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(54) **Refined lampshade structure**

(57) A refined lampshade structure includes a supporting stand (20), a bulb holder (30), a lampshade (40) covering the bulb holder (30), which has a hollow extension tube (21) with a threaded section (22) arranged on top edge thereof, a LED lighting module (60) engaging with an opening (24) on the top of the extension tube (21), and a light transmissive protection shell (50) fixed on the threaded section (22). The light transmissive protection shell (50) integrates the LED lighting module (60) with the bulb holder (30) by fixing the lampshade (40) on the extension tube (21). With lampshade being easily disassembled for cleaning or replacing, the present invention features enhanced practicability and durability.

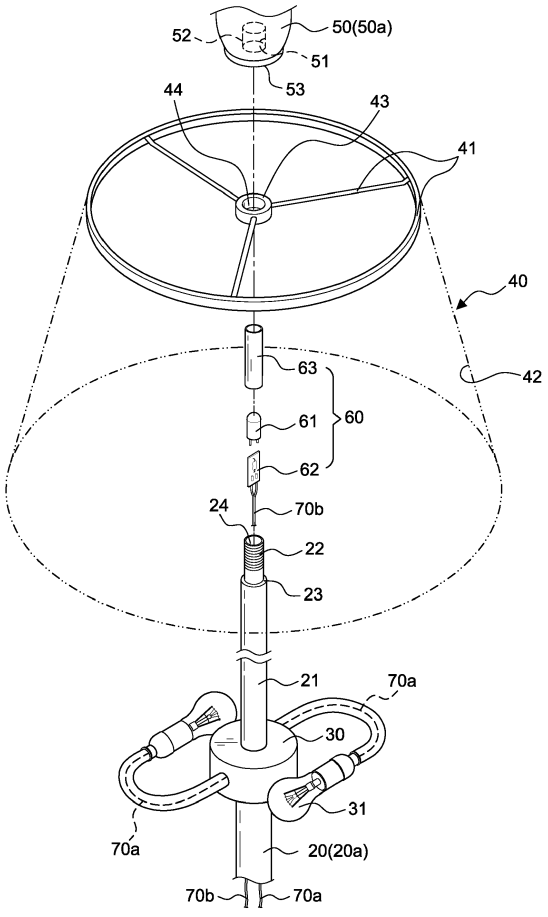

FIG.2

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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention:

[0001] The present invention relates to a refined lampshade structure, particularly to one that has a LED bulb arranged above the lampshade. The lampshade is easily disassembled, enabling the users to clean or replace it at their will.

2. Description of the Related Art:

[0002] As shown in FIG. 1, the table lamp assembly **10** is comprised of several basic components. They are: a lamp support column **11** to which is attached a lamp harp assembly **12,** and a typical lampshade **13,** setting atop the harp **12** and held in place by the final **14,** a modular replaceable plug-in electronic ballast **15** and a modular adapter **16** containing the ballast receptacle. While a circular fluorescent lamp **17** is shown, this plug-in electronic ballast can be used with fluorescent lamps of any shape, e.g. light bulb. Secured to the top of lamp column **11** is the lower portion of the lamp harp **12.** A decorative final **14,** when screwed down, maintains the placement of the lampshade **13** in its desired position; thereby preventing the lampshade **13** from tipping unevenly to one side and also preventing it from rotating undesirably should one inadvertently brush against it. This structure is from the US Patent No. 6,390,646, but such table lamp assembly does not have function of night light.

[0003] Traditional table lamp assembly provides lighting on desks and has been developed into different lighting fixtures in bedrooms, especially hotel rooms, and become the main fittings functioning lighting and decorations. Such lamps usually have a switch to adapt for different purposes as normal lighting and dim lights at sleep. However, the lamp designs are simple and lack of variety, as in FIG. 1, unable to make visual effects to the consumers. Plus, applications of LED bulbs are getting wider and more advanced in recent years. Colorfulness and various designs are two of the welcoming features. Lighting a LED nigh light at night in the bedroom creates soft lighting and the various designs make it even more decorative.

[0004] Therefore, it is desirable for the inventor to combine the traditional lamps with LED bulbs to create an integrated lamp fixture with various designs of lampshades that can be easily disassembled without affecting the main structure.

SUMMARY OF THE INVENTION

[0005] The primary object of the present invention is to provide an electricity-saving night light with soft lights by combining traditional lamp structure with LED bulbs.

[0006] Another object of the present invention is to provide an innovative lampshade structure which is easily disassembled to enhance the practicability and durability.

[0007] In order to achieve the objects above, the present invention comprises a supporting stand, a bulb holder, a lampshade, a LED lighting module, and a light transmissive protection shell according to claims 1-5.

[0008] With features disclosed above, the bulb holder and light bulb(s) are arranged in the middle section of the supporting stand and at the top of the extension tube a LED bulb is arranged. Two electric wires go through the hollow supporting stand and extension tube to link up each bulb, thus enhance the effectiveness of the invention. In addition, the positioning portion on the lampshade fits the threaded section, and the entire lamp structure is fixed by screwing the light transmissive protection shell tight, without touching or moving the LED bulb or electric wires. The practicability and durability of the present invention are therefore improved.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009]

FIG. 1 is a perspective view of a lamp according to the prior art;

FIG. 2 is an exploded view of a preferred embodiment of the present invention;

FIG. 3 is an exploded view of the present invention with assembled LED lighting module;

FIG. 4 is an exploded view of the present invention with assembled LED lighting module engaging into the extension tube;

FIG. 5 is a perspective view of a preferred embodiment of the present invention;

FIG. 6 is a cross-section view of a preferred embodiment of the present invention;

FIG. 6A is a cross-section view of the LED lighting module of a preferred embodiment of the present invention;

FIG. 7 is a practical application view of the present invention with base arrangement of standing vase style and an erect extension tube;

FIG. 8 is a practical application view of the present invention with base arrangement of standing vase style and a curved extension tube;

FIG. 9 is another practical application view of the present invention with base arrangement of standing vase style and a curved extension tube;

FIG. 10 is a practical application view of the present invention with base arrangement of plate style and an A-shaped supporting stand; and

FIG. 11 is another practical application view of the present invention with base arrangement of inverted T-shaped style and a curved supporting stand.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0010] Referring to FIGS. 2-7, a preferred embodiment of the present invention includes a supporting stand **20** which is hollow and disposed on a base **80,** a bulb holder **30** disposed on said supporting stand **20** with at least one light bulb **31** thereon connecting to a first electric wire **70a,** and a lampshade **40** including a frame **41** and a circular cover **42,** covering said bulb holder **30;** characterized in that the bulb holder **30** has a hollow extension tube **21** with a threaded section **22** arranged on top edge thereof, forming a positioning surface **23,** and a LED lighting module **60** engages with an opening **24** on the top of said extension tube **21** and connecting to a second electric wire **70b** from the bottom. In this embodiment, the LED lighting module **60** includes a LED bulb **61** electrically connected to a resistive circuit board **62** that connects to said second electric wire **70b,** and a water-proof sheath **63** wrapping up said LED bulb **61** and resistive circuit board **62,** arranged in-between the LED lighting module **60** and the extension tube **21** to fix the structure, either with or without usage of adhesive; the resistive circuit board here refers to a circuit board with a resistor set in the loop. With reference to FIG. 6A, the LED lighting module **60** has the LED bulb **61** and resistive circuit board **62** assembled together, featuring the present invention as prolonged durability since the terminal **611** of the LED bulb **61** links up to the resistive circuit board **62** and is not easily damaged; plus the resistor on the circuit board can stable the electric currents. And the water-proof sheath **63** can be either a plastic sheath or wrapping to prevent the module from damp and to engage into the opening **24** of the extension tube **21.** Besides, the engagement can be firmer with adhesive around the opening **24** but this is optional. By means of aforesaid structure, the LED lighting module **60** is stably fixed on the extension tube **21** and further functions as a night light.

