



- (51) **International Patent Classification:**
F21V 31/00 (2006.01) *F21V 15/01* (2006.01)
- (21) **International Application Number:**
PCT/IB2013/055629
- (22) **International Filing Date:**
9 July 2013 (09.07.2013)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2012/05136 10 July 2012 (10.07.2012) ZA
- (72) **Inventors; and**
- (71) **Applicants :** MILLARD, Paul, Stefanus [ZA/ZA]; 12 Honeyguide, Blue Gill, Glen Marais, 1619 Kempton Park (ZA). VAN NIEKERK, Charl [ZA/ZA]; 16 Green Acres, 826 Klippan Road, 0182 Montana Gardens (ZA).
- (74) **Agents:** DAVIES, James, Hasely et al.; Adams & Adams, PO Box 1014, 0001 Pretoria (ZA).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to the identity of the inventor (Rule 4.17(i))*
- *of inventorship (Rule 4.17(iv))*

Published:

- *with international search report (Art. 21(3))*
- *with amended claims (Art. 19(1))*

Date of publication of the amended claims: 6 March 2014

(54) **Title:** AN ELECTRICAL LIGHTING APPARATUS AND A SEAL FOR AN ELECTRICAL LIGHTING APPARATUS

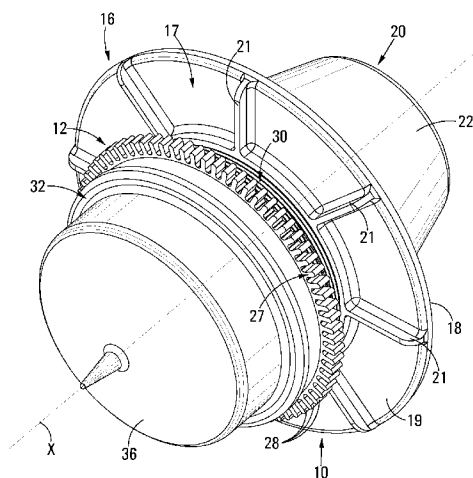


FIG 1

(57) **Abstract:** The invention relates to an electrical lighting apparatus (10) and to a seal (16). The lighting apparatus (10) includes a body (12), defining a body axis X, a male, screw-type, electrical connector (14) which projects longitudinally from the body (12) and a radially outwardly projecting seal (16). The body (12) comprises an axially inner portion (30), which has external screw-thread on an outer surface (13) thereof, and an axially outer portion (32). The seal (16) comprises an annular attachment formation (17) which includes a flange (19) and internal screw-thread for screw-threadingly engaging the outer surface (13) and an annular seal member (18) which is attached to an underside of the flange (19). When connected to a light fitting (20), the seal (16) is displaceable relative to the body (12) between an open position and a sealed position in which the seal sealingly abuts the light fitting (20).



AMENDED CLAIMS

received by the International Bureau on 23 December 2013 (23.12.13)

1. An electrical lighting apparatus which is connectable to an electrical light fitting, the lighting apparatus including:
 - a body defining a body axis;
 - an electrical connector which projects from the body and is electrically connectable to the light fitting; and
 - a seal which is connected to, and configured for engagement with, the body such that the seal is displaceable relative to the body, wherein the seal projects radially outwardly from the body, the seal being circumferentially and axially displaceable relative to the body about the body axis and wherein, when the lighting apparatus is connected to the light fitting, the seal is operatively displaceable relative to the body, along the body axis, between an open position, in which the seal does not abut the light fitting, and a sealed position, in which the seal sealingly abuts the light fitting in order to inhibit ingress of water and/or dirt into the light fitting.
2. An electrical lighting apparatus as claimed in claim 1, wherein the seal is peripherally connected to the body about the body axis, the seal being axially displaceable relative to the body along the body axis.
3. An electrical lighting apparatus as claimed in claim 2, wherein the seal is annular and coaxially arranged about the body.
4. An electrical lighting apparatus as claimed in any of the preceding claims, wherein the seal is screw-threadingly engaged with the body such that the seal is helically/spirally displaceable relative to the body about the body axis.
5. An electrical lighting apparatus as claimed in claim 4, wherein the seal includes:
 - an attachment formation which is connected to the body; and

a seal member fast with the attachment formation.

6. An electrical lighting apparatus as claimed in claim 5, wherein the attachment formation is annular and includes a radially outwardly projecting flange to which the seal member is attached such that the attachment formation is configured operatively to urge the seal member against the light fitting.
7. An electrical lighting apparatus as claimed in claim 6, in which the attachment formation includes an internal screw-thread and the body includes an external screw-thread such that the attachment formation screw-threadingly engages the body.
8. An electrical lighting apparatus as claimed in claim 7, wherein the attachment formation includes gripping formations which allow an operator to grip and thus displace the seal relative to the body.
9. An electrical lighting apparatus as claimed in any of the preceding claims, which includes at least one electrical light source which is electrically connected to the electrical connector.
10. An electrical lighting apparatus as claimed in claim 9, wherein the electrical light source is in the form of a Light-Emitting Diode (LED), the lighting apparatus further including a light reflector and a heat sink which is thermally connected to the LED.
11. An electrical lighting apparatus as claimed in any of the preceding claims in which the electrical connector is a male type electrical connector configured to be received within a female electrical socket of the light fitting.
12. A seal for an electrical lighting apparatus which is connectable to an electrical light fitting, the seal having a central aperture for accommodating a body of the lighting apparatus, the seal being

configured for screw-threaded engagement with the body of the lighting apparatus such that, when the lighting apparatus is connected to the light fitting, the seal is operatively displaceable relative to the body of the lighting apparatus between an open position, in which the seal does not abut the light fitting, and a sealed position in which the seal sealingly abuts the light fitting in order to inhibit ingress of water and/or dirt into the light fitting.

13. A seal as claimed in claim 12, which includes an attachment formation which is configured for screw-threaded engagement with the body of the lighting apparatus and a seal member which is attached to the attachment formation.
14. A seal as claimed in claim 13, wherein the attachment formation projects operatively outward away from the lighting apparatus and includes a plurality of gripping formations which allow an operator to grip and rotate the seal relative to the lighting apparatus.