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(54) **Column lamp clampable between floor and ceiling**

(57) The lamp (10) is of the type comprising a vertical column (11) and supports one (46) or more lighting fixtures. It comprises a lower element (20) for its support on the floor (12) and an upper element (46; 54) for its support on the ceiling (14), and two coaxial intermediate tubular elements (16, 18) insertable one into the other in the manner of a telescope and lockable together by a known device providing locking and release as the result of relative rotation of the two tubular elements (16, 18) in one direction or the other respectively. At least one lighting fixture (46) is rigid with at least one (18) of the two tubular elements. Within the column (11) there is provided an elastic device (22) which, as a result of axial compression of the column (11), enables the length of the lamp (10) to be shortened in order to enable the locking-release device to be released. With the lamp (10) mounted, the elastic device (22) develops an axial force sufficient to maintain the lamp (10) stable but without preventing a person being able, by acting on the column (11) with the hands, to overcome the elastic force developed by the elastic device (22) in order to release the lamp (10).

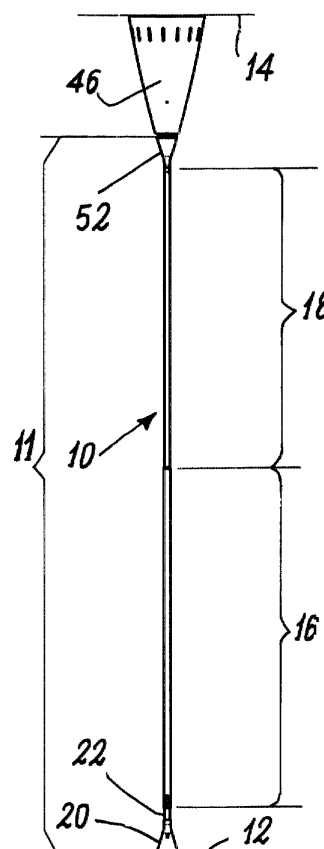


FIG. 1

Description

[0001] The present invention relates to a room lighting lamp and in particular a column lamp in which a normally vertical column supports one or more lighting fixtures.

[0002] An object of the invention is to provide a column lamp fixable between the floor and ceiling of a room.

[0003] A further object is to provide a lamp of this type which can be easily set in position and likewise easily removed.

[0004] A further object is to provide a lamp of this type which cannot be removed by a child.

[0005] The first two objects are attained by the column lamp with at least one lighting fixture, according to the present invention, comprising a lower element for its support on the floor and an upper element for its support on the column, and two intermediate coaxial tubular elements, insertable one into the other in the manner of a telescope and lockable together by a known device providing locking and release as the result of relative rotation of the two tubular elements in one direction and the other respectively, at least one lighting fixture being rigid with at least one of the two tubular elements, within the column there being provided an elastic device which, as a result of axial compression of the column, enables the length of the lamp to be shortened in order to enable the locking-release device to be released, the elastic device developing, with the lamp mounted, an axial force sufficient to maintain the lamp stable without preventing a person being able, by acting on the column with the hands, to overcome the elastic force developed by the elastic device in order to release the lamp.

[0006] The last stated object is attained by the lamp of the present invention, wherein said elastic device is disposed in the upper part of the lamp, in a position not reachable by a child even with a chair. In this manner a child is unable to release the lamp as he would have to exert thereon an upward thrust, which idea would never enter the mind of a child.

[0007] The invention will be more apparent from the ensuing description of one embodiment thereof. In this description reference is made to the accompanying drawings, in which:

Figure 1 is an elevational view of the column lamp of the invention;

Figure 2 is an enlarged axial vertical section through the lower end of the lamp; and

Figure 3 is an enlarged perspective view of the upper end of the lamp.

[0008] As can be seen from the figures, the lamp 10 is of the column type and is shown mounted between a floor 12 and a ceiling 14. The column 11 comprises two coaxial tubular elements 16 and 18, of which the upper element 18 is of smaller diameter in the illustrated example so that it can be inserted into the lower element

16. A locking-release device, not shown in the figures but of well-known type, enables the two tubular elements to be rigidly locked together, when required, by rotating them manually relative to each other about their common axis.

