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(54) **Fluorescent lamp with hinged base**

(57) A fluorescent lamp comprising a glass bulb (10), a base (11) and mechanical and electrical means to be connected to the intended lamp-holder, said base (11) being adapted to mechanically support said bulb (10) and to house said mechanical and electrical means to be connected to the intended lamp-holder, characterized in that said base (11) comprises two separate parts, the first part (12) being associated with said glass bulb (10), the second part (13) being associated with said mechanical and electrical means to be connected to the intended lamp-holder.

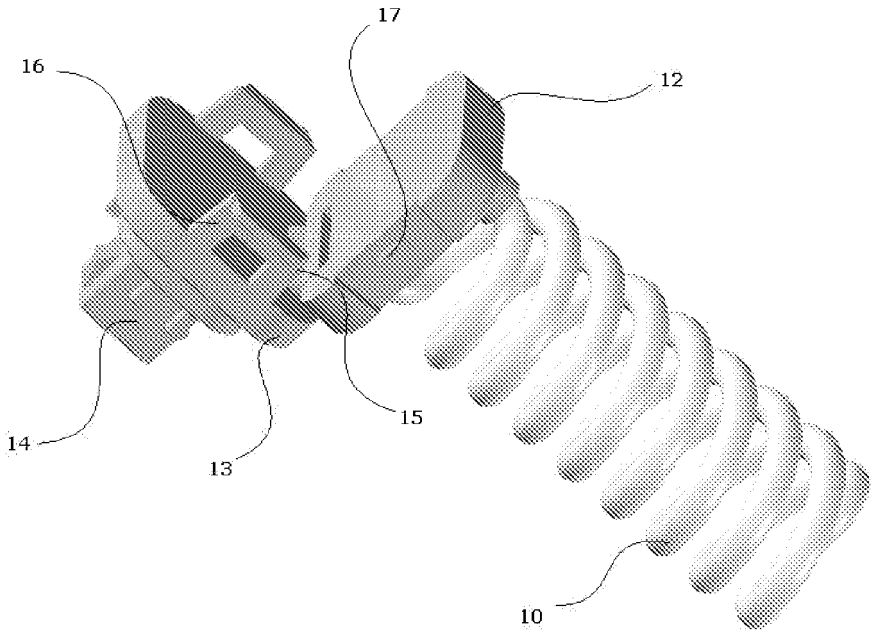

Fig. 1

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Description

Field of the invention

[0001] The present invention relates to the field of lighting items, in particular to non-integrated, energy-efficient lamps of fluorescent type.

State of the art

[0002] As known, fluorescent lamps are encountering increasingly vast distribution and will soon completely replace the traditional incandescent lamps. The benefits introduced by fluorescent lamps lie in their increased life and in the energy efficiency that they permit to achieve. Moreover, the lighting quality provided by these lamps is now widely comparable with that of incandescent lamps. Nevertheless, a problem which is still related with fluorescent lamps, is the overall dimensions. Indeed, fluorescent lamps generally have larger dimensions than the corresponding incandescent lamps, and sometimes this is an obstacle for installing them in ceiling lights or in lamps having small dimensions. This is particularly true in connection with lamps having ends of type G24d, G24q, GX24d and GX24q. Indeed, the lighting apparatuses equipped with lamps of this type all have large dimensions. This factor is not only a drawback in terms of appearance, although it is significant, but especially from the technical point of view, as the larger the lighting apparatuses, the more they lose efficiency due to their failure to recover passive reflections.

[0003] Therefore, it is the object of the present application a fluorescent lamp adapted to overcome the above-described limitations connected to the typical dimensions of traditional fluorescent lamps, which dimensions are excessive for many applications.

Brief description of the drawings

[0004]

Fig. 1 shows the lamp according to the present invention, in "open" position.

Fig. 2 shows the lamp according to the present invention, in "closed" position.

Summary of the invention

[0005] The present invention relates to a fluorescent lamp having varying overall dimensions, comprising a support and connection base in turn comprising two separate parts which are free to reciprocally move about a connecting hinge so as to vary the overall dimensions of the lamp itself.

Detailed description of the invention

[0006] With reference to accompanying Figs. 1 and 2, a preferred embodiment of the lamp according to the present invention is shown.

