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(58) Field of Search
UK CL (Edition P) **H2E ECBF**
INT CL^6 **H01R 33/05 33/06**

(54) Abstract Title
Detachable light fitting

(57) A ceiling light fitting or lighting rose comprises a base portion 10 for fitting to the ceiling and a separate body portion 11 for connecting to the cable 12 of a pendant light. Inlet terminals 29 are provided on the base portion 10 for connecting to the mains supply cable, each inlet terminal being connected to respective supply terminals that are concealingly mounted in respective sockets 23,24 disposed on the underside of the base portion 10. The body portion 11 comprises a pair of projecting terminals 13,14 which make contact with respective supply terminals when they are inserted into the respective sockets 23,24 in the base portion 10 and the body portion 11 is turned relative to the base portion 10. The pendant light and any associated shade can mounted or removed from the ceiling merely by turning the body portion 11 into or out of engagement with the base portion 10.

The base portion may include a rotatable shutter (39, Fig 5).

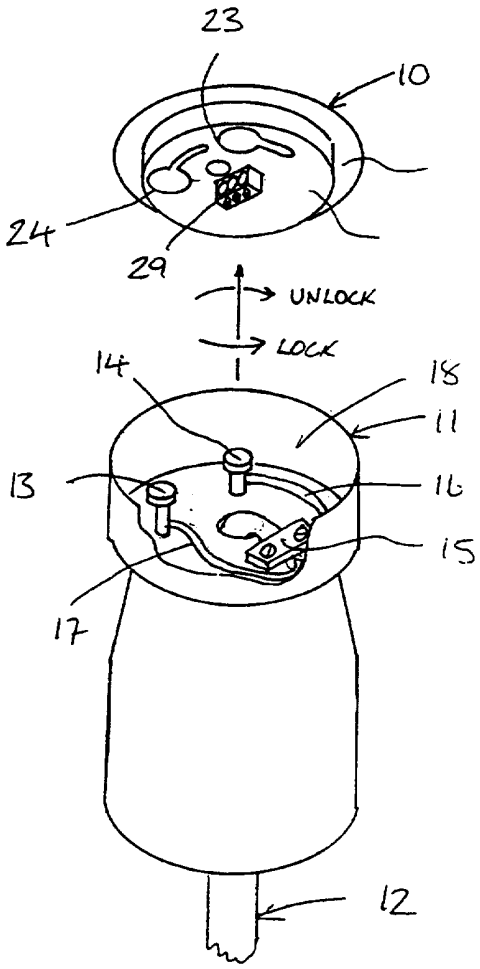

Figure 1

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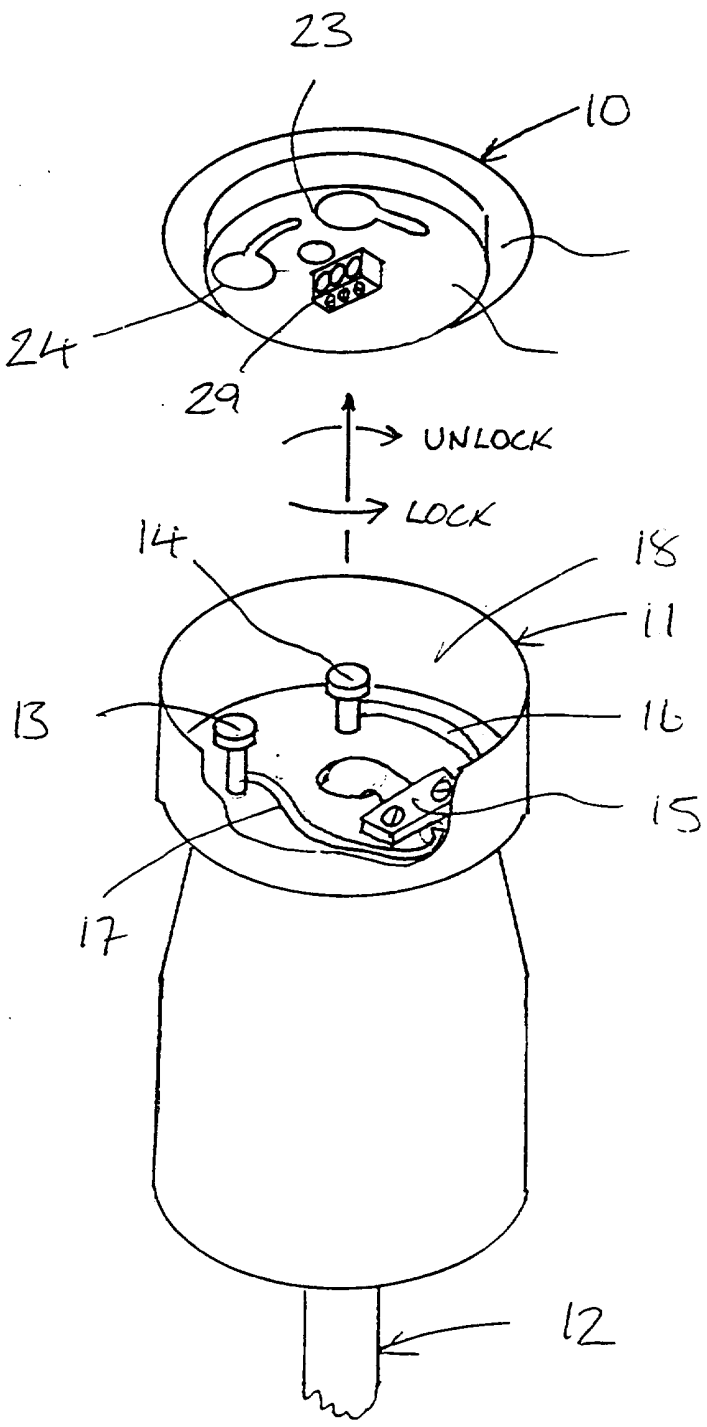

