 10, a battery case 20 and a battery unit 30.

[0008] The folder body 10 has first and second panels 11, 12 that are movable between an opening position and a closing position, a spine 13 interconnecting the first and second panels 11, 12. The spine 13 has an outer face 131 and a plurality of nuts 132 embedded therein.

[0009] The battery case 20 has a base casing 21, a

cover 22, a plurality of screws 23 and a battery chamber 24 confined by the base casing 21 and the cover 22.

[0010] The base casing 21 has a first portion 25, a second portion 26, and two slide grooves 213 formed respectively in two opposite sides of the base casing 21 and extending from the first portion 25 to the second portion 26. The first portion 25 has a substantially U-shaped cross section, and includes a bottom wall 251, a pair of lateral walls 252 extended from two opposite sides of the bottom wall 251, and an end wall 253 connected to one end of the bottom wall 251 and one end of each lateral wall 252. The bottom wall 251 is formed with a plurality of through holes 254 that are respectively aligned with the nuts 132. A pole 211 is disposed on the end wall 253, and another pole 212 is disposed on another end wall of the second portion 26, which is opposite to the end wall 253. A plurality of screws 23 extend through the respective through holes 254 into the respective nuts 132, thus mounting fixedly the base casing 21 to the outer face 131 of the spine 13.

[0011] The cover 22 is connected detachably to the base casing 21, and includes a stationary portion 27 covering the first portion 25, and a movable portion 28 covering the second portion 26. Referring again to Figure 3, the stationary portion 27 of the cover 22 has a substantially U-shaped cross section, two opposite side 271 respectively engaging the opposite sides of the base casing 21, and two slide hooks 272 respectively provided on the opposite sides 271 to engage the respective slide grooves 213 of the first portion 25. Referring to Figure 4, the movable portion 28 of the cover 22 has a substantially U-shaped cross section, a top wall 281, two opposite sidewalls 282 connected to the top wall 281, two slide rails 283 formed respectively on the sidewalls 282, and an end plate 284 connected transversely to the top wall 281 and the two sidewalls 282. The two slide rails 283 engage slidably the respective slide grooves 213 of the second portion 26. The end plate 284 is opposite to the end wall 253 of the base casing 21 and is used to close an open end of the battery chamber 24.

[0012] The battery unit 30 includes multiple batteries 31 mounted in the battery chamber 24 of the battery case 20 for electrical connection with the poles 211, 212.

[0013] Referring back to Figures 2, 3 and 4, the stationary portion 27 is positioned to the first portion 25 of the base casing 21 through an engagement of the slide grooves 213 with the slide hooks 272. When the movable portion 28 is detached from the second portion 26 of the base casing 21, the battery chamber 24 is opened at one side distal from the end wall 253 of the base casing 21 to fill the batteries 31. To close the battery chamber 24, the battery chamber 24 may be attached to the base casing 21 by sliding the slide rails 283 of the movable portion 28 along the slide groove 213 to move the end plate 284 toward the battery unit 30. When the movable portion 28 abuts against and is stopped by the stationary portion 27, the batteries 31 are connected to the poles 211, 212. The power generated by the battery unit 30 can be sup-

plied to a light-emitting element (not shown) for illuminating the folder device.

[0014] It is worth to mention that, the surfaces of the base casing 21 and the cover 22 may be provided with a coating layer 40 having the same color as the folder body 10 to hide the battery case 20. The coating layer 40 can also improve the aesthetic appearance of the folder device.

[0015] Referring to Figures 5 and 6, the second preferred embodiment of the folder device according to this invention is shown to include a folder body 10, a battery case 20' and a battery unit 30. The battery case 20' has a base casing 21, a cover 22', a plurality of screws 23 and a battery chamber 24 confined by the base casing 21 and the cover 22'. The second preferred embodiment differs from the first preferred embodiment in that: The slide grooves 213 of the base casing 21 are provided only in the first portion 25. The second portion 26 has a first side 261, and a second side 262 that is formed with a locking hole 263'. The movable portion 28' of the cover 22' has a substantially U-shaped cross section, a connection end 281' connected pivotally to the first side 261, a free end 282' movable to the second side 262, and a locking piece 283' disposed on the free end 282' and interlockable with the locking hole 263'. Preferably, the movable portion 28' and the second portion 26 of the base casing 21 are integrally formed as one piece.