[0011] Moreover, a positioning portion **43** is disposed at the center of said frame **41** which has an axial hole **44** that can be engaged on said threaded section **22** to fit said positioning portion **43** and positioning surface **23,** and a light transmissive protection shell **50** with inside threads **51** at the bottom is corresponding to said threaded section **22** to fix it on. In this embodiment, the light tramissive protection shell **50** has a flat bottom **52** at the center with a locking portion **53** bulging up and the inside threads **51** at central thereof, and a cooling opening **54** is arranged at the top of said light transmissive protection shell **50.** The light transmissive protection shell **50** can be a thick tube-shaped object as shown in FIG. 11 as well; whereby the light transmissive protection shell **50** integrates said LED lighting module **60** with said bulb holder **30** by fixing said lampshade **40** on the extension tube **21;** or it could be disassembled in reverse order to displace said lampshade **40.**

[0012] In this embodiment, the first electric wire **70a** and second electric wire **70b** are arranged inside the hollow supporting stand **20,** connecting to the power supply at the bottom. The first electric wire **70a** electrically connects to the bulb holder **30** at the top, supplying the electricity for the light bulb **31;** and the second electric wire **70b** goes through the bulb holder **30** and the extension tube **21,** supplying electricity for the LED bulb **61.** Further, in order to switch between the bulb holder **30** and the LED bulb **61,** the present invention has a transformer and a multistage switch (not shown in the FIGS.) linking to the first and second electric wires **70a, 70b.** The transformer and multistage switch are preferable to be disposed inside the base **80.**

[0013] FIGS. 4 and 5 are illustrations of the lampshade assembly. Firstly, put the positioning portion **43** around the threaded section **22** to fit the positioning surface **23.** Then screw the light transmissive protection shell **50** down to the threaded section **22** to join the positioning surface **43.** The lampshade **40** is therefore fixed on the extension tube **21** as shown in FIG. 6. It can also be disassembled by reversing the aforesaid steps.

[0014] The assembling and disassembling process of the lampshade **40** does not require touching or moving the LED bulb **61** or any other electric components such as electric wires. Plus, the delivery of the present invention is easier since the lampshade **40** and its related components can be separately delivered from the framework of the lamp, reducing the volume of the packages. Also, the consumers can make their own choices upon the models of the lampshade. What's more, the lampshade **40** may need to be disassembled for cleaning due to dirt or other factors. The feature mentioned above further enhances the practicability and durability of the present invention.

[0015] In this embodiment, the base **80** is arranged as standing vase style **80a,** and the supporting stand **20** and the extension tube **21** are erectile **20a, 21a,** but the present invention is not limited to such application. For example, as shown in FIG. 8, the extension tube **21** is a curved tube **21b.** Or as shown in FIG. 10, the base **80** is arranged as plate style **80b** with an A-shaped supporting stand **20b** and curved extension tube **21b;** on the plate style base **80** there is a decorative fixture **81** disposed. In FIG. 11, the base **80** is in inverted T-shaped style **80c** and the supporting stand **20** is curved **20c.** The light bulb **31** includes tungsten bulb or Bakelite bulb **31a** as in FIG. 9, and can be arranged either horizontal or vertical.

[0016] With aforesaid structures and measures, the present invention integrates the structures of traditional lamps and LED bulbs as the bulb holder **30** and light

bulb(s) **31** arranged in the middle section of the supporting stand **20;** at the top of the extension tube **21** a LED bulb **61** is arranged; two electric wires **70a, 70b** go through the hollow supporting stand **20** and extension tube **21** to link up each bulb so as to switch the lights. Besides, the present invention has the positioning portion **43** to be put around the threaded section **22** and the light transmissive protection shell **50** to fix the lampshade **40.** Thus the users can easily disassemble the lampshade **40** without touching or moving the LED bulb **61** or other electric components, enabling various choice upon different models of lampshade at users' will and easier cleaning features. On the other hand, different styles of the supporting stand **20** that can combine with other fixtures also make it more decorative.

[0017] Although a particular embodiment of the invention has been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.

Claims

1. A refined lampshade structure comprising:

a supporting stand (20) which is hollow and disposed on a base (80);
a bulb holder (30) disposed on said supporting stand (20) with at least one light bulb (31) thereon connecting to a first electric wire (70a);
a lampshade (40) including a frame (41) and a circular cover (42), covering said bulb holder (30);
characterized in that:

the bulb holder (30) has a hollow extension tube (21) with a threaded section (22) arranged on top edge thereof, forming a positioning surface (23);
a LED lighting module (60) engaging with an opening (24) on the top of said extension tube (21) and connecting to a second electric wire (70b) from the bottom;
a positioning portion (43) disposed at the center of said frame (41) which has an axial hole (44) that can be engaged on said threaded section (22) to fit said positioning portion (43) and positioning surface (23); and
a light transmissive protection shell (50) with inside threads (51) at the bottom corresponding to said threaded section (22) to fix it on;
whereby the light transmissive protection shell (50) integrates said LED lighting module (60) with said bulb holder (30) by fixing said lampshade (40) on the extension tube (21); or it could be disassembled in reverse order to displace said lampshade (40).

2. The refined lampshade structure as claimed in claim 1, wherein said LED lighting module (60) includes a LED bulb (61) electrically connected to a resistive circuit board (62) that connects to said second electric wire (70b), and a water-proof sheath (63) wrapping up said LED bulb (61) and resistive circuit board (62), arranged in-between the LED lighting module (60) and the extension tube (21) to fix the structure.

3. The refined lampshade structure as claimed in claim 1, wherein the light tramissive protection shell (50) has a flat bottom (52) at the center with a locking portion (53) bulging up and the inside threads (51) at central thereof, and a cooling opening (54) arranged at the top of said light transmissive protection shell (50).

4. The refined lampshade structure as claimed in claim 1, wherein the arrangement of the base (80) includes standing vase style (80a), plate style (80b), and inverted T-shaped style (80c), and the supporting stand (20) includes erect tube (20a), A-shaped tube (20b), and curved tube (20c) arrangements.

5. The refined lampshade structure as claimed in claim 4, wherein the A-shaped tube (20b) arrangement further includes a decoration fixture (81) on said plate style (80b) arrangement.