[0009] Figure 2 shows the lower end part of the lamp 10, comprising an element 20 for its lower support (on the floor 12). This figure also shows said elastic device, which is indicated overall by 22 and is positioned between the support element 20 and the lower end of the lower tubular element 16.

[0010] As can be seen from Figure 2, the support element 20 is of substantially rigid material (for example metal or a suitable plastic material), it is roughly of frusto-conical shape, it is partly hollow and presents two apertures, of which one is an upper circular coaxial aperture which could directly receive the lower end of the lower tubular element 16, but which in the embodiment shown in the figures instead receives said elastic device (described hereinafter). The other aperture 26 (which communicates with the aperture 24) is provided in the lower lateral part of the support element 20 and enables the electric cable for powering the lamp or lamps provided in the lighting fixture (described hereinafter) to enter.

[0011] Into the upper aperture 24 there is loosely inserted a tubular stem 28 the lower end of which is forcibly inserted into a coaxial through hole 30 provided for this purpose in the interior of the support element 20. The tubular stem 28 acts as a guide for a coaxial sleeve 32 the lower end of which telescopically enters the upper aperture 24 of the support element 20, whereas the upper end of the sleeve 32 is forcibly inserted into the lower end of the lower tubular element 16. As can be seen from Figure 2, the upper end of the tubular guide stem 32 is inserted in the manner of a telescope (such that it can slide axially) into a portion of internal diameter narrower than the sleeve 32.

[0012] Between the tubular guide stem 28 and the interior of the sleeve 32 there is disposed a helical spring 36 the lower end of which abuts against a coaxial shoulder 38 provided in the interior of the lower support element 20, the other end of the spring 36 abutting against a coaxial shoulder 40 provided inside the sleeve 32. The upper end part of the tubular guide stem 28 is threaded such that a nut 42 and relative locking nut 44 can be screwed onto it to enable the compression of the spring 36 when the lamp is mounted to be adjusted within a determined range. The operation of the elastic device 22 is already apparent from the foregoing. It will however be described hereinafter when explaining how the lamp is mounted in position and removed.

[0013] As can be seen from Figure 3, the upper end of the lamp 10 consists, in the specific illustrated example (but in general it can also be different therefrom), of the lighting fixture 46 roughly of frusto-conical shape. The lighting fixture 46 is made of a rigid transparent or translucent material (for example of opaline polycar-

bonate) and is coaxially fixed (for example by one or more screws) to a connection element 52, in this case flared, fixable onto the upper end of the upper tubular element 18 by screwing. The flare of the element 52 is such that it blends (to the extent allowed by the annular discontinuity 50 provided between the two, as can be seen from Figure 3) with the profile of the lighting fixture 46, the said flared element 52 containing a lampholder (not shown).

[0014] As can be seen from Figure 3, the lighting fixture 46 presents aeration slits 48, other slits (not visible) being provided in the lower part of the lighting fixture 46, at the annular discontinuity 50.

[0015] In the specific example illustrated, the lighting fixture 46 is provided with a cover 54 (for example of sheet metal or a suitable plastic material) which acts as an abutment against the ceiling 14 but which, in the specific example, also performs the function of reflecting the light of the lamp (not shown) contained in the lighting fixture 46. As can be seen from Figure 3, the inner surface of the cover 54 has a form which favours its reflecting function.

[0016] As already stated, if the lamp is to be of the type not removable in practice by children, the elastic device 22, instead of being provided at the lower end of the lower tubular element 16 (as in the lamp 10 of the figures), is inserted into the upper tubular element 18, at a height not reachable by a child's hands, preferably not even with a chair (the most common object which a child would think of using in attempting to reach a certain height). If the lighting fixture is disposed at the upper end of the lamp (as in the case of the lamp 10), the safest place in which to position said elastic device is between the upper end of the upper tubular element and the flared element 52.