[0016] The second preferred embodiment is operable to pivot the movable portion 28' relative to the base casing 21 for opening and closing operations so that the battery unit 30 can be conveniently removed and replaced.

Claims

1. A folder device with a power supply, comprising:

a folder body (10) including two panels (11, 12), and a spine (13) interconnecting said cover panels (11, 12); and
 a battery case (20, 20') having a base casing (21), a cover (22, 22'), and a battery chamber (24) confined by said base casing (21) and said cover (22, 22'), said base casing (21) being fixed to said spine (13), said cover (22, 22') being connected detachably to said base casing (21).

2. The folder device of Claim 1, wherein said base casing (21) has first and second portions (25, 26), said cover (22, 22') having a stationary portion (27) covering said first portion (25), and a movable portion (28, 28') covering said second portion (26).

3. The folder device of Claim 2, wherein said base casing (21) has two opposite sides extending along two opposite longitudinal sides of said spine (13), said stationary portion (27) of said cover (22, 22') having a substantially U-shaped cross section, and two op-

posite sides respectively engaging said opposite sides of said base casing (21).

4. The folder device of Claim 3, wherein said base casing (21) further has two slide grooves (213) formed respectively in said opposite sides of said base casing (21), and said stationary portion (27) of said cover (22) further has two slide hooks (271) respectively engaging said slide grooves (213).
5. The folder device of Claim 4, wherein said slide grooves (217) extends from said first portion (25) to said second portion (26), said movable portion (28) of said cover (22) having a substantially U-shaped cross section and two opposite sides respectively formed with two slide rails (283) to engage slidably and respectively said slide grooves (213).
6. The folder device of Claim 4, wherein said second portion (26) of said base casing (21) has two opposite first and second sides, and a locking hole (263') formed in said second side, said movable portion (28') of said cover (22') having a substantially U-shaped cross section, a connection end (281') connected pivotally to said first side, and a free end (282') movable to said second side, and a locking piece (283') disposed on said free end (282') and interlockable with said locking hole (263').
7. The folder device of Claim 6, wherein said movable portion (28') of said cover (22') is formed as one piece with said second portion (26).
8. The folder device of Claim 1, further comprising a plurality of screws (23) that fasten said base casing (21) to said spine (13).
9. The folder device of Claim 8, further comprising a plurality of nuts (132) fixed in said spine (13) and engaging respectively said screws (23).