Figure 1

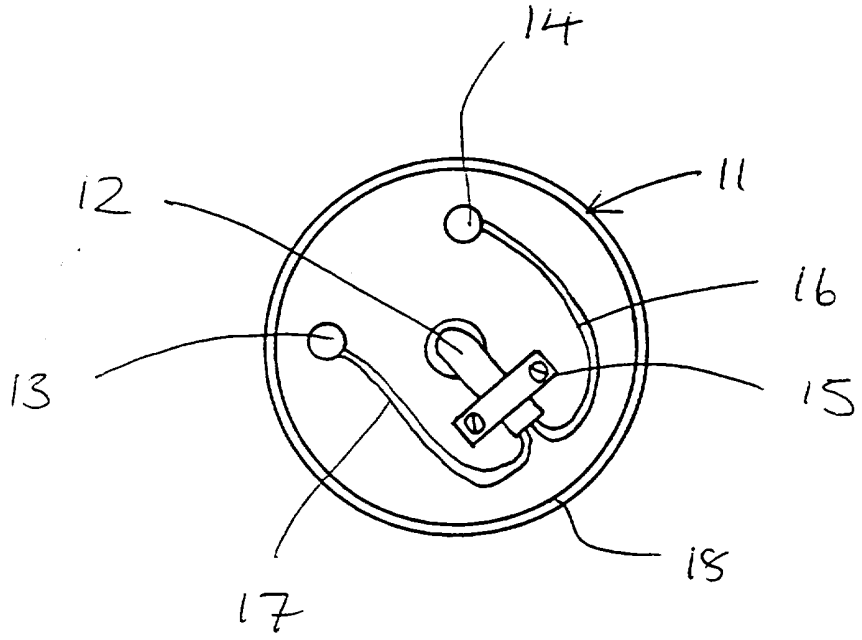

Figure 2

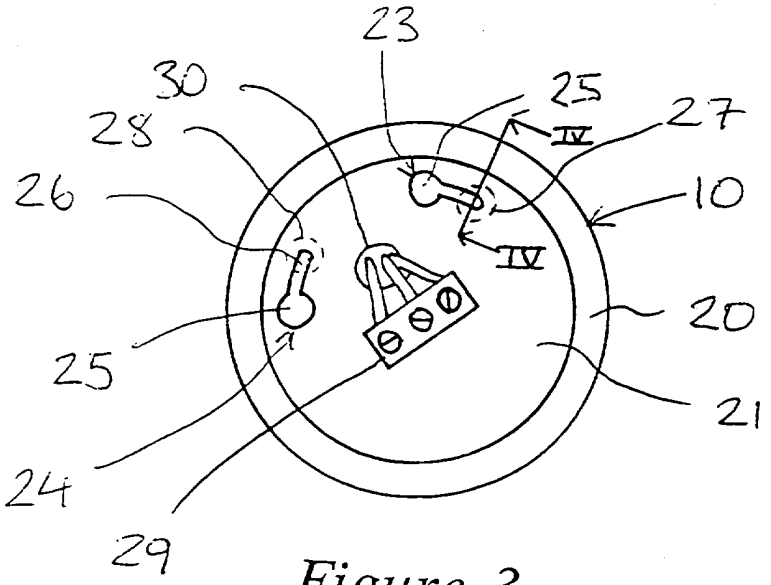

Figure 3

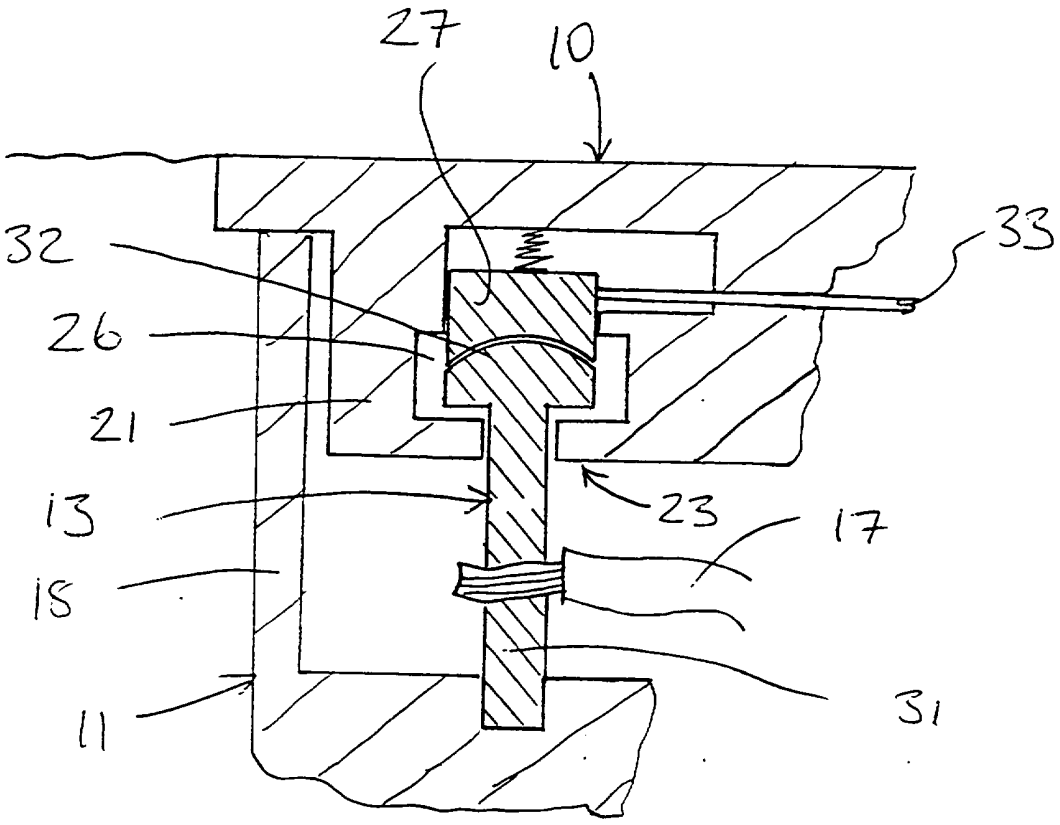

Figure 4