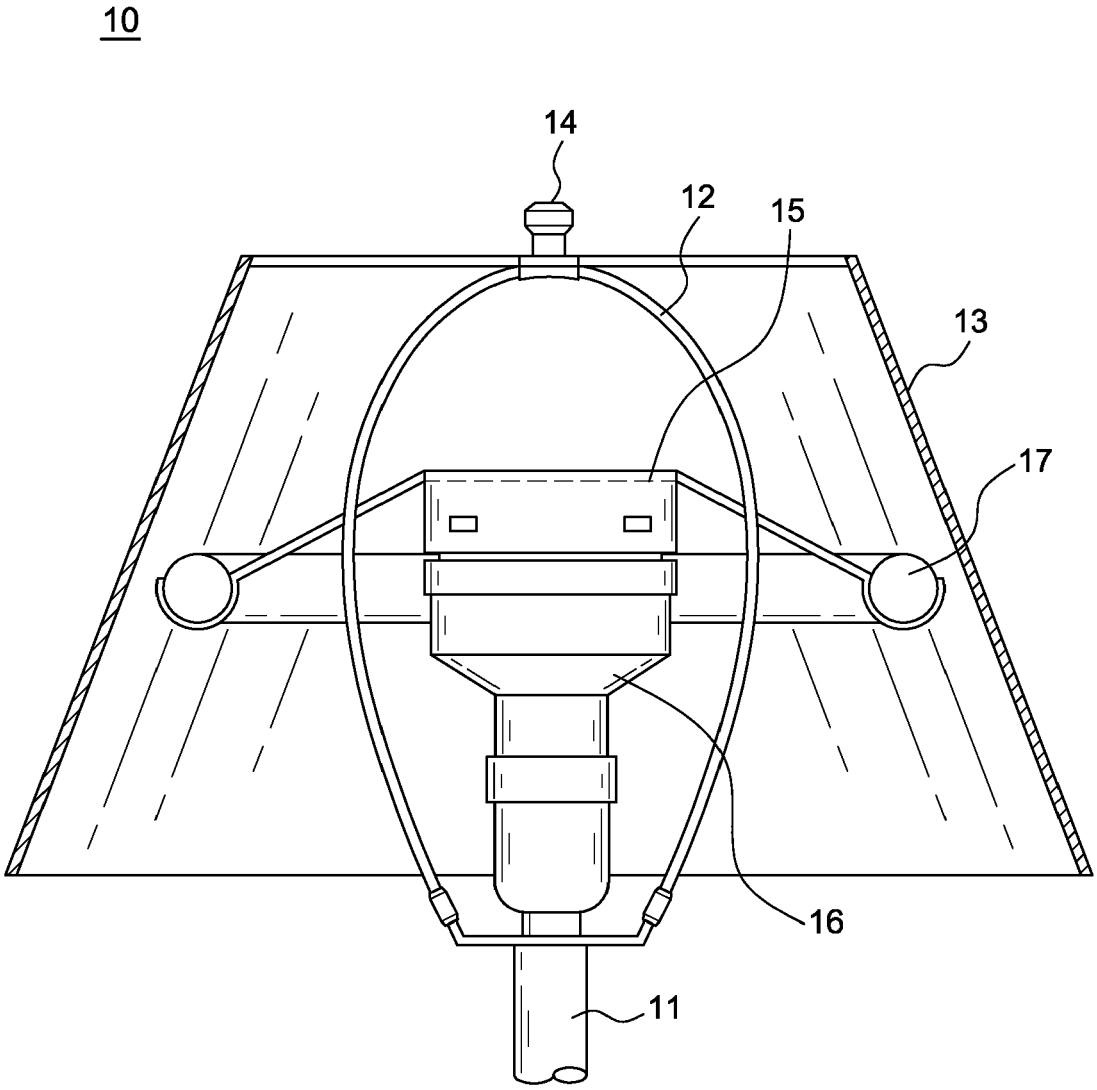

FIG.1
PRIOR ART

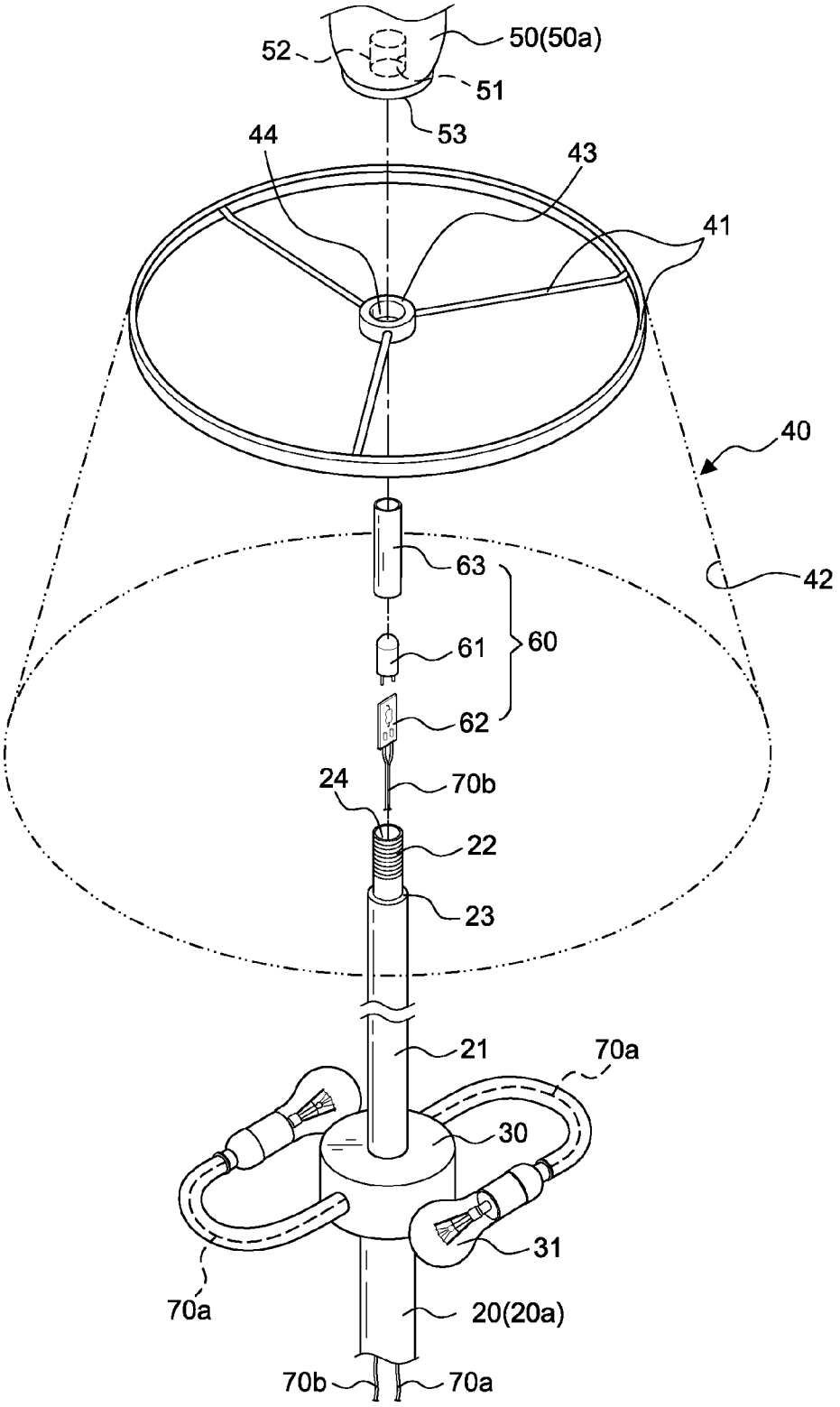
52
50(50a)
51
53
44
43
41
40
42
63
61
60
62
24
70b
22
23
21
70a
30
31
70a
20(20a)
70b
70a