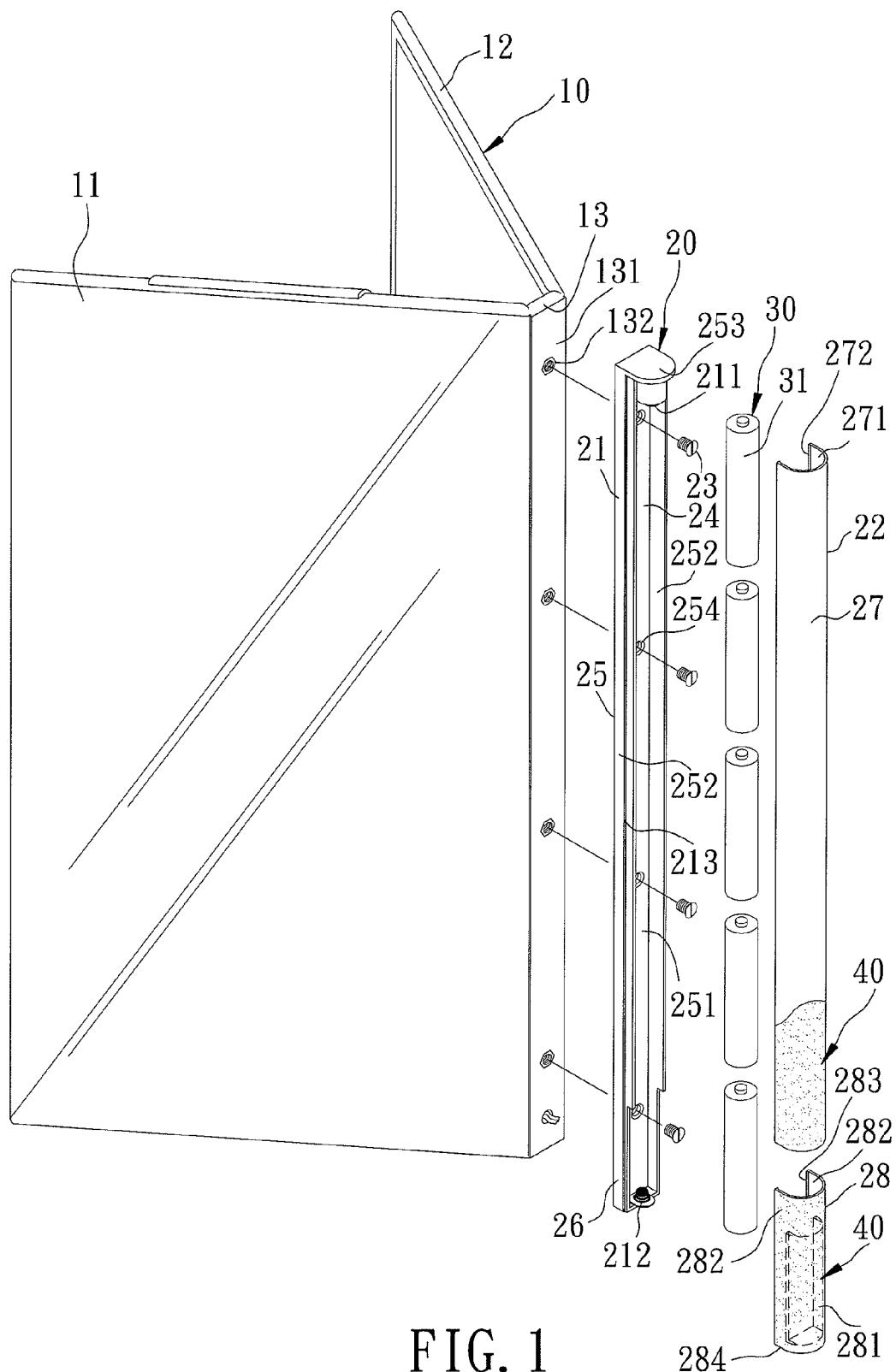
