No. 875,357. PATENTED DEC. 31, 1907.

W. R. LAMBERT.

LAMP SOCKET.

APPLICATION FILED FEB. 1, 1907.

Fig. 1.

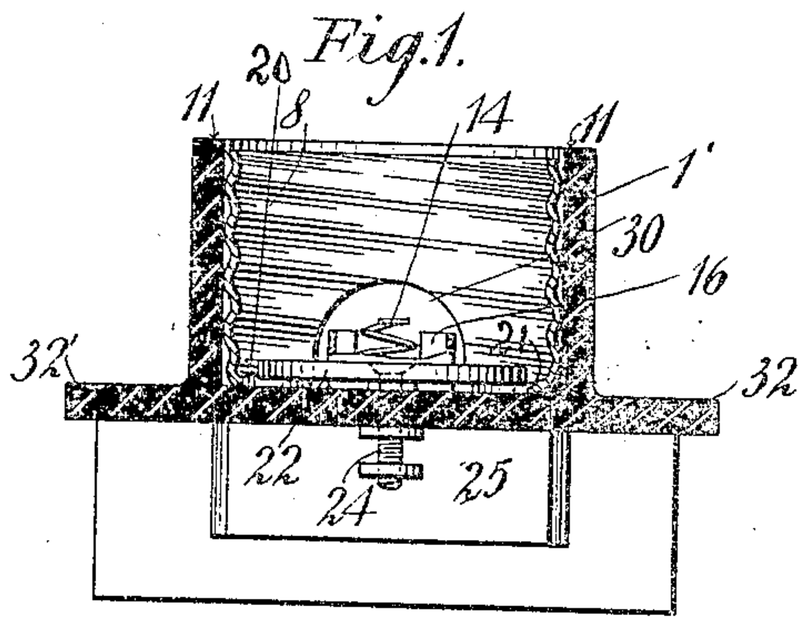


Fig. 4.

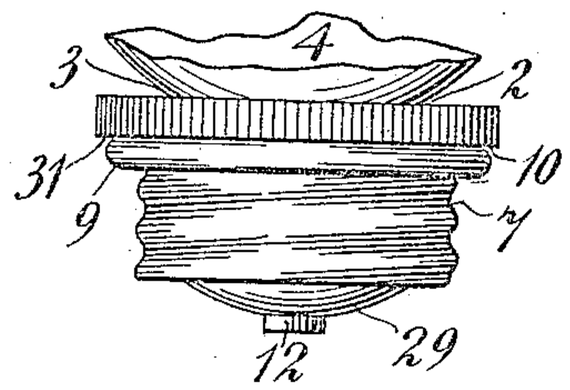


Fig. 2.

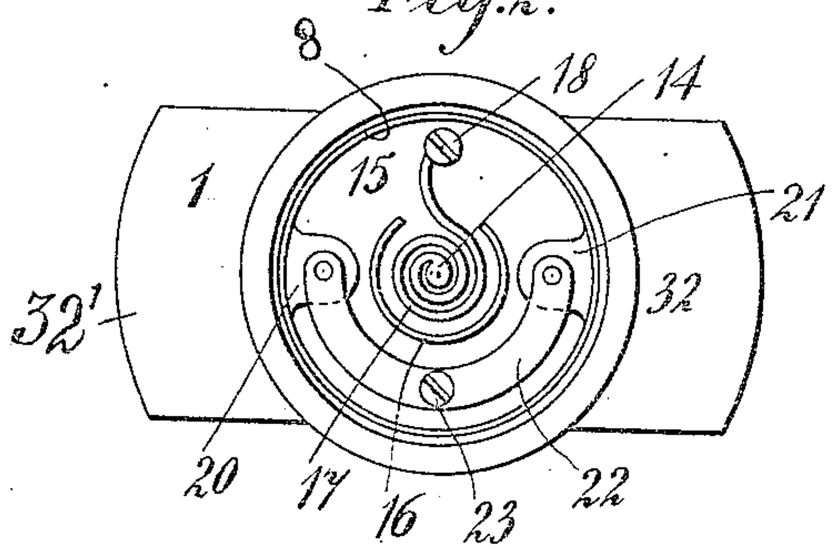


Fig. 5.

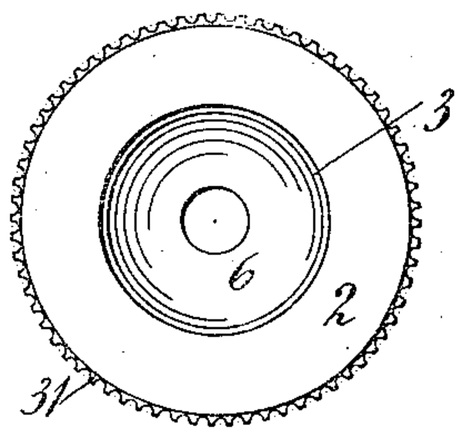


Fig. 3.

