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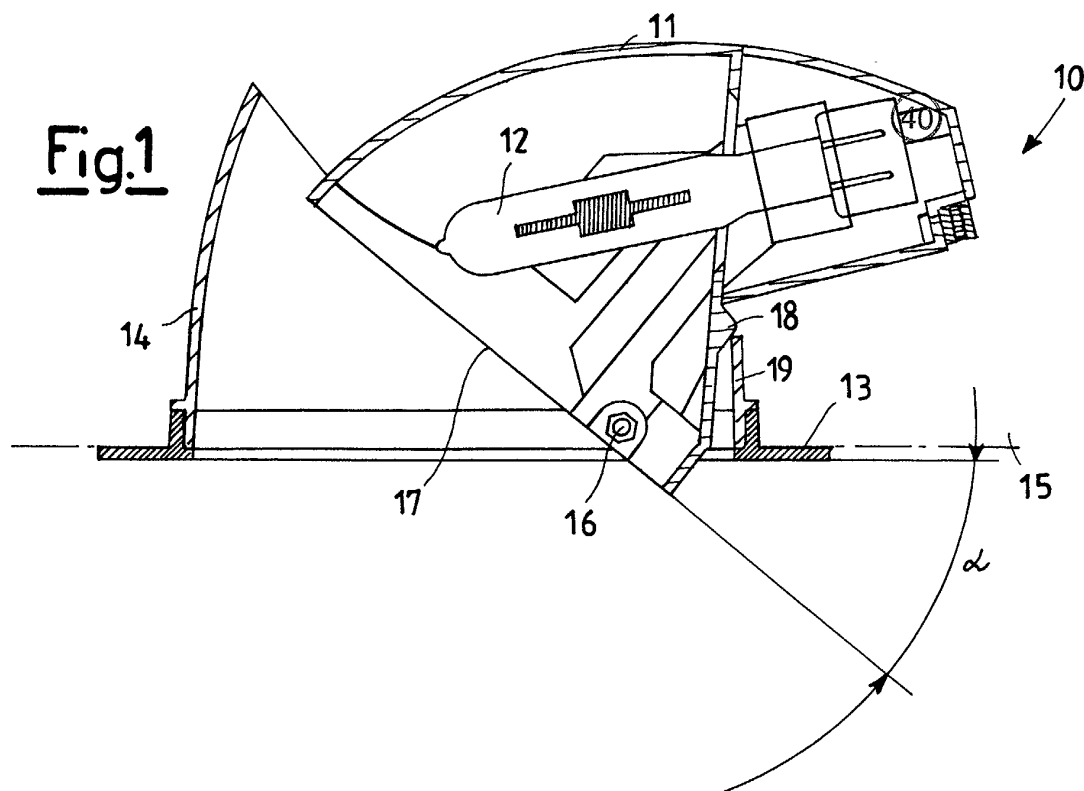
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(54) **Built-in orientable lighting apparatus**

(57) A built-in orientable lighting apparatus (10), of the type comprises a containment body (14) which hosts a lamp bay (11), inside of which there is at least one light source (12). The lighting apparatus (10) foresees means for realising the internal and external orientability of the lamp bay (11) with respect to the plane of the surface (15) to which the lighting apparatus is applied, in

such a way that the lamp bay (11) can move, reversibly, from a first maximum operating position, in which the lamp bay (11) forms a first internal angle (α) with the plane of the surface (15) to which the aforementioned lighting apparatus (10) is applied, to a second maximum operating position where the lamp bay (11) forms a second external angle (β) with the surface (15).



Description

[0001] The present invention has as its object a built-in orientable lighting apparatus.

[0002] On the market there are currently various built-in lighting apparatuses which have the possibility of being orientated towards the outside of the suspended ceiling or of another reference surface to which they are applied.

[0003] As an alternative to these lighting apparatuses, other built-in lighting apparatuses exist which have, however, the possibility of being orientated towards the inside of the suspended ceiling.

[0004] These functions, individually available on the individual built-in lighting apparatuses, can generally be combined with the possibility of orientating the apparatus, on the vertical axis, also by angles of 360°.

[0005] From this examination of the prior art one notes, however, that it now seems desirable to obtain a built-in lighting apparatus which overcomes the described technical limitations.

[0006] A purpose of the present invention is, therefore, that of realising a built-in orientable lighting apparatus which satisfies the modern interior design requirements, in an efficient and cost-effective manner.

[0007] A further purpose of the present invention is that of realising a built-in orientable lighting apparatus that is simple, safe and reliable in operation.

[0008] These and other purposes are achieved by a built-in orientable lighting apparatus, of the type comprising a containment body which has a lamp bay, inside of the aforementioned lamp bay being present at least one light source, characterised in that it foresees means for realising the internal and external orientability of the lamp bay with respect to the plane of the surface to which the aforementioned lighting apparatus is applied, in such a way that the aforementioned lamp bay can move, reversibly, from a first maximum operating position, in which the aforementioned lamp bay forms a first internal angle with the plane of the surface to which the aforementioned lighting apparatus is applied, to a second maximum operating position, where the aforementioned lamp bay forms a second external angle with the aforementioned surface.

[0009] Further characteristics of the invention are defined in the further claims attached to the present application.

[0010] Further purposes and advantages of the present invention will become clear from the following description and from the annexed drawings, provided only and an explanatory and non-limiting example, in which:

- figure 1 shows a schematic view, in section, of the built-in orientable lighting apparatus, according to the present invention, in a first operating position; and
- figure 2 shows a schematic view, in section, of the

built-in orientable lighting apparatus, according to the present invention, in a second operating position.

[0011] With particular reference to the figures mentioned, the built-in orientable lighting apparatus, according to the present invention, is wholly indicated with the reference number 10.