[0017] It should also be noted that the column lamp of the present invention can have a lighting fixture of different form than the lighting fixture 46 of the lamp 10, and that the lighting fixture can also be disposed in an intermediate position of the lamp, which can also be provided with more than one lighting fixture (the lighting fixtures being distributed along the extension of the lamp).

[0018] Returning to the lamp 10 of the figures, it is very easy to mount, by simply releasing the two tubular elements 16 and 18 (if locked together) by rotating them relative to each other with the hands in the appropriate direction about the common axis, then lengthening or shortening the lamp 10, then locking them together by the reverse operation so that the lower support element 20 rests against the floor 12 with a certain force, and the cover 54 mounted on the lighting fixture 46 presses against the ceiling 14.

[0019] To remove the lamp 10 from the position in which it is located (for example to move it to another position in the same room or in another room), one of the two tubular elements 16 and 18 is gripped at any point with one hand and pulled downwards to overcome the reaction of the spring 36, while at the same time,

with the aid of the other hand, rotating the two tubular elements relative to each other in order to release them so that the lamp 10 can be properly shortened and be removed without difficulty.

[0020] If the lamp is of the said type not removable by children, in which the elastic device is close to its upper end, the removal operation differs from that just described merely in that to overcome the reaction of the spring the hand has to push upwards.

[0021] As will be apparent from the foregoing, the lamp of the present invention is very simple both to construct; and to mount and remove.

15 Claims

1. A room lighting lamp (10), wherein a vertical column (11) supports one (46) or more lighting fixtures, comprising a lower element (20) for its support on the floor (12) and an upper element (46; 54) for its support on the ceiling (14), and two coaxial intermediate tubular elements (16, 18) insertable one into the other in the manner of a telescope and lockable together by a known device providing locking and release as the result of relative rotation of the two tubular elements (16, 18) in one direction or the other respectively, at least one lighting fixture (46) being rigid with at least one (18) of the two tubular elements, within the column (11) there being provided an elastic device (22) which, as a result of axial compression of the column (11), enables the length of the lamp (10) to be shortened in order to enable the locking-release device to be released, the elastic device (22) developing, with the lamp (10) mounted, an axial force sufficient to maintain the lamp (10) stable but without preventing a person being able, by acting on the column (11) with the hands, to overcome the elastic force developed by the elastic device (22) in order to release the lamp (10).
2. A lamp (10) as claimed in claim 1, wherein the elastic device (22) is disposed in the upper part of the lamp (10), in a position not reachable by a child, even with a chair.
3. A lamp (10) as claimed in claim 1, wherein the elastic device (22) is disposed between the lower support element (20) and the lower end of the lower tubular element (16).
4. A lamp (10) as claimed in claim 1, wherein the lower support element (20) is of frusto-conical shape.
5. A lamp (10) as claimed in claim 1, wherein the upper support element consists of a lighting fixture (46).
6. A lamp (10) as claimed in claim 1, wherein the light-

ing fixture (46) is roughly of frusto-conical shape.

7. A lamp (10) as claimed in claim 1, wherein each lighting fixture (46) is provided with aeration slits (48). 5
8. A lamp (10) as claimed in claim 6, wherein the lighting fixture (46) of frusto-conical shape is closed up-
perly by a cover (54) which rests on the ceiling (14)
and also acts as a reflector. 10
9. A lamp (10) as claimed in claim 8, wherein the inner
surface of the cover (54) has a shape which favours
its reflecting function. 15
10. A lamp (10) as claimed in claim 5, wherein a con-
nection element (52), which also acts as a lam-
pholder, is disposed between the lighting fixture
(46) and the upper end of the upper tubular element
(18). 20
11. A lamp (10) as claimed in claims 6 and 10, wherein
a connection element (52) is flared in such a man-
ner as to blend with the profile of the frusto-conical
lighting fixture (46). 25
12. A lamp (10) as claimed in claim 10, wherein the
elastic device (22) is disposed between the connec-
tion element (52) and the upper end of the upper
tubular element (18). 30
13. A lamp (10) as claimed in claim 1, wherein the elas-
tic device (22) comprises an elastic element con-
sisting of a helical spring (36) coaxial with the col-
umn (11). 35

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