[0007] The lamp usually comprises a glass bulb 10 containing the gas (generally a krypton and neon mixture) which, due to the excitation received by a part of the electrons emitted by a powered cathode, generates a light radiation, and a base 11 made of insulating material adapted to mechanically support said bulb 10 and to house said mechanical and electrical means to be connected to the intended lamp-holder.

[0008] Said base 11 made of insulating material, preferably made in plastic material, such as for example PVC, in turn comprises two separate parts, the first part 12 being associated with said glass bulb 10, the second part 13 being associated with said means to be connected to the intended lamp-holder, preferably provided with a connector 14 equipped with one end compatible with standards G24d, G24q, GX24d and GX24q.

[0009] Said two separate parts 12, 13 are hinged to each other and free to pivotally move with respect to each other about the connecting hinge 15 which will also house the electric leads between said two parts 12, 13. Moreover, said two parts will be equipped with reversible hooking means and adapted to keep them in a "closed" position, one above the other, as shown in accompanying Fig. 2. Said reversible hooking means preferably comprise a tongue 16 integral with said second part 13 of said base 11 and provided with a central opening, and a tooth 17 integral with said first part 12 of said base 11 and adapted to reversibly engage said central opening of said tongue 16.

[0010] Fluorescent lamps, and in particular lamps having ends of type G24d, G24q, GX24d and GX24q, are normally installed in a horizontal position inside flush-mounting ceiling apparatuses in which the lamp-holder is also in the horizontal position. In traditional lamps, a certain distance is required between the end of the lamp glass bulb and the wall of the lamp-holder, in order to facilitate the insertion of the lamp into the lamp-holder. With the lamp according to the present invention, lamp-holders of considerably larger dimensions than those of the lamp are no longer required, therefore ceiling lights may also have smaller dimensions and may also be installed where the available space is small and, moreover, they may allow a more efficient lighting such as to allow a considerable energy efficiency. The insertion of the lamp according to the present invention into the corresponding lamp-holder occurs by inserting connector 14 into the counterpart contained in the lamp-holder when said two parts 12, 13 are in the "open" position as shown in accompanying Fig. 1. Thereby, the lamp insertion is easier and the manoeuvring space required by traditional lamps is not needed. Once connector 14 has been connected, the aforesaid two parts 12, 13 are closed again, mutually secured by means of said reversible hooking means, and the lamp is ready to be used. The inverse manoeuvre as compared to the one described is carried out for removing the lamp from the lamp-holder.

[0011] With reference to accompanying Figs. 1 and 2, said glass bulb may also be constructed with a tube of the "twister" type having smaller dimensions than tubes of equal power and linear type. This allows a further saving in terms of overall dimensions of the lamp.

Claims

1. A fluorescent lamp comprising a glass bulb (10), a base (11) and mechanical and electrical means to be connected to the intended lamp-holder, said base (11) being adapted to mechanically support said bulb (10) and to house said mechanical and electrical means to be connected to the intended lamp-holder, said base (11) comprising two separate parts, the first part (12) being associated with said glass bulb (10), the second part (13) being associated with said mechanical and electrical means to be connected to the intended lamp-holder **characterized in that** said two separate parts (12, 13) are hinged to each other and free to pivotally move with respect to each other about a connecting hinge (15) adapted to house the electric leads between said two parts (12, 13).

2. A lamp according to claim 1, **characterized in that** said two separate parts (12, 13) further comprise reversible hooking means adapted to keep them in a "closed" position, one above the other.

3. A lamp according to claim 2, **characterized in that** said reversible hooking means comprise a tongue (16) which is integral with said second part (13) of said base (11) and provided with a central opening, and a tooth (17) which is integral with said first part (12) of said base (11) and adapted to reversibly engage said central opening of said tongue (16).

4. A lamp according to claims 1-3, **characterized in that** said base (11) is made of insulating plastic material.

5. A lamp according to claims 1-4, **characterized in that** said mechanical means to be connected to the intended lamp-holder comprise a connector (14) equipped with one end compatible with standards G24d, G24q, GX24d and GX24q.

6. A lamp according to claims 1-5, **characterized in that** said glass bulb (10) is constructed with a tube of the "twister" type.