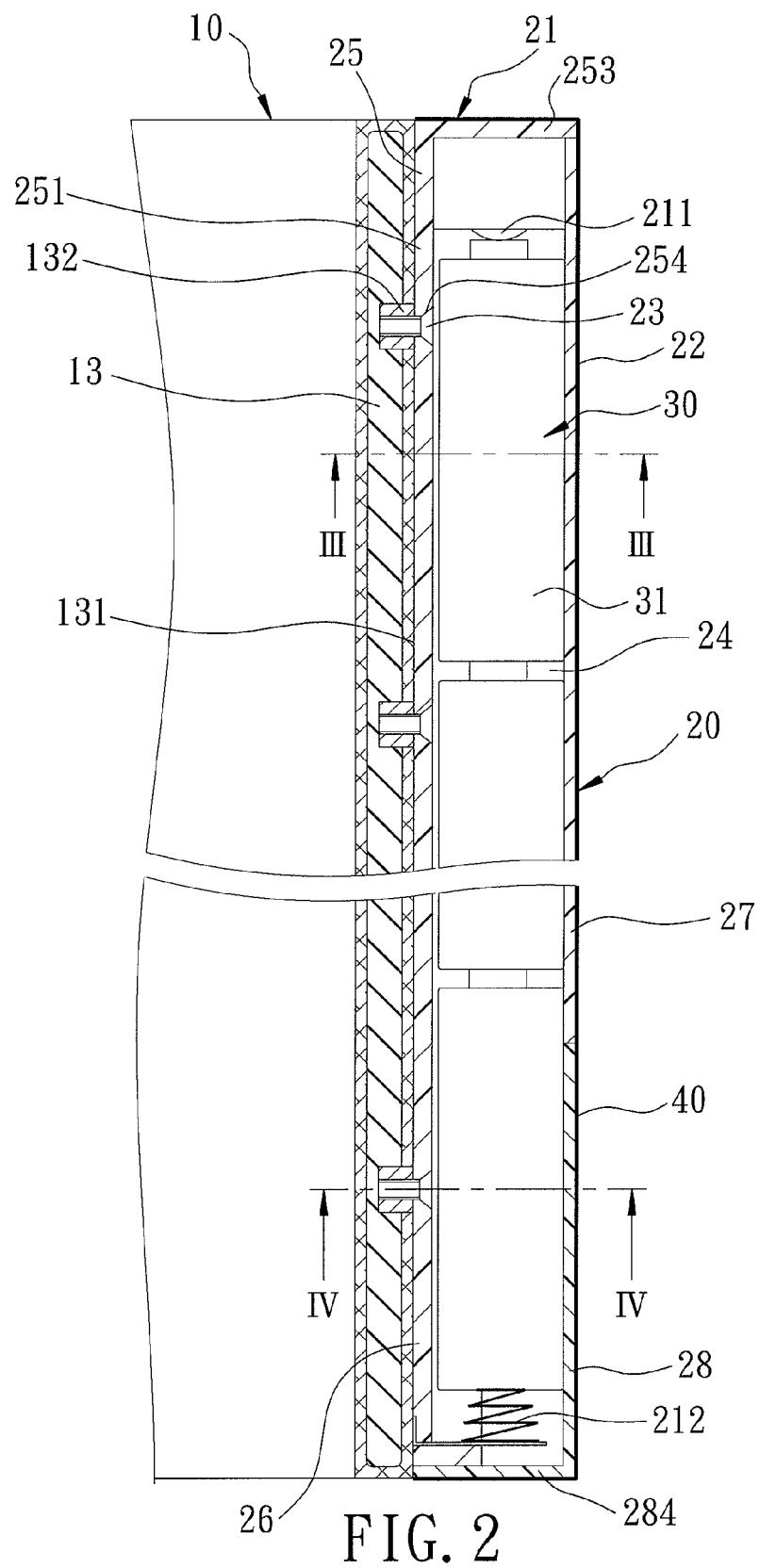


