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(54) **Support for a light source**

(57) Lamp holder for the light, which allows the light generated by it to be adjusted quickly and efficiently, so that the operator assembling the light can direct the light produced by the lamp to the required area without using

special tools. In this way and at the same time, small faults in the alignment of other parts of the equipment, such as the arm holding the light and the vertical nature of the column holding the aforementioned light can be rectified.

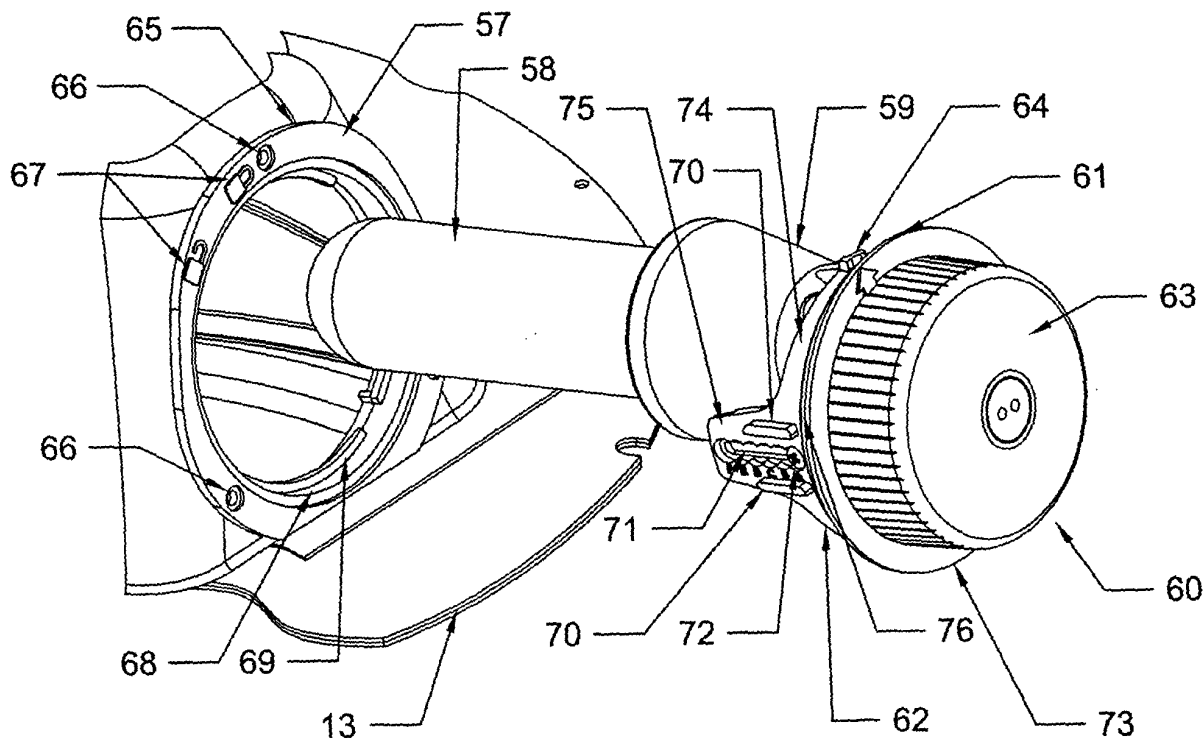


Fig. 2

Description

[0001] This application for an additional patent is as stated in the title "IMPROVEMENTS TO EUROPEAN PATENT No. 6.380.159.1 FOR AN IMPROVED DEVICE FOR LIGHTING EQUIPMENT" the new features and design comply with that stated with maximum safety and efficiency.

[0002] More specifically the invention refers to improvements to the purpose of the main Patent No. 6.380.159.1, by adding a mechanism to the lamp holder for the light, which allows the light generated by it to be adjusted quickly and efficiently, so that the operator assembling the light can direct the light produced by the lamp to the required area without using special tools. In this way and at the same time, small faults in the alignment of other parts of the equipment, such as the arm holding the light and the vertical nature of the column holding the aforementioned light can be rectified.