FIG.2

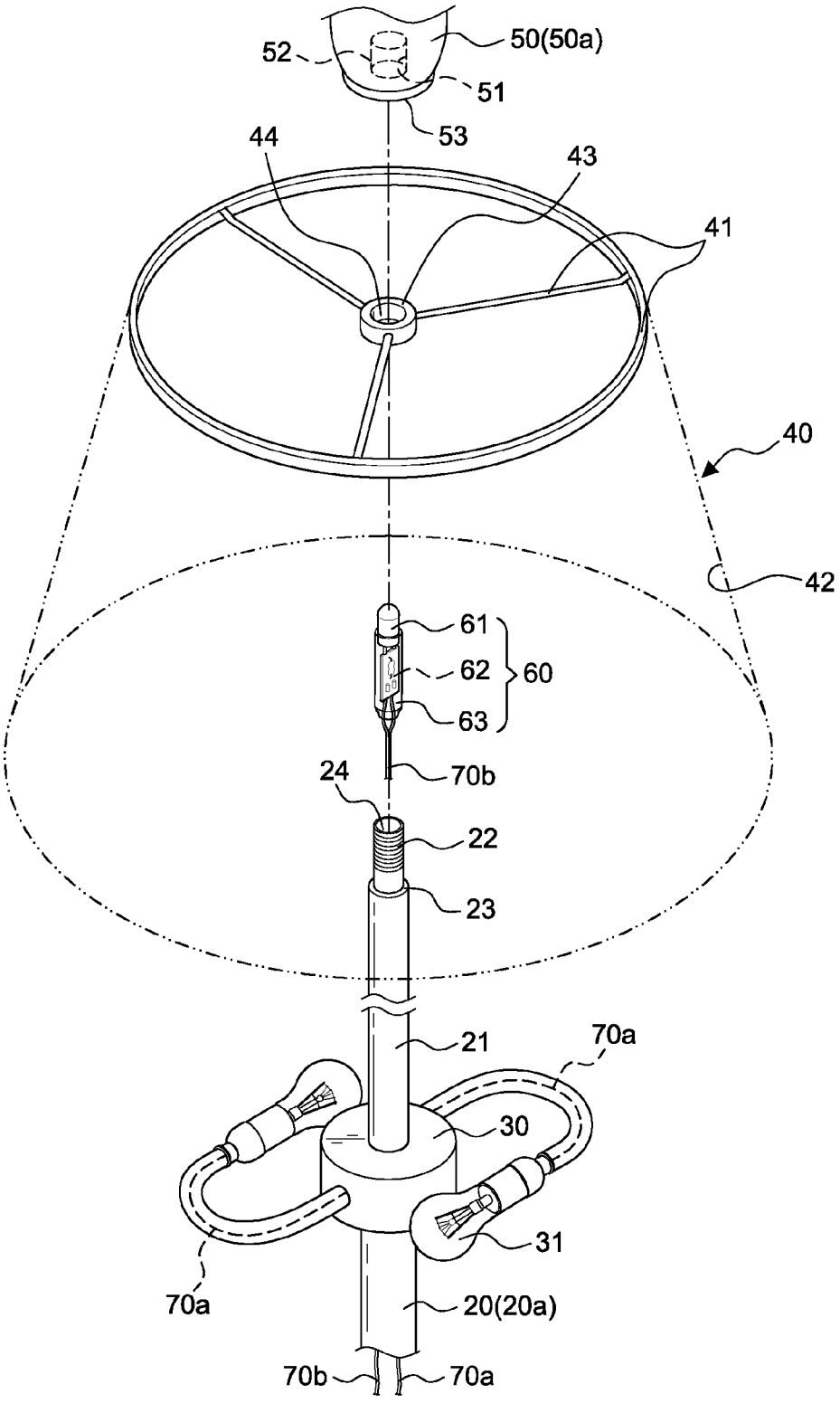
52
50(50a)
51
53
44
43
41
40
42
61
62
60
63
24
70b
22
23
21
70a
30
31
70a
20(20a)
70b
70a

FIG.3

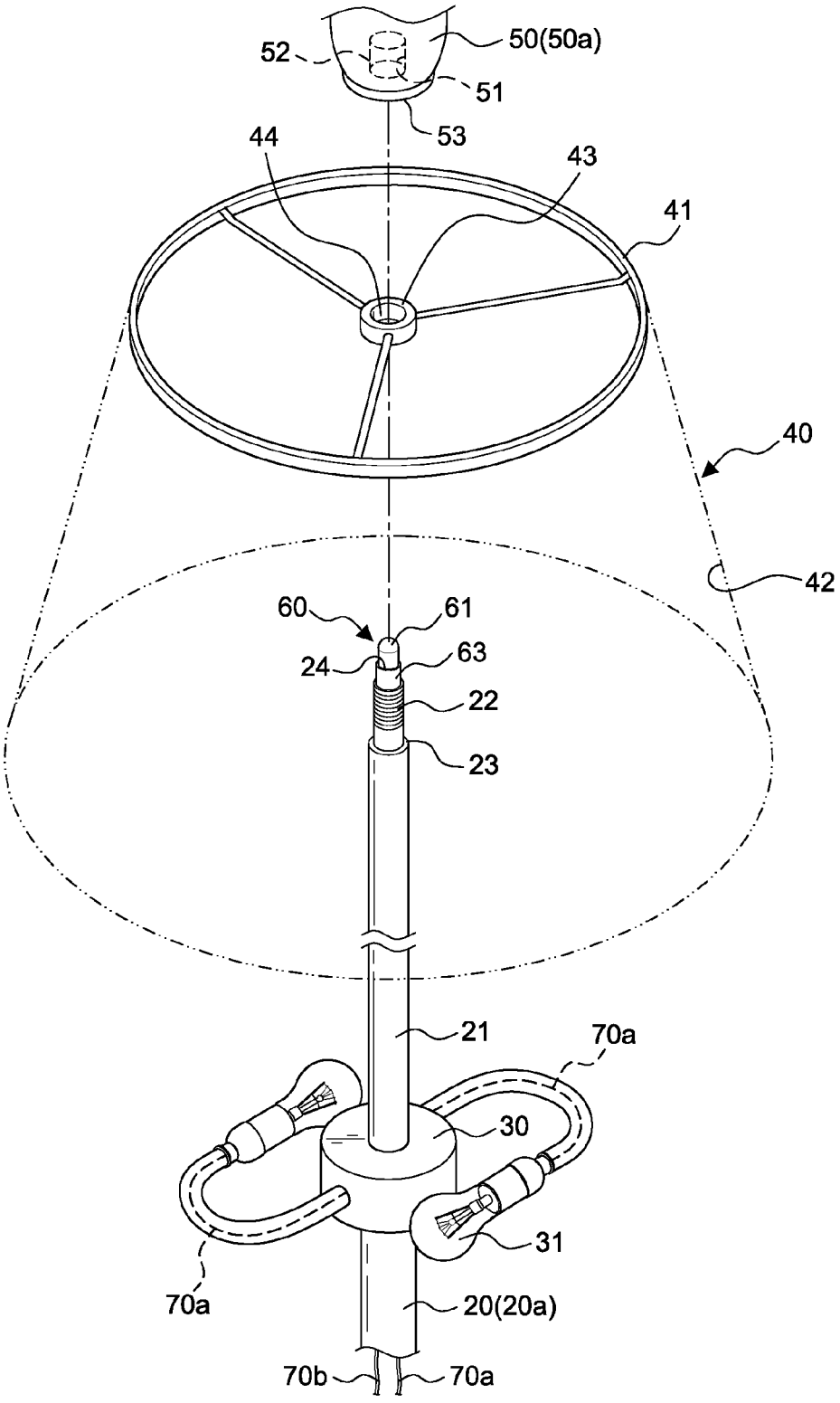
52
50(50a)
51
53
44
43
41
40
42
60
61
24
63
22
23
21
70a
30
31
70a
20(20a)
70b
70a