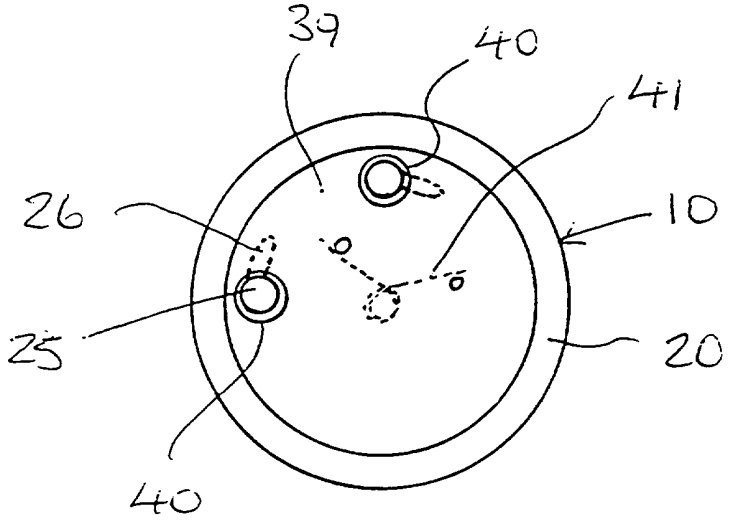

Figure 5

Light Fitting

This invention relates to a light fitting and more particularly but not solely to a ceiling light fitting.