[0003] The main European Patent No. 6.380.159.1 is a light formed by a circular frame, the upper part of which has a seal joint, a support for the reflector body and the reflector itself which its corresponding electrical parts for lighting the lamp. The lower section has a flat piece of glass, a lens glass or a polycarbonate box and lateral or vertical different shaped link arms which position the light on the selected column.

[0004] The improvements stated in this application are based on the replacement of the lamp holder in the main patent, for a socket for a cup and a cup (both plastic) housing the lamp holder in such a way that the optic still has the internationally classified seal known as IP-66. For the purposes of the invention the socket for the cup and the cup do not affect the light's seal as designed and constructed in the report for the main Patent.

[0005] Without changing the shape and characteristics of the reflector described and claimed in the main patent, a washer is attached to the opening for the assembly of the lamp holder. This washer is located in this opening and includes some means of receiving the cup without changing its design and changing its position of this cup with regard to the reflector using these methods allowing the light emitted by the lamp to be perfectly focused.

[0006] The cup itself includes the lamp holder and because of the means of adjustment and connection, it forms an airtight seal with the reflector. The position of the cup can be changed by turning a small screw on the cup.

[0007] Turning this screw, in combination with the other means of adjustment, makes the lamp holder move forwards or backwards in terms of the completed position of the reflector. This is fixed to the frame of the light itself and therefore is completely static holding the reflector to the frame by a support.

[0008] Other details and features shall be shown during the description below. This description refers to drawings attached to this report showing for illustrative purposes a practical implementation of the invention.

[0009] Below is a detailed list of the different parts of the invention drawn in the attached diagrams; (10) frame, (11) side mounting, (12) washer, (13) support, (14) reflector, (15) cupola, (16) electrical components, (17) plate, (18) tube, (20) lugs, (21) drilled holes, (22) lamp holder, (23) vertical arms, (24) bushing hole, (25) single vertical link arm, (26) double vertical link arm, (27) light, (28) flan glass, (29) lens glass, (30) polycarbonate box, (31) columns, (32) link arm, (33) cylindrical lug, (34) first section, (35) second section, (36) lug, (37) vertical part of (26), (38) horizontal part of (26), (39) curved part of (26), (40) vertical part, (41) head, (42) horizontal part, (43) vertical part of (48), (44) head of (48), (45) horizontal part of (48), (46) curved part of (48), (47) single vertical link arm, (48) double vertical link arm, (49) first body of the column (31), (50) second body of the column (31), (51) conical-trunk support, (52) plate, (53) curved part of (47), (54) hole, (55) horizontal part, (56) vertical part, (57) connection piece, (58) lamp, (59) lamp holder, (60) cup, (61) overlap area, (62) support, (63) adjustment wheel, (64) guide lug, (65) flat area, (66) drilled hole, (67) cover area, (68) skirt, (69) ribs, (70) guide ribs, (71) slot, (72) screw, (73) flat area for wheel (63), (74) ring shaped area, (75) skirt, (76) joint.

[0010] Numbers (10) to (56), inclusive, belong to the Main patent No. 6.380.159.1, but some of them describing parts of the light (27) are the same to make the invention more easily understood.

[0011] Figure 1 is an enlarged view of the light (27) showing the different parts forming the improvements to this Additional European Patent application.

[0012] Figure 2 is an enlarged view of the main features of the cup (60) connected to the reflector (14) using connection piece (73).

[0013] In one of the preferred implementations of this invention and as shown in Figure 1, the light (27) in this European Patent No. 6.380.159.1 has no lamp holders (22) drawn with this number in Figure 1 of this patent. These have been replaced by a cup (60) in order to make fine adjustments of the light as shown in Figure 2.

[0014] In turn, the cup (60) is formed by a lamp holder support (62) as shown in Figure 2, an adjustment wheel (63) and means to guide the lamp holder (59), which fit into the connection piece (57), mounted (57) on the reflector (14) using conventional screws not shown in the drawing. These screws pass through drilled holes (66) made in (57) allowing the connection piece (57) to be attached to the reflector (14).