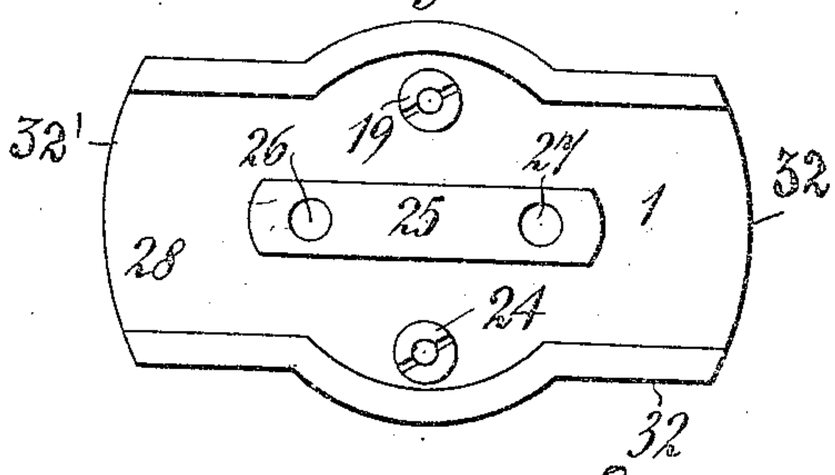


Fig. 6.

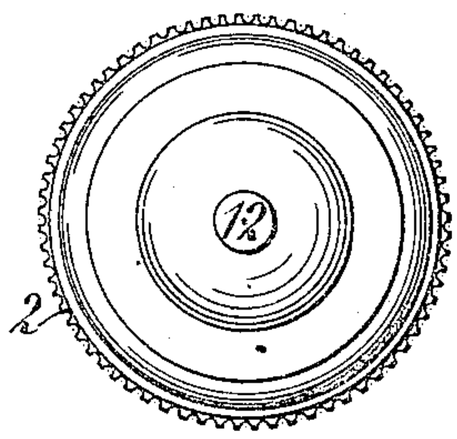


Fig. 8

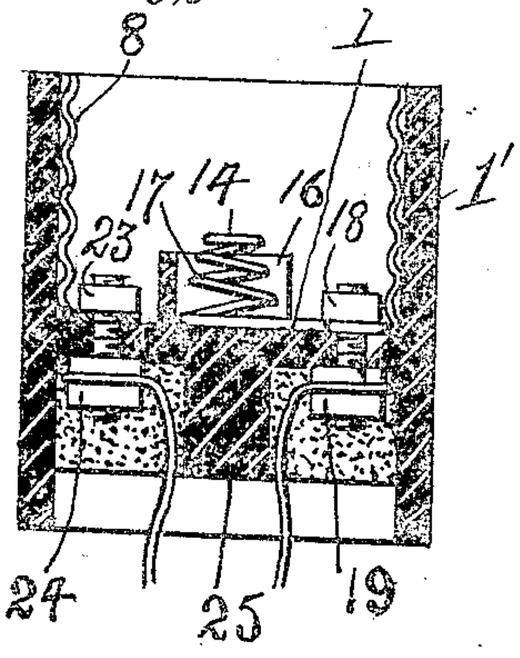
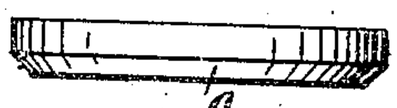


Fig. 7



—Witnesses.—

A. J. Trigg.

Max N. Svoboda.

—Inventor.—

Walter R. Lambert,

By

A. C. Ewert & Co.

Attorneys

UNITED STATES PATENT OFFICE.

WALTER REGINALD LAMBERT, OF LONDON, ENGLAND.

LAMP-SOCKET.

No. 875,357. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed February 1, 1907. Serial No. 355,303.

To all whom it may concern:

Be it known that I, WALTER REGINALD LAMBERT, a subject of the King of Great Britain and Ireland, residing at 28 Avington Grove, London, S.E., in the county of London, England, have invented certain new and useful Improvements in Lamp-Sockets, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to electric lamp sockets and provides with the same a lamp holder constructed in two principal portions, such lamp holder being adapted to enable ready connection and disconnection of the lamp, and at the same time to prevent, when in use, the percolation of any moisture or fluid from the outside to the interior part of said holder and connections containing the contact members, one of the portions of the lamp holder being adapted to be cemented or otherwise hermetically connected with the lamp bulb, due accommodation being provided in each of said portions for the leads and terminals in such manner as to counteract any tendency to leak to earth should the outside of the holder be exposed to moisture or immersed in liquid.

Lamps connected in circuit by means of lamp holders constructed in accordance with this invention are thoroughly protected from wet weather even in the most exposed situations, and can also, with due precaution as to the proportioning of the parts, be used under water.

This invention is hereinafter described with reference to the accompanying drawings in which:—

Figure 1 is a longitudinal sectional elevation of the improved holder. Fig. 2 is a plan view of the same. Fig. 3 is a view of the improved device from below. Fig. 4 is a side view of the lower portion of the base of the lamp. Fig. 5 is a plan view of the part shown in Fig. 4 with the bulb removed. Fig. 6 is a view of the part shown in Fig. 4, from below. Fig. 7 is a side elevation of the gasket employed as a packing between the base and the holder. Fig. 8 is a transverse section on the line 8—8 of Fig. 1.

