March 10, 1925. 1,528,811

M. ZEILER

ELECTRIC POCKET LAMP

Filed Sept. 27, 1923

Fig. 1.

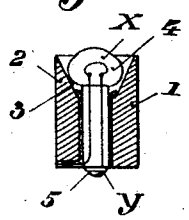


Fig. 2.

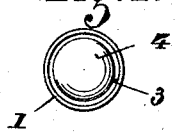


Fig. 3.

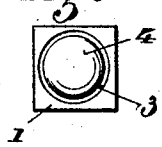


Fig. 4.

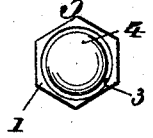


Fig. 5.

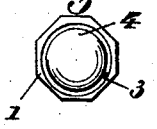


Fig. 6.

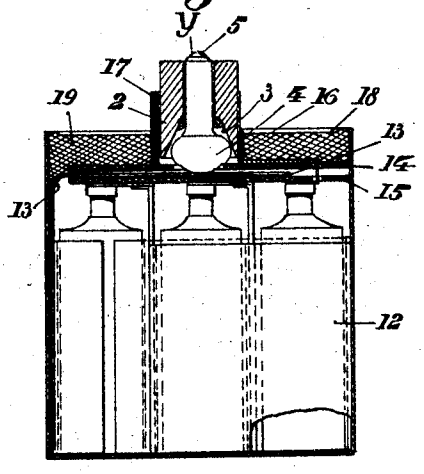
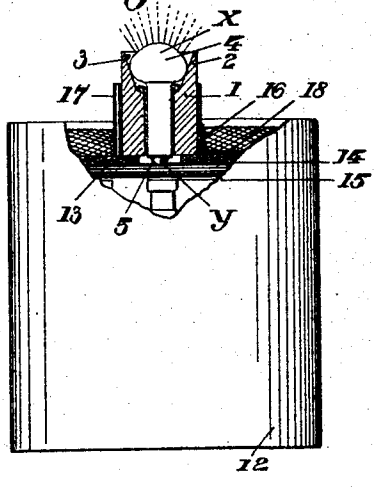


Fig. 7.



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UNITED STATES PATENT OFFICE.

MAX ZEILER, OF BERLIN-TREPTOW, GERMANY.

ELECTRIC POCKET LAMP.

Application filed September 27, 1923. Serial No. 665,196.

To all whom it may concern:

Be it known that I, MAX ZEILER, a citizen of the German Republic, residing at Treptower Park 21, Berlin-Treptow, Germany, have invented a certain new and useful Electric Pocket Lamp, of which the following is a specification.

This invention relates to an electric pocket lamp without casing which is formed in two parts viz:—a specially formed dry or semi-dry battery with a holding device embedded therein in a socket-like manner and a removable incandescent lamp cooperating therewith and constructed in a plug-like manner which can be wholly or partly displaced whilst being at the same time capable of being inverted.

In the apparatus the dry or semi-dry battery has one pole-lug for instance the carbon contact spring or a conducting member (such as a wire or the like) which is rigidly connected with a holding device for instance a bush slip or a sleeve which is embedded in a suitable casting material in the upper part of the battery in a socket-like manner, being arranged in such a manner around a small opening from which it is insulated, that the incandescent lamp hereinafter more particularly referred to can be inserted therein in a plug-like manner, either wholly or partly, or in an inverted manner, that is to say either in such a way that the contact of the incandescent lamp or the glass thereof comes to lie against the other pole lug lying underneath the small opening or at the open bottom of the socket-like holding device which is insulated from the latter pole lug. A portion of the lamp socket projects outside the holding device so that it can be easily gripped by the hand and displaced in the holding device.

The incandescent lamp forming part of the electric pocket lamp according to the present invention has the characteristic feature that instead of comprising the usual screw or Edison socket, it is formed with a holding socket which is strengthened—for instance along its whole length,—in such a manner that the whole of the lamp, that is to say the lamp together with the socket has practically a uniform diameter, the socket surrounding and protecting at the same time the whole side walls of the bulb in order that it may be inserted in a plug-like manner into the socket formed on the battery, this insertion being effected either wholly or partly (for switching-in and switching-off purposes) or in an inverted manner. By this arrangement the lamp can be inserted either fully, so that the contact at the foot thereof makes contact with the pole lug and causes the lamp to light up or it may be inserted only halfway when no current will pass through the lamp or the lamp may be inserted in a plug-like manner into the socket-like holding device in an inverted position when the glass of the lamp acts as an insulator and by lying within the socket-like holding device is ensured against breakage. The socket that is provided in the lamp itself and forms an integral part thereof preferably surrounds the lamp in such a manner that its upper part forms or acts as a reflector at the lower part of the head of the lamp. If desired, the plug-like lamp according to the present invention may be of polygonal cross section and if it is desired to impart to it a springy action its periphery may be slotted.