[0015] As shown in Figure 2, the connection piece (57) is formed by a flat and ring piece (65) and a skirt (68) appearing from its inner edge.

[0016] The lamp (58) is attached by a screwed thread or other equivalent method for lamp holders (59), as shown in Figure 2. In turn, this is (59) fixed using screws (72) to the supports (62), with these supports (62) having a slotted area (71) which stops the lamp holder (59) to (62) from moving in the different positions shown for illustrative purposes as letters A, B, C, D, E, and F. These

positions shown as letters holding screws (72) in slot (71), hold the position of the lamp (58) in a more or less advanced position in a longitudinal direction inside the reflector (14).

[0017] The support (62) is formed by an ring area (74) which extended vertically downwards according to skirts (75), which (75) has some longitudinal guide ribs (70) on its upper surface. These contain hidden slots shown in Figure 2 equipped with a connection piece (57) in a skirt (68).

[0018] The connection piece (57), as shown in Figure 2 is formed by a flat ring shaped piece (65) which is extended around its inner edge by a skirt (68). The surface of this has some ribs (69) which butt up to the circular area or joint (76). Also in the flat area there are drilled holes (66) for holding the support (62) to the reflector (14). Lugs (64) have been located in the connection area emerging from the ring area (74).

[0019] The lugs (64) are located in the connection area (67) which has been drilled so that these lugs (64) can pass through. By turning the ring area (74) allow the cup (60) to be connected to the reflector (14), pressing the joint (76) located below the flat area (73) on the wheel (63) the flat area (65) of the connection piece (57) making the whole assembly (14-60) completely sealed.

[0020] Moreover, if the user turns the adjustment wheel (63), a single inner thread finely adjusts the lamp holder (59) or makes a second adjustment once all light components (27) have been assembled. In this way, its is first generally adjusted using the holding position for the lamp holder (59) in any of the positions A, B, C, D, E, F. There is then a fine adjustment by rotating the wheel (63).

[0021] Having sufficiently described how this invention using the attached drawings, it is easy understood that any modification to the detail of the mention which is judged to be suitable may be made whenever the essential features of the summarised invention in the following claims are not altered.

Claims

1. - "IMPROVEMENTS TO EUROPEAN PATENT No. 6.380.159.1 FOR AN IMPROVED DEVICE FOR LIGHTING EQUIPMENT" including columns of different heights, single vertical link arms, double vertical link arms, vertical and sloping link arms, glass and box and lights which include a frame, preferably circular, on which rests a washer, a circular edge support and an empty central area to connect a reflector, being closed on its upper part by a cupola, whereas the lower section of the frame includes a flat glass, a lens glass or a polycarbonate box using suitable methods. These are **characterised by** the fact that the reflector (14) on the light (27) includes a cup (60) which have means to make a general adjustment of the lamp holder (59) with respect to

the reflector (14) and fine adjustment methods for the aforementioned lamp holder (59) with respect to the reflector (14).

2. - "IMPROVEMENTS TO EUROPEAN PATENT No. 6.380.159.1 FOR AN IMPROVED DEVICE FOR LIGHTING EQUIPMENT" according to the first claim **characterised by** the fact that the general adjustment methods for the lamp holder (59) with regard to the reflector (14) are formed by a support (62) on the lamp holder (59) which consists of a flat ring shaped area (74) with extends vertically downwards according to some skirts (75), which have (75), on their upper surface, some longitudinal guide ribs (70) which enclose some hidden slots in the skirt (68) on the connection piece (57), formed (57) by an ring area (65) which extends around the inner edge of the skirt (68).
3. - "IMPROVEMENTS TO EUROPEAN PATENT No. 6.380.159.1 FOR AN IMPROVED DEVICE FOR LIGHTING EQUIPMENT" according to the first claim **characterised by** the fact that the means of generally adjusting the lamp holder (59) are formed by a slotted area (71) located in the skirt (75) with slots (71) in positions A, B, C, D, E, and F of the lamp holder (59) with respect to the reflector (14), using the assistance of a screw (72).
4. - "IMPROVEMENTS TO EUROPEAN PATENT No. 6.380.159.1 FOR AN IMPROVED DEVICE FOR LIGHTING EQUIPMENT" according to the first claim **characterised** the means of generally adjusting the lamp holder (59) with regard to the reflector (14), are formed by a connection piece (57) on the cup (60) with the reflector (14), formed by a flat ring shaped area (65) with a skirt (68) extending around the inner edge, the surface of which is ribbed (69) which butt up against the circular area or joint (76).
5. - "IMPROVEMENTS TO EUROPEAN PATENT No. 6.380.159.1 FOR AN IMPROVED DEVICE FOR LIGHTING EQUIPMENT" according to the first claim **characterised by** the fact that the flat ring shaped area (65) has locating areas (67) or drilled holes to pass lugs (64) through which extend from the surface of the ring shaped area (74) to allow the cup (60) to be connected to the support (65) with the assistance of a seal joint (76), located below the flat area (73).