Ceiling light fittings generally comprise a so-called ceiling rose having a base plate for fixing to the ceiling and a removable cover. A plurality of electrical screw terminals are provided on the base plate for connecting to respective terminals of a switched mains supply. A pendant light is secured to the ceiling rose by attaching the wires of its supply cable to respective terminals on the base plate. The cover of the ceiling rose is then fitted to obscure the terminals on the base.

A disadvantage of this arrangement is that it is difficult to attach heavy pendant lights, such as chandeliers, since the person fitting the light has to stand on a ladder and support the weight of the light whilst making its electrical connection to the ceiling rose. Furthermore, the electrical connection between the ceiling rose and the light fitting has to be broken in order to remove the latter for cleaning.

I have now devised a light fitting which alleviates the above-mentioned problems.

In accordance with this invention there is provided a light fitting comprising a base for fixing to a ceiling and a separate body for connecting to a light, the base comprising a plurality of mains supply terminals which make contact with respective contact terminals on the body when the latter is locked into engagement with the base.

Thus, the light to be fitted can be wired to the body of the fitting before climbing up to the ceiling. Then, in order to connect the light, the user simply has to climb the ladder, and engage the body with base.

The risk of the weight of the light accidentally pulling the body out of the socket is avoided once the two parts are locked into engagement.

Preferably the body is engaged with the base by turning the body relative to the base.

Preferably the body comprises projecting contact

terminals which engage into respective sockets in the base.

Preferably the sockets in the base comprise locking means which engage the contact terminals and prevent the body from being accidentally pulled out of the base.

Preferably the base comprises a flat plate for fixing to the ceiling. Preferably the body comprises a cover which obscures the terminals of the base and body of the fitting when the two parts are engaged.

Preferably the base comprises a shutter which obscures the live mains supply terminal when the body is separated from the base, so that the risk of receiving an accidental electric shock is avoided.

Embodiments of this invention will now be described by way of examples only, and with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of an embodiment of ceiling light fitting in accordance with this invention;

Figure 2 is a plan view of the body of the light fitting of Figure 1;

Figure 3 is a bottom view of the base of the light fitting of Figure 1;

Figure 4 is a sectional view along the lines IV - IV of Figure 3; and

Figure 5 is a bottom view of the base of an alternative embodiment of light fitting in accordance with this invention.

Referring to Figure 1 of the drawings, there is shown a light fitting comprising a base 10 for fitting to a ceiling, and a separate body 11 attached to the end of a supply cable 12 of a pendant light.

Referring to Figure 2 of the drawings, the body 11 comprises a generally cylindrical housing having two terminals 13, 14 projecting upwardly from its upper end-wall. A through bore, for receiving the supply cable 12 of the pendant light extends axially through the housing between its opposite end-walls. In order to attach the light, the free end of the supply cable 12 is fed through the bore from the lower end wall until it emerges at the upper end-wall. The cable 12 is then passed under a clamping member 15, and the live and neutral mains conductors 16, 17 of the cable are connected to the

respective contact terminals 13, 14. It will be appreciated that the light can be connected to the body before climbing onto the ladder. The contact terminals 13, 14 comprise screw connectors (not shown) which clamp onto the free ends of the conductors 16, 17. A peripheral wall 18 projects axially from the upper end-wall of the body 11 to protect the terminals 13, 14. The terminals comprise an elongate shank 31 attached to an enlarged head 32 having a Convex contact surface on its outer end, as shown in Figure 4.

Referring to Figure 3 of the drawings, the base 10 comprises a circular moulded plastics plate 20 having a raised central portion 21, on which a plurality of sockets 23, 24 are provided. The sockets 23, 24 are arranged on a circular line which is concentric to the plate.

Referring also to Figure 4 of the drawings, each socket e.g. 23 comprises a circular insertion opening 25 connected to an arcuate channel-section keyway 26 having a narrow opening at its surface. The keyways 26 extend clockwise from the insertion opening.

Spring-loaded terminals 27, 28 are disposed in the sockets 23, 24 respectively, at the opposite end of their respective channel-section keyways 26 to their insertion openings. The supply terminals 27, 28 each comprise a concave contact surface. The supply terminals 27, 28 are connected to respective terminals of a block connector 29 on the base by means of conductors 33. An aperture 30 is formed in the base, so that mains supply cables can be fed through to the block connector 29 from the opposite side of the ceiling.