[0012] The lighting apparatus 10 is associated with a circular ring 13 which is fitted to the suspended ceiling 15 and comprises a lamp bay 11, inside of which there is a light source 12.

[0013] The lighting apparatus 10 is also equipped with a containment body 14, associated with the aforementioned circular ring 13, and which contains the lamp bay 11.

[0014] In figures 1-2 the lighting apparatus 10 is represented in relation to a suspended ceiling 15, indicated schematically in figures 1-2, in order to highlight the internal and external orientability of the lamp bay 11 with respect to the plane of the suspended ceiling 15.

[0015] The technical result of the invention was obtained by appropriately designing the lamp bay 11, in such a way as not to penetrate the frame and the circular ring 13.

[0016] The lighting apparatus 10 has a fulcrum 16 for rotation, whose axis does not correspond with that of the lighting apparatus 10, to optimise the internal and external rotation of the apparatus 10.

[0017] In fact, the lighting apparatus 10 has been broken down into two parts, that being the lamp bay 11 and the ring 13, to which the containment body 14 is connected, and two maximum rotation angles have been chosen, indicated with α for internal angles and with β for external angles.

[0018] In fact, the lamp bay 11 can move, reversibly, from a first maximum operating position, in which it forms a first internal angle α with the plane of the surface to which the lighting apparatus 10 is applied (in the case illustrated in figures 1-2, the suspended ceiling 15), up to a second maximum operating position, where the lamp bay 11 forms a second external angle β with the surface of the suspended ceiling 15.

[0019] Simply as a non-limiting example, possible values for the angles α and β are, respectively, 45° and 65°, but other values can be chosen according to requirements.

[0020] Indeed, it would be possible to obtain the same results also with different technologies, still following the novelty of the inventive concepts revealed in the present description.

[0021] By rotating it about the fulcrum 16, the apparatus 10 can be put into a first operating position, which can be seen in figure 1, where the orientable lighting apparatus 10 is halted by a stop 18 which touches against a retainer 19.

[0022] Still by rotating it about the fulcrum 16, the lighting apparatus 10 can be put into a second operating

position, which can be seen in figure 2.

[0023] The lighting apparatus 10, thanks to its characteristics of orientability, can obviously reach all of the intermediate positions between these two maximum positions, indicated with α for the internal angle and with β for the external angle.

[0024] The lighting apparatus 10 can also be capable of carrying out a rotation of 360° about the vertical axis.

[0025] The lighting apparatus 10 can also be equipped with a screen 17 which is connected between the light source 12 and the outside and which has an area suitable for spreading the light, for example a satin or silk-screen printed area to obtain a homogenous uniformity of the illumination of the wall to be illuminated without light stains on the part nearest to the light source 12.

[0026] From the description which has been made the characteristics of the built-in orientable lighting apparatus, which is object of the present invention, are clear, just as the advantages and the operation are also clear.

[0027] It does, in fact, concern a circular built-in apparatus (the shape of which, however, has no influence over the aims of the inventive principle illustrated in the present description), for which reason the bay 11 which contains the light source 12 can be orientated towards both the outside and the inside with respect to the plane of the suspended ceiling 15.

[0028] Finally, it is clear that numerous variants can be brought to the built-in orientable lighting apparatus, object of the present invention, all covered by the novelty principles inherent to the inventive idea.

[0029] It is also clear that, in the practical embodiment of the invention, the materials, the shapes and the sizes of the illustrated details can be whatever according to requirements and they can be replaced with others which are technically equivalent.

[0030] The scope of the invention is defined in the claims attached to the present application.

Claims

1. Built-in orientable lighting apparatus (10), of the type comprising a containment body (14) which hosts a lamp bay (11), inside of the aforementioned lamp bay (11) being present at least one light source (12), **characterised in that** it foresees means for realising the internal and external orientability of the lamp bay (11) with respect to the plane of the surface (15) to which the aforementioned lighting apparatus is applied, in such a way that the aforementioned lamp bay (11) can move, reversibly, from a first maximum operating position, in which the aforementioned lamp bay (11) forms a first internal angle (α) with the plane of the surface (15) to which the aforementioned lighting apparatus (10) is applied, to a second maximum operating position where the aforementioned lamp bay (11) forms a

second external angle (β) with the aforementioned surface (15).

2. Lighting apparatus (10), according to claim 1, **characterised in that** the means for realising the internal and external orientability of the lamp bay (11) with respect to the plane of the aforementioned surface (15) comprise a fulcrum (16) which is in a misaligned position with respect to the aforementioned lamp bay (11).
3. Lighting apparatus (10), according to claim 2, **characterised in that**, by rotating it about the aforementioned fulcrum (16), the aforementioned lamp bay (11) can be put into a first operating position in which the aforementioned orientable lighting apparatus (10) is halted by a stop (18) which touches against a retainer (19).
4. Lighting apparatus (10), according to claim 2 **characterised in that**, by rotating it about the fulcrum (16), the aforementioned lamp bay (11) can be put into a second operating position, facing towards the outside of the containment body (14).
5. Lighting apparatus (10), according to one or more of the previous claims, **characterised in that** the aforementioned first internal angle (α) has a value of 45°.
6. Lighting apparatus (10), according to one or more of the previous claims, **characterised in that** the aforementioned second external angle (β) has a value of 65°.
7. Lighting apparatus (10), according to claim 1, **characterised in that** the aforementioned lighting apparatus (10) is capable of carrying out a rotation of 360° about the vertical axis.
8. Lighting apparatus (10), according to one or more of the previous claims, **characterised in that** it is equipped with a screen (17), connected between the aforementioned light source (12) and the outside and which has an area suitable for spreading the light, so as to obtain a homogenous uniformity of the illumination.