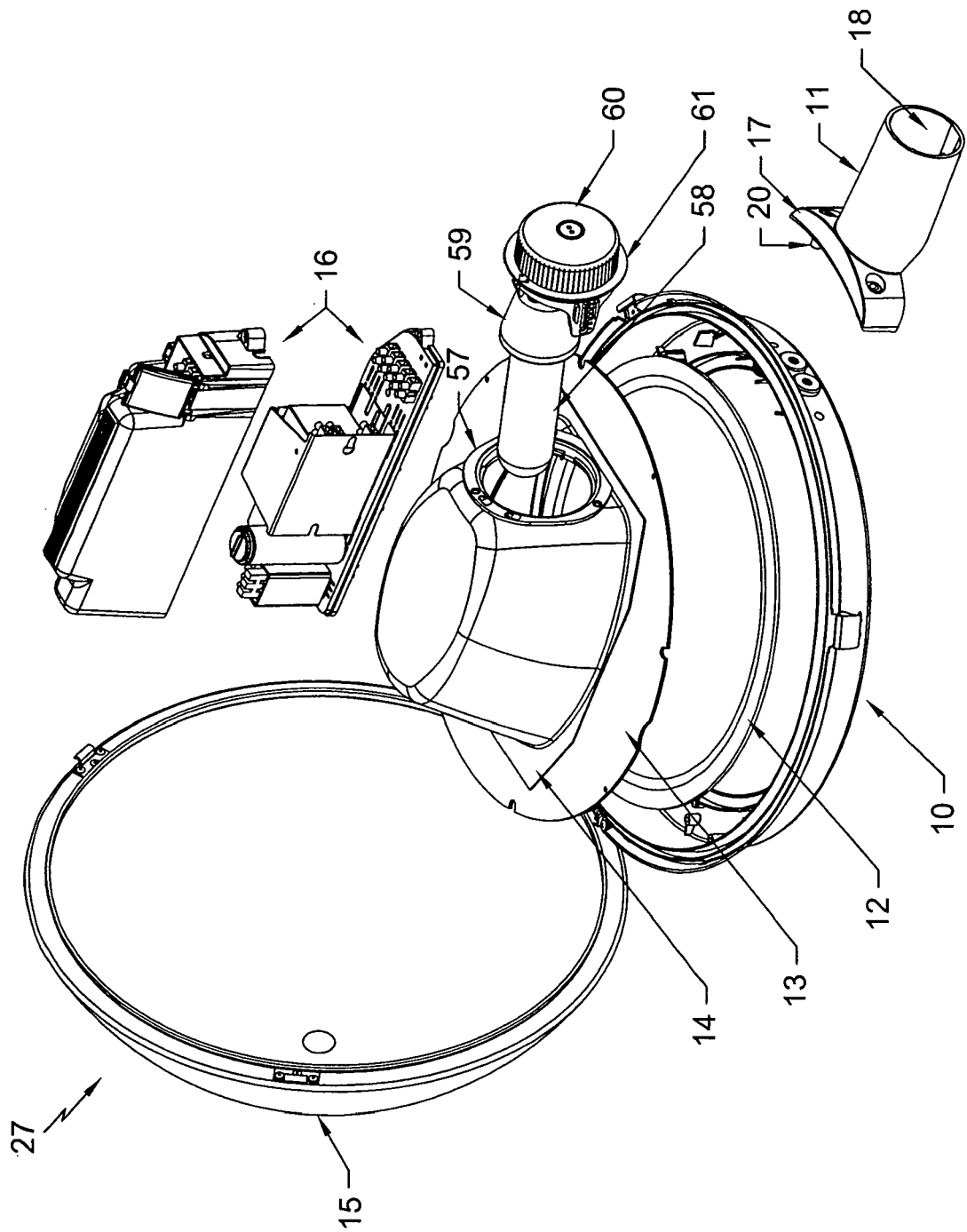


Fig. 1

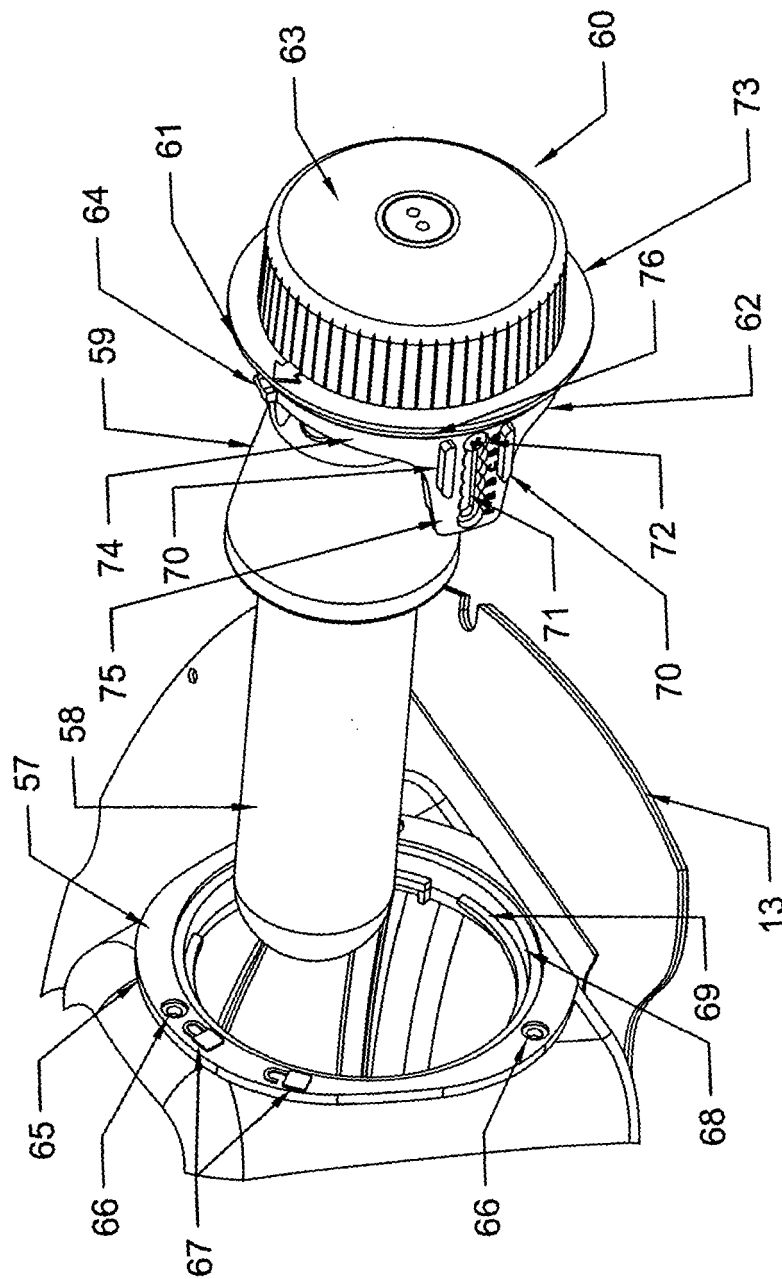


Fig. 2



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 06 38 0230

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 13 November 2006	Examiner Lange, Christian
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			

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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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