FIG. 1



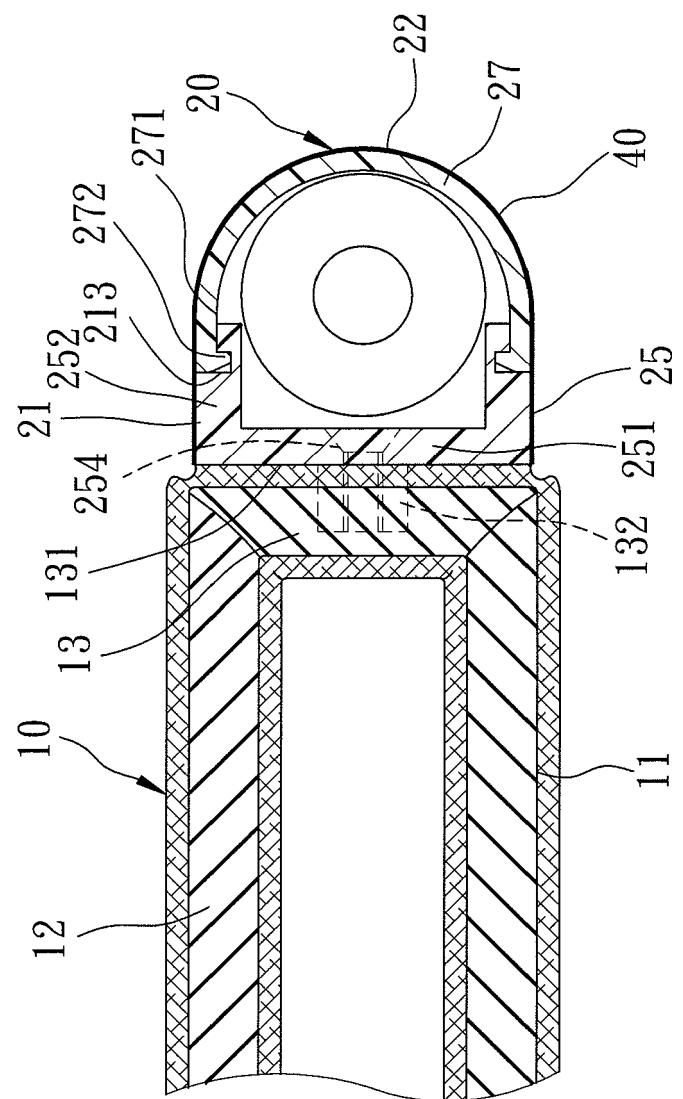


FIG. 3

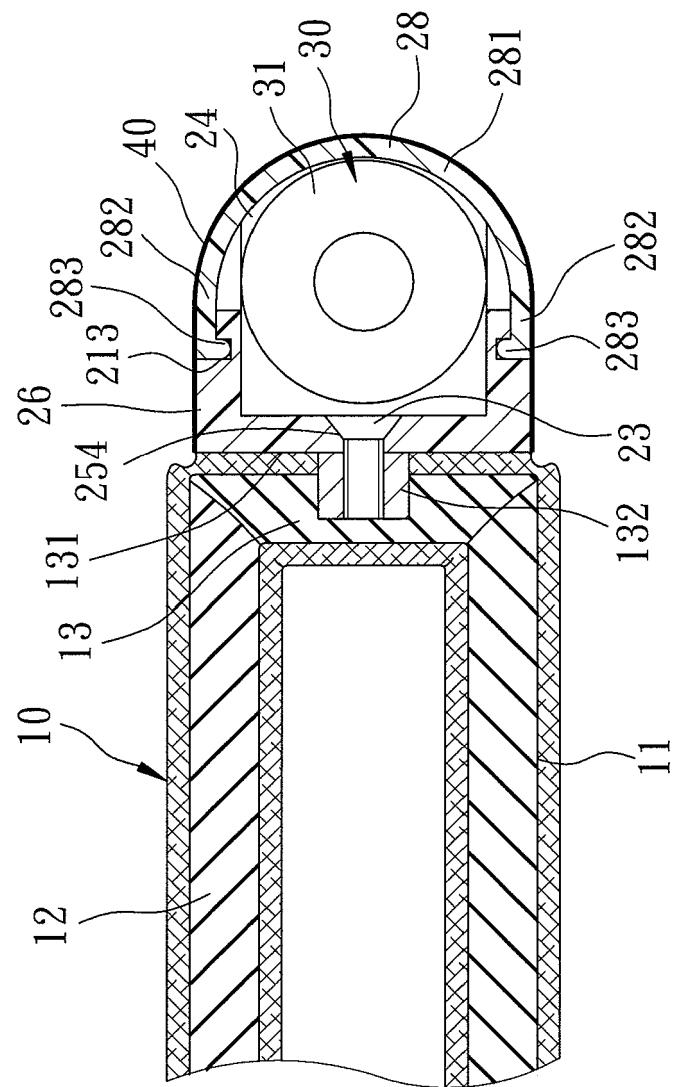


FIG. 4

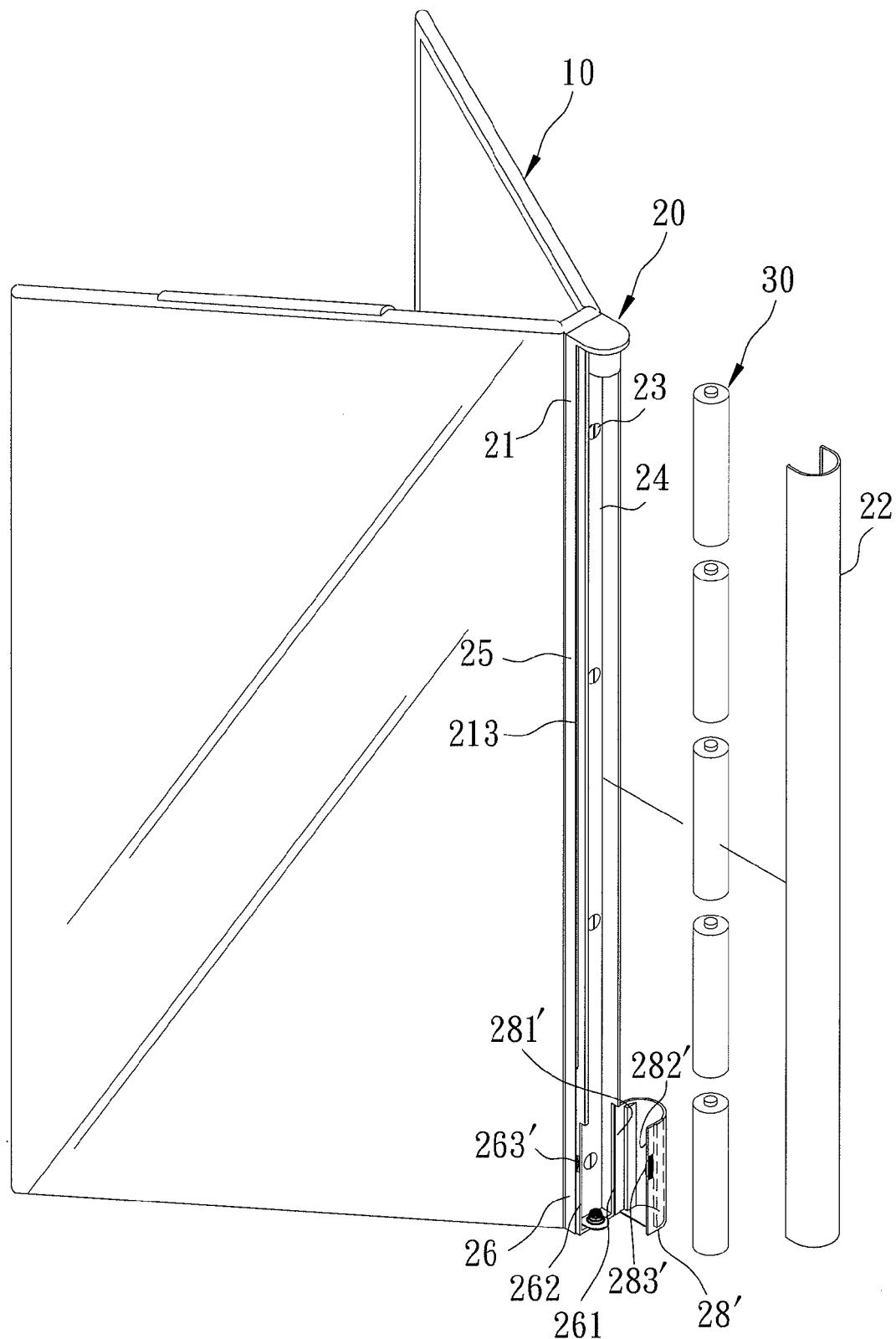


FIG. 5

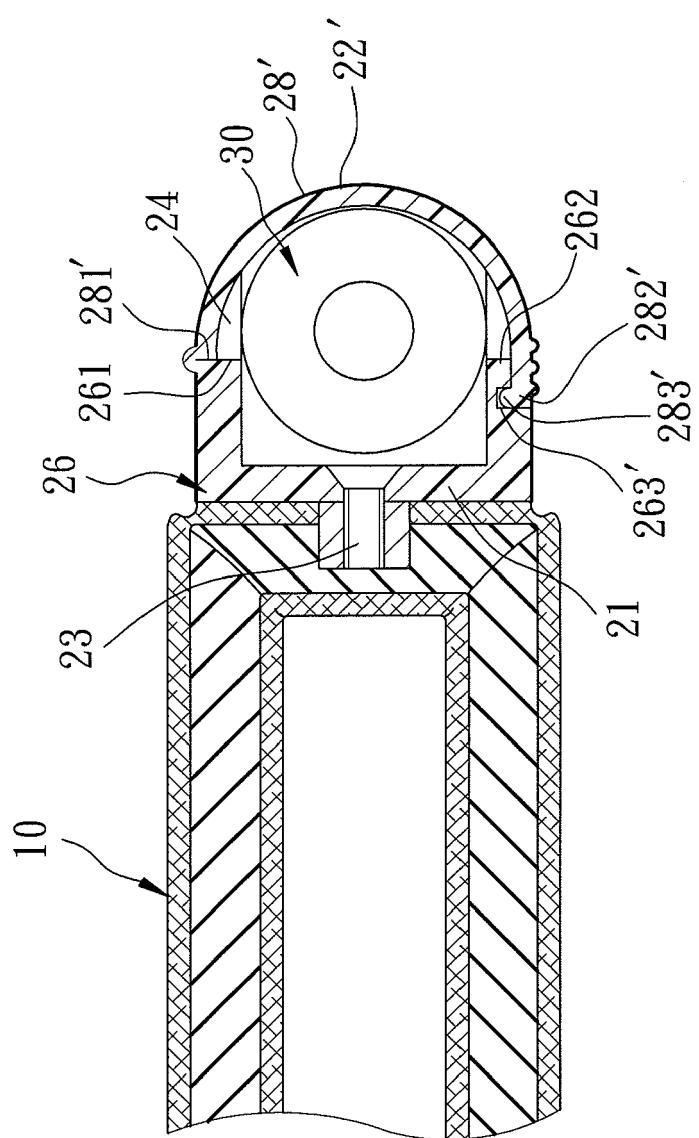


FIG. 6



EUROPEAN SEARCH REPORT

Application Number
EP 11 17 4466

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 4 680 681 A (FISHERMAN CARL [US] ET AL) 14 July 1987 (1987-07-14) * column 2, line 64 - column 3, line 32; figures 1, 3, 7 * -----	1-9	INV. B42D3/12 B43L3/00 B42F7/02
A	FR 2 749 189 A1 (VALLAT CHRISTIAN ANDRE [FR]) 5 December 1997 (1997-12-05) * page 3, line 15 - line 23; figure 3 * -----	1-9	
A	US 7 163 306 B1 (MAJOR WILLIAM ROBERT [US] ET AL) 16 January 2007 (2007-01-16) * column 5, line 47 - line 66; figure 1 * * column 9, line 39 - column 10, line 10; figure 1A * -----	1-9	
A	US 3 823 312 A (WEINSTEIN M) 9 July 1974 (1974-07-09) * column 1, line 49 - line 61; figures 1, 2 * -----	1-9	
			TECHNICAL FIELDS SEARCHED (IPC)
			B42F
The present search report has been drawn up for all claims			
1	Place of search Munich	Date of completion of the search 20 December 2011	Examiner Achermann, Didier
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 11 17 4466

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-12-2011

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4680681	A	14-07-1987	NONE	
FR 2749189	A1	05-12-1997	NONE	
US 7163306	B1	16-01-2007	NONE	
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