Once the supply cables have been attached, the base 10 is fitted to the ceiling by means of screws. In order to fit the pendant light, the user simply has to stand on a ladder and insert the terminals 13, 14 of the body 11 into the sockets 23, 24 respectively of the base 10. The body 11 is locked to the base 10 by rotating the body 11 clockwise, so that the enlarged heads 32 of its terminals enter the channel-section keyways 26: this locks the terminals 13, 14 into the sockets. Further rotation of the body 11 causes its terminals 13, 14 to snap-engage with respective spring-biassed terminals 23, 24 in the keyways 26. The complementary shape of the surfaces of the

engaged terminals 13, 23 and 14,24 serve to hold the body 11 in the locked position. It will be appreciated that the terminals are arranged such that the body 11 can only be connected to the base 10 one way around, thus it is not possible to reverse the connection between their respective terminals 13, 23 and 14, 24. When the body 11 is connected to the base 10 the edge of its peripheral wall 18 seals against the base 10 and covers the terminals inside.

Referring to Figure 5 of the drawings, in an alternative embodiment a circular shutter 39 is rotatably mounted to the base 10, in order to obscure its exposed electrical terminals 26, 29. The shutter 34 is biassed into a closed position by a coil spring 41. Apertures 40 in the shutter provide access to the insertion opening 25 of the sockets in the base. When the body 11 is brought up to the base 10 so that its terminals 13, bear on the shutter 39, the latter is caused to rotate, so that the terminals can enter the keyways 26.

In a modification applicable to both the above embodiments, the body 11 may be provided with more than two terminals e.g. where a third earth terminal is required. In this case, the terminals also need to be offset, so that it is not possible to inadvertently connect a live mains supply to the earth terminal.

In another modification, the body 11 may be provided with an internal screw-threaded socket at the lower end of its through-bore, so that a conventional bayonet or screw-fitting light terminal can be attached directly to the body.

Claims

1) A light fitting comprising a base for fixing to a ceiling and a separate body for connecting to a light, the base comprising a plurality of mains supply terminals which make contact with respective contact terminals on the body when the latter is locked into engagement with the base.

2) A light fitting as claimed in claim 1, in which the base comprises mains inlet terminals for connecting to respective conductors of a mains supply cable, the inlet terminals being connected to respective mains supply terminals on the base.

3) A light fitting as claimed in claims 1 or 2, in which the body is engaged with the base by turning the body relative to the base.

4) A light fitting as claimed in any preceding claim, in which the body comprises projecting contact terminals which engage into respective sockets in the base.

5) A light fitting as claimed in claim 4, in which the sockets in the base comprise locking means which engage the contact terminals.

6) A light fitting as claimed in any preceding claim, in which the base comprises a flat plate for fixing to the ceiling.

7) A light fitting as claimed in any preceding claim, in which the body comprises a cover arranged to obscure the terminals of the base and body of the fitting when the two parts are engaged.

8) A light fitting as claimed in any preceding claim, in which the base comprises a shutter which obscures the live mains supply terminal when the body is separated from the base.

9) A light fitting substantially as herein described with reference to Figures 1 to 4 or Figure 5 of the accompanying drawings.

The Patent Office

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Application No: GB 9624789.5 **Examiner:** Paul Nicholls
Claims searched: 1 - 9 **Date of search:** 21 April 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.P): H2E (ECBF)

Int Cl (Ed.6): H01R 33/05, 33/06

Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	GB 2,278,966 A	(TAYLOR) - Whole document	1-3, 6, 7
X	GB 2,268,841 A	(PILLING) - Whole document	1, 2, 4, 6, 7
X	GB 2,227,376 A	(HITECH) - See fig 1	1, 2, 4, 6, 7
X	GB 2,217,495 A	(MATSUSHITA) - Whole document	1-7
X	GB 1,420,748 A	(SMITH) - See fig 3	1, 2, 6, 7
X	GB 1,298,758 A	(MK) - See especially pegs 91	1-7
X	GB 787,713 A	(MASON) - Whole document	1, 2, 6, 7
X	GB 615,692 A	(MASON) - Whole document	1, 2, 6, 7
X	GB 605,598 A	(BOYNTON and WHIFFIN) - See especially pins 19	1-7
X	WO 95/02912 A1	(MAILLIER) - Whole document	1-3, 6, 7

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