FIG.4

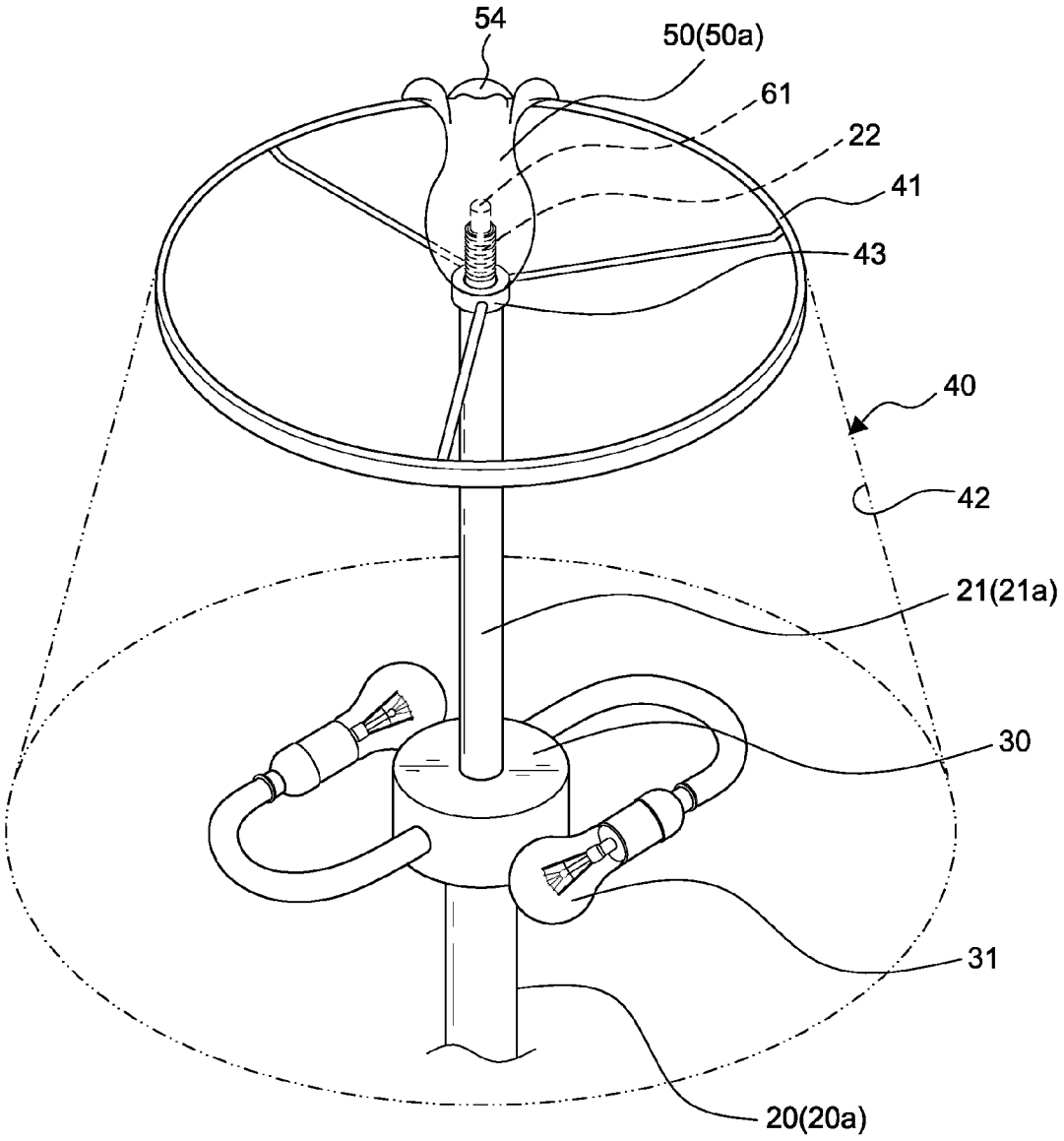

FIG.5

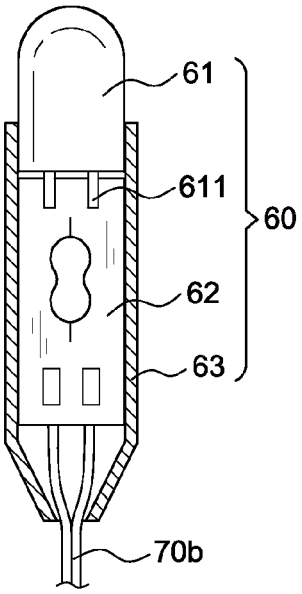
61
611
60
62
63
70b

FIG.6A

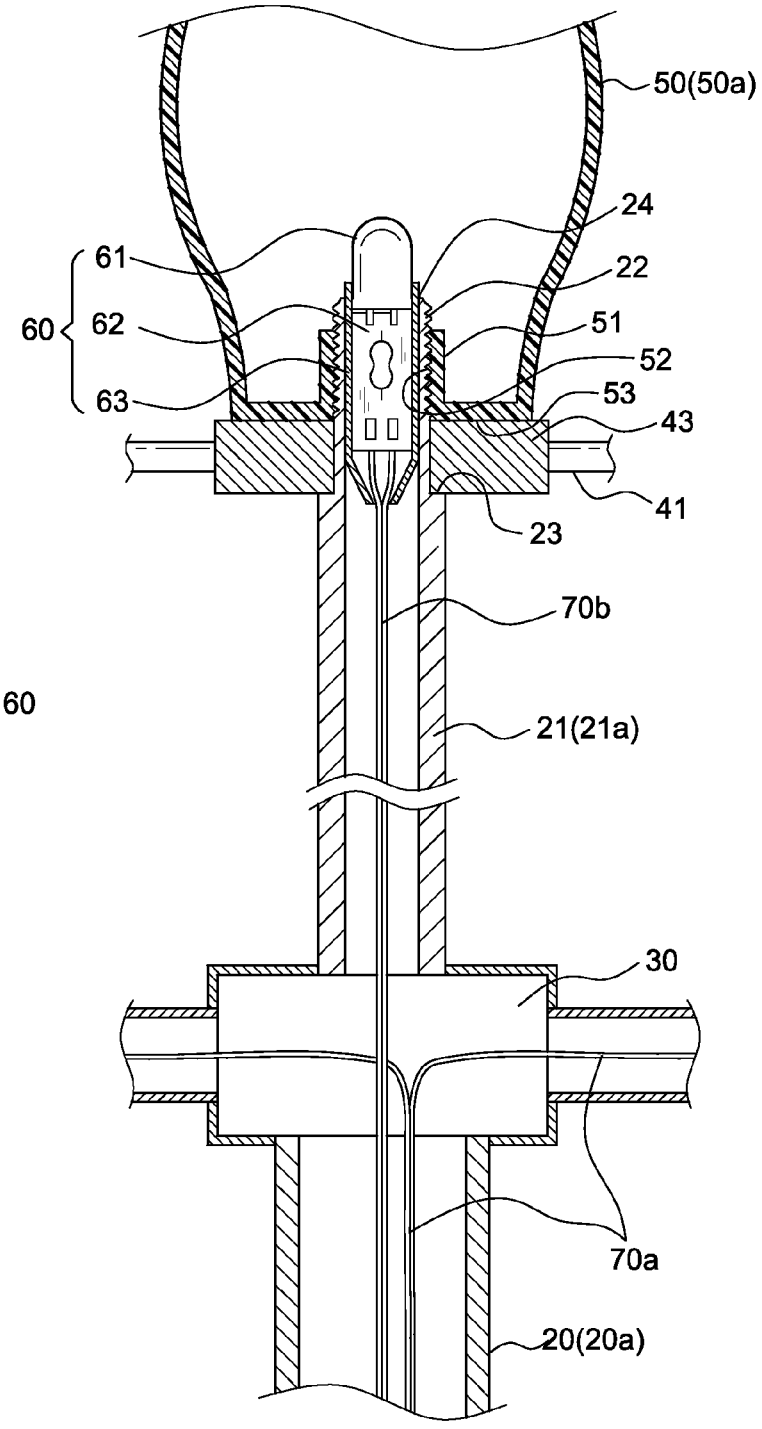
50(50a)
24
61
22
60
62
51
52
63
53
43
41
23
70b
21(21a)
30
70a
20(20a)