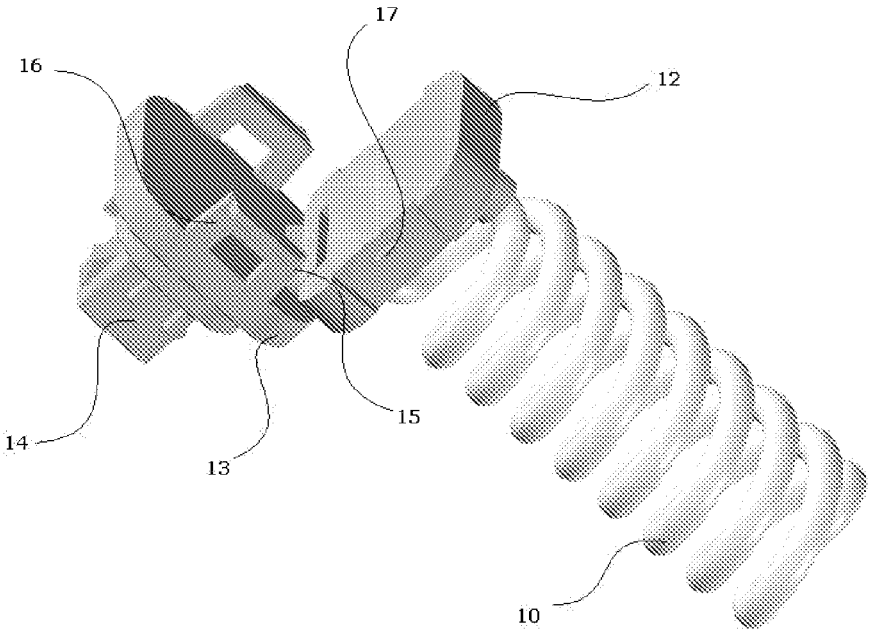

Fig. 1

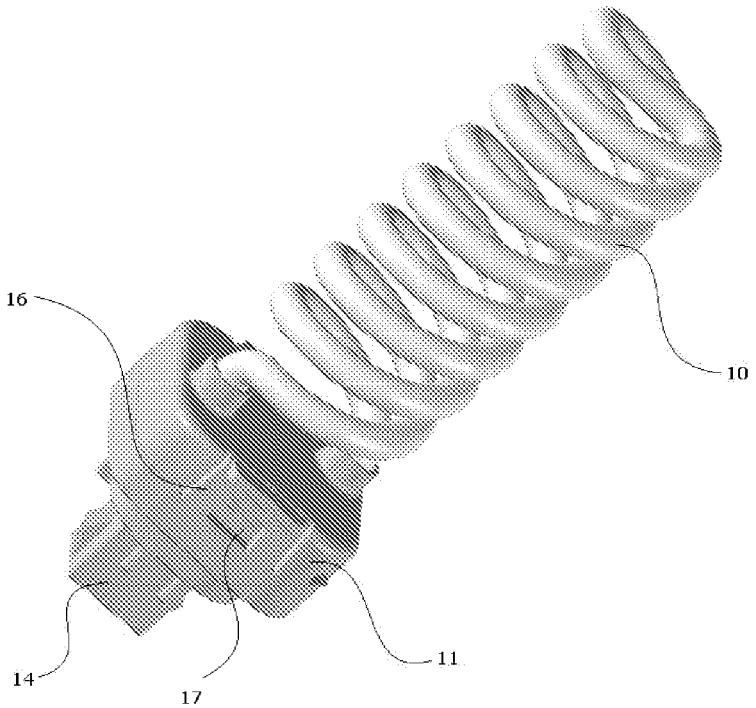

Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 10 19 1491

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 95/25245 A1 (GREEN LIGHT COMP LTD [AU]; TRAYNOR NEIL STUART [AU]) 21 September 1995 (1995-09-21) * page 10, line 2 - page 11, line 32 * * figure 3b * -----	1,5,6	INV. H01J5/48 H01J5/54
X	EP 0 892 210 A2 (BAILLOD FREDERIC [CH]) 20 January 1999 (1999-01-20) * column 2, line 57 - column 4, line 52; figures * -----	1-4	

TECHNICAL FIELDS SEARCHED (IPC)

H01J
H01K
F21V

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	5 April 2011	Angloher, Godehard

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

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 19 1491

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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05-04-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9525245 A1	21-09-1995	NONE	
EP 0892210 A2	20-01-1999	NONE	

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