The improved device comprises a base 1 having a cylindrical extension 1′ at one side and spaced wings 32 and 32′ extending from the other side, and with a horseshoe shaped guard 16 extending from the base 1 within the cylindrical portion 1′, and a rib 25 extending from the base 1 between the wings 32, 32′.

The base portion, cylindrical portion, spaced wings, horseshoe shaped guard, and the rib, are preferably constructed of one single piece of porcelain or other suitable insulating material. The rib 25 is provided with spaced threaded apertures 26, 27 to receive holding screws whereby the device may be secured in place to a supporting structure when required.

Fitting within the cylindrical portion 1′ is a threaded sleeve 8, preferably pressed or spun from sheet metal in the usual manner, and with inwardly extending lugs 20, 21 bearing upon the floor or base 1. Connecting the lugs 20, 21, is a bridge member 22, the latter secured to the base 1 by a threaded clamp bolt 23 having means at its threaded end within the space between the wings 32, 32′, such as clamp nuts 24, for securing one of the lead wires in the usual manner. Disposed within the horseshoe shaped guard 16 is a spring contact 17 having its outer whirl extended and connected to the base 1 within the sleeve 8 by a clamp screw 18, this clamp screw having means, such as a nut 19, for connecting another of the lead wires to the bolt within the space between the wings 32, 32′.

It will be noted that the bolts 18 and 23, together with their binding nuts 19 and 24, are disposed on opposite sides of the rib 25, so that all danger of short-circuiting at this point is obviated.

The bulb 4 of an incandescence lamp is adapted to be cemented into or otherwise hermetically fastened at the edge 3 within the upper cup-shaped portion 2 of the lamp base. The male metal screw thread 7 can then be screwed within the corresponding metal female thread 8 in the interior of the external socket portion 1 and finally compressing the gasket 9 of rubber or other equivalent elastic material so as to establish a watertight joint between the edges 10 and 11.

One lead of the lamp is connected with the central contact 12, while the other is connected with the metal screw thread 7 before referred to. During the screwing into position the contact 12 presses down upon the contact surface 14 of the spring 17 mounted upon the floor 15 of the external socket 1, within the horseshoe shaped insulating guard

16, and connected up with the terminal 18 and thence to the external terminal screw 19 in the base of the portion 1.

With regard to the other terminal the current passes, when the holder is in the screwed down position,—from the screw thread 7 to the screw thread 8 and so to the lugs 20, 21, on the floor 15 of the portion 1, whence it is carried by the bridge piece 22 to the terminal 23, and so to the external terminal screw 24 in the base of the portion 1.

The conductors of the circuit are brought into the channels 28 in the portion 1, so that the screws 19 and 24 can be thrust within the coiled strands of the wires and binding washers screwed on. The space between the ribs 32, 32′ forming the channel 28 is then filled in with insulating composition of the usual kind preferably at boiling temperature.

The screw thread 8 does not extend to the level of the edge 11 of the socket 1, and similarly the screw thread 7 does not extend to the crown 29. The screw thread 8 is also preferably cut away considerably as at 30 to prevent accidental contact with the conductor 17 or terminal 18, and this feature also incidentally facilitates the introduction of the metal lining into the socket. The rim of the portion 2 is preferably milled as shown at 31 to afford purchase for the fingers when screwing in the lamp socket. Fig. 7 shows a chamfered form to which the gasket 9 may be cut or punched.

The wing extensions 32—32′ of the portion 1 are, in the manner as shown, preferably extended considerably to either side to obtain the advantage of embedding the conductors in insulating composition for some distance, whereby is not only the area of the insulation increased and the percolation of moisture to the conductors effectually prevented, but by being more firmly held the conductors are less prone to dislodgment in handling, with consequent liability to leakage of current.

As regards the disconnectible members of the circuit this invention provides for the effective inclosure of all current carrying parts in such manner that contact is made and the single remaining joint rendered watertight by the operation of a single screwing.

What I claim is:—

A lamp socket, a base of non-conducting material comprising a body having spaced wings at one side and a socket at the other side and with a semi-annular guard rib extending from the body within the socket and a longitudinal rib between said wings, a spring contact extending within the semi-annular guard rib and provided at its outer end with a binding bolt passing through the body, a threaded sleeve of conductive material within said socket and provided with inwardly extending lugs, a segmental bridge member connected at the ends to said lugs and provided with a bolt passing through the body, said bolts being disposed upon opposite sides of said longitudinal guard rib, and means for connecting the conducting wires respectively to said bolts, plastic insulating material disposed between said wings and around said longitudinal guard rib.

In testimony whereof I affix my signature in the presence of two witnesses.

WALTER REGINALD LAMBERT.

Witnesses:

G. L. BROWNE,

F. L. RAND.