FIG.6

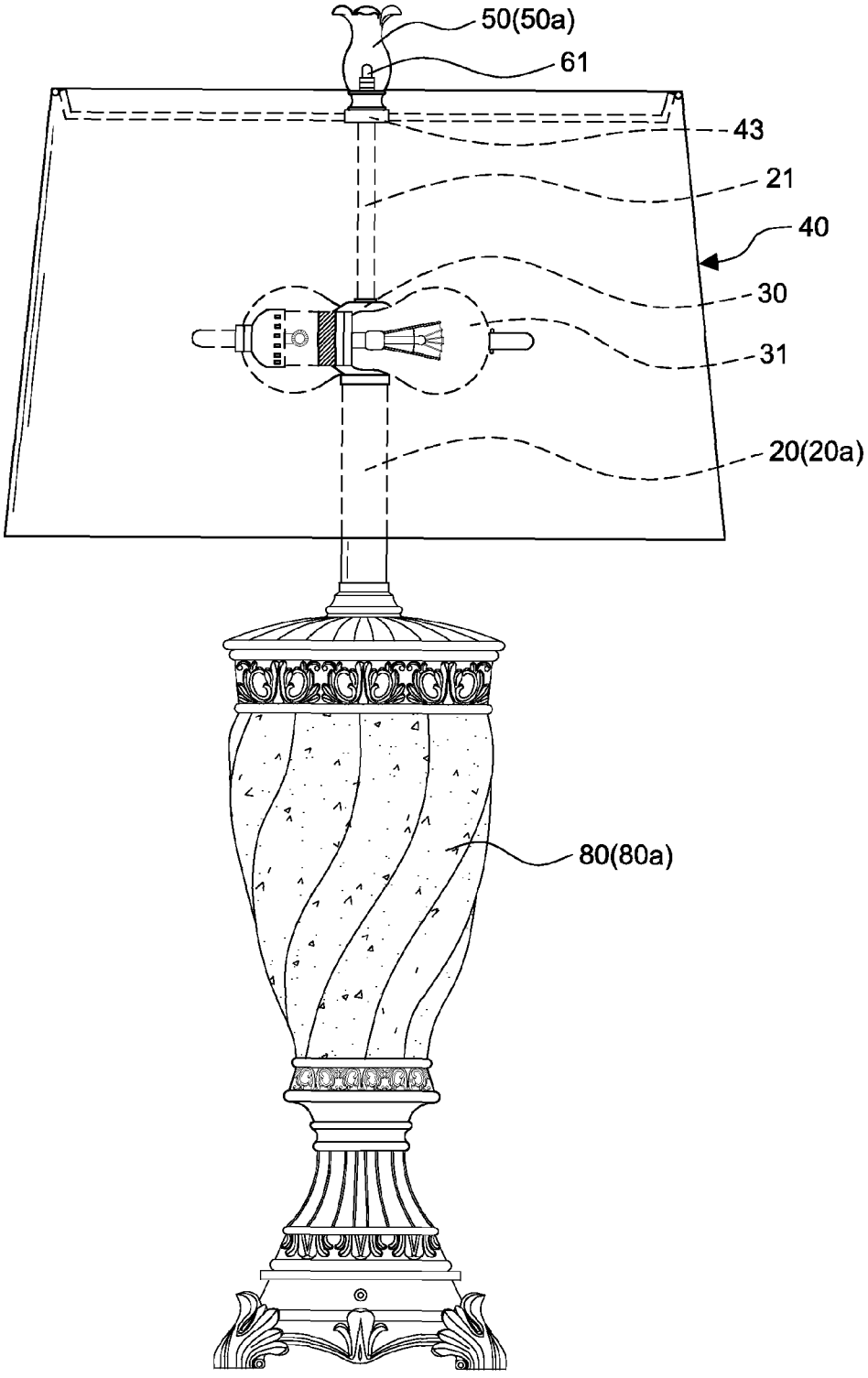

FIG.7

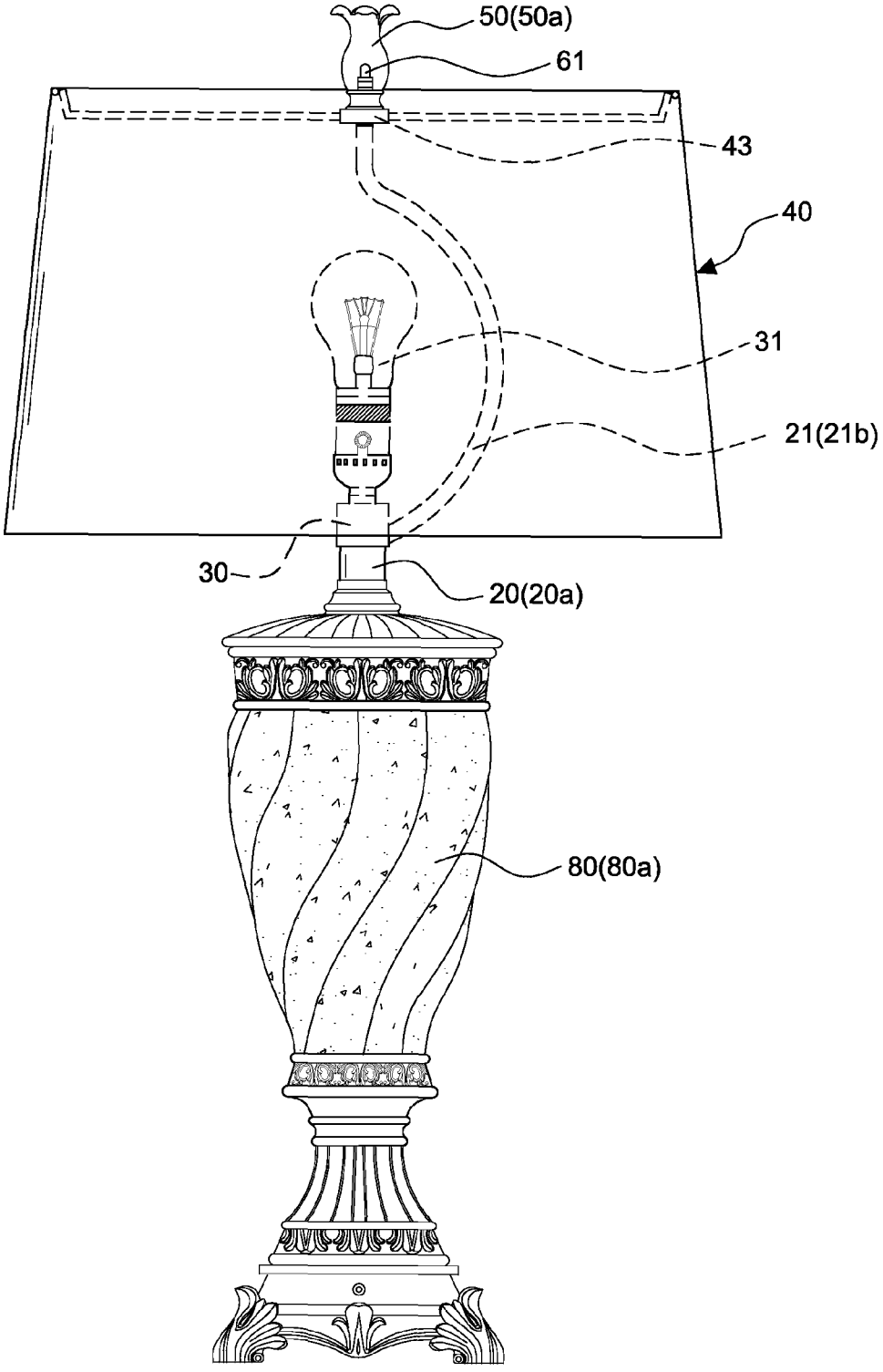

FIG.8

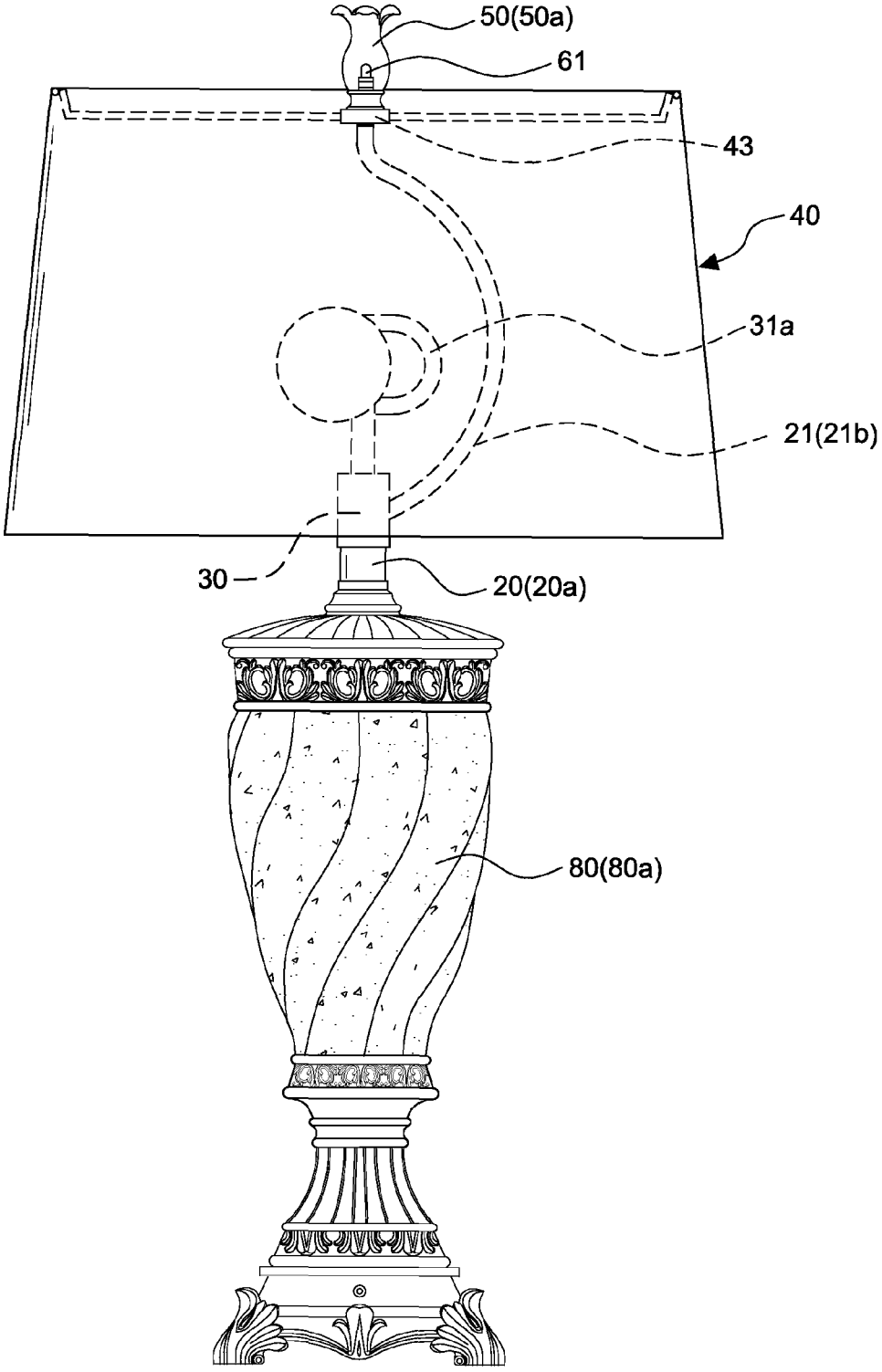

FIG.9

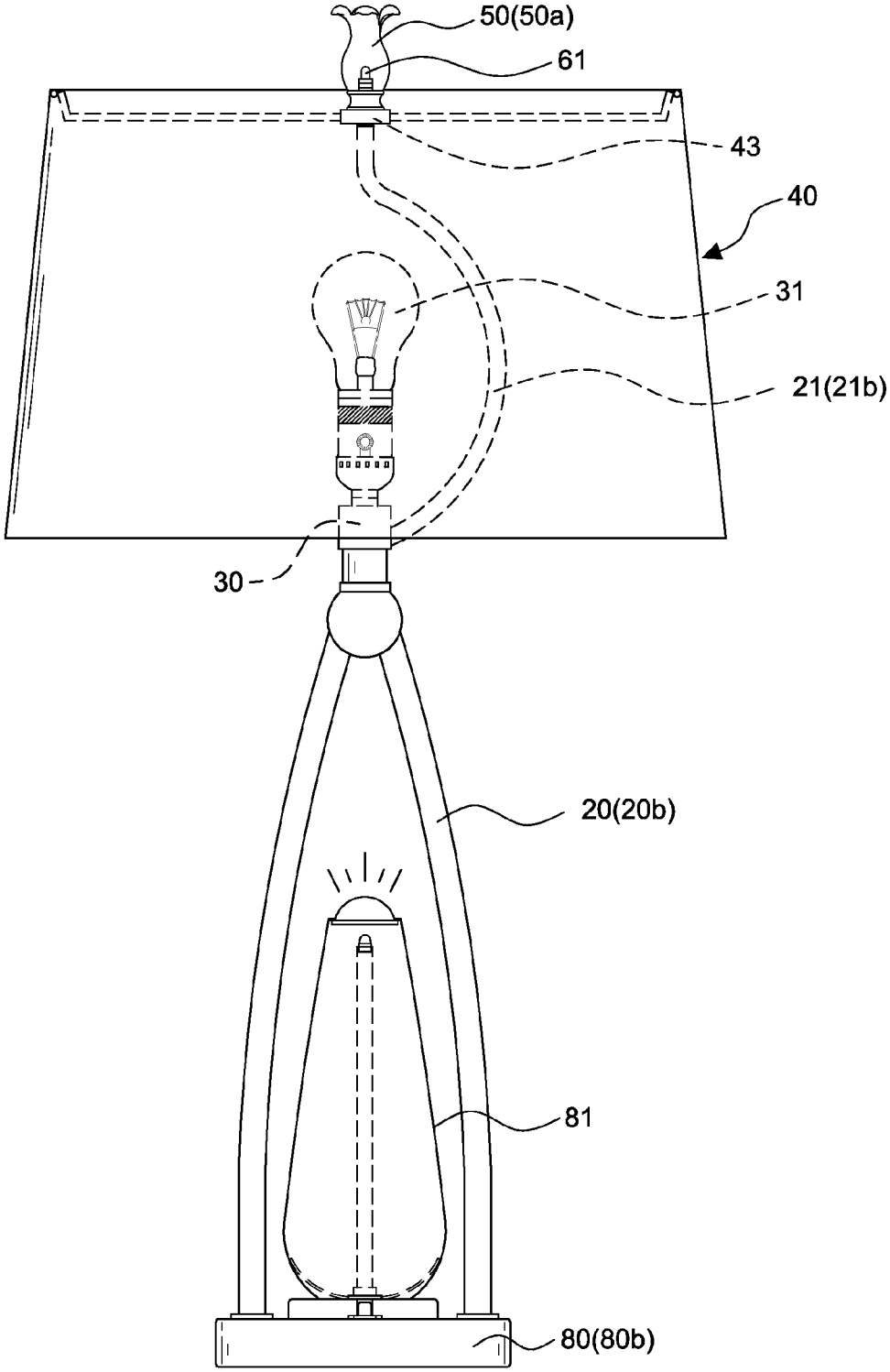

FIG.10

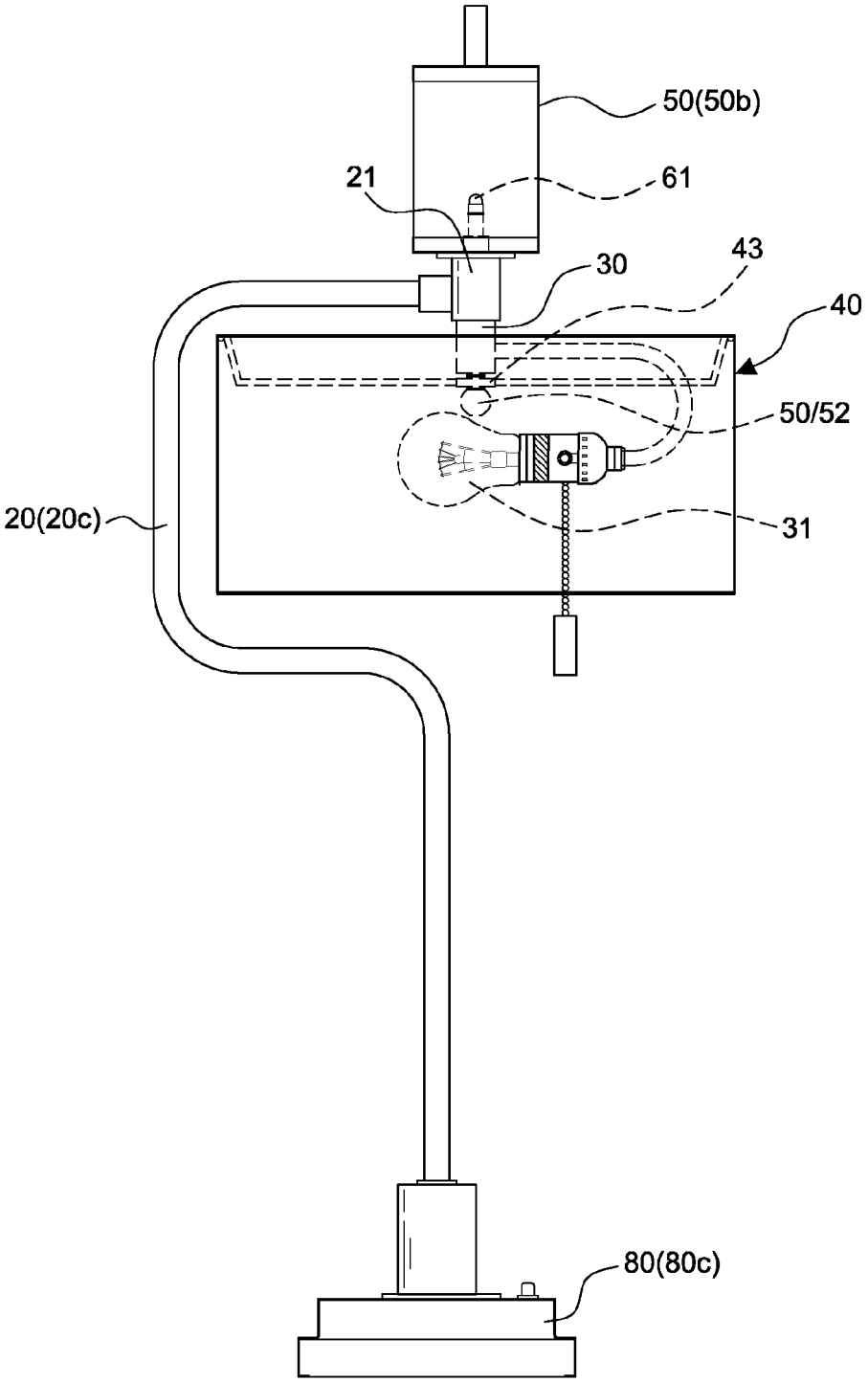

FIG.11

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EUROPEAN SEARCH REPORT

Application Number
EP 14 17 1218

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 2008/001078 A1 (GRO GROUP INTERNAT LTD [GB]; HOLMES ROBERT DOUGLAS [GB]) 3 January 2008 (2008-01-03) * page 11, line 17 - line 22 * * page 14, line 10 - line 26 * * figures 4, 5 *	1	INV. F21S6/00 F21V1/14 ADD. F21Y101/02 F21Y113/02
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A	US 7 052 157 B1 (LAU KENNETH H [US]) 30 May 2006 (2006-05-30) * figures 6, 7 *	1	
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	26 September 2014	Allen, Katie

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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26-09-2014

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

REFERENCES CITED IN THE DESCRIPTION

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