The invention is illustrated by way of example in the accompanying drawings, the form of the plug-like lamp being shown in different modifications, it being understood that the construction of the battery, including the holding socket may also be modified without in any way departing from the spirit of the invention.

Figures 1–5 illustrate different modifications of the plug-like lamp, whilst

Figures 6 and 7 illustrate in sectional elevation and part sectional elevation the whole of the electric pocket lamp with the plug-like lamp in the fully inverted and the fully inserted lighting positions respectively.

As will be seen from the drawings, according to the present invention the socket 1 which is made integral with the lamp 4 is substantially larger as compared with the usual screw or Edison socket; the upper part 2 of the socket 1 of the lamp has at least the same diameter as the head 4 of the lamp itself, (in the drawing the diameter of 1 has been shown greater than that of 4) a reflector 3 being provided or formed inside the upper part 2.

The electrical connections of the lamp are effected through the intermediary of the contact 5 provided at the foot of the lamp and through the intermediary of the socket 1 or if desired they may be effected through the socket in which case the latter is made

of an insulating material. The periphery of the plug-like lamp may be in any of the forms shown in Figures 2–5, that is to say, it may be either round or provided with edges, so as to prevent a rotation of the plug-like lamp within the socket-like holding device of the battery hereinafter more particularly described and to prevent its rolling away should it be dropped.

The battery 12 (see Figures 6 and 7) which is intended to be used in conjunction with the lamp hereinbefore described, for which purpose it is provided with a socket-like holding device, is provided with a zinc contact spring 13 which is embedded in between two insulating strips 14 and 15 in such a manner that only a small opening 16 is left in the upper insulating strip 14 for leading the current from the zinc contact spring 13 to the contact 5 at the foot of the lamp 14, whilst the socket-like holding device such as the bush slip 17 forming an elastic or a resilient ring or a bush with open bottom for the reception and temporary holding as well as for the full or partial displacement of the plug-like lamp, surrounds the opening 16 in such a manner that the plug-like lamp can be inserted into the holding device 17 wholly or partly and be removed and inverted, and again inserted and pushed against the pole lug 13, the holding device 17 being rigidly connected with the other pole lug that is to say the carbon contact spring 18. Around the holding device 17 the periphery of which may correspond to the peripheries of any of the lamps shown in Figures 2 to 5 a layer of suitable material 19 is cast in such a manner that it should form a sealing at the top of the battery.

If desired, the new reinforcement of the socket 1 of the lamp itself may be produced by retaining the usual Edison socket and by screwing a bushing provided with a corresponding internal screw-thread, and with an outer surface corresponding to any of the Figures 2–5 which bushing is provided on the inside of its upper part with a portion acting as a reflector.

It will be obvious that the incandescent lamp provided with the plug-like socket 1 as well as the battery 12 which is provided with a socket-like holding device 17 may be sold separately, seeing more especially that one single incandescent lamp 4 will last much longer than the batteries 12.

What I claim is:—

1. An electric pocket lamp comprising a dry or semi-dry battery, a resilient neck rigidly fixed to one pole lug of the battery and a lamp socket consisting of a socket, shaped to correspond with the neck and a lamp removably fixed therein thus forming a single unit, the foot contact of the lamp being adapted to engage the other pole lug of the battery, the construction being such that a portion of the socket projects outside the neck so that it can be gripped by the hand whereby when the socket is pushed in, the lamp circuit is closed and the lamp is lit, and when the socket is only partially pushed in the circuit is interrupted, while when out of use the lamp socket is inserted into the neck in the inverted position.

2. An electric lamp battery comprising a dry or semi-dry battery, a neck fixed to one pole of the battery having a cylindrical shape resilient in the radial direction being formed of a coil metal strip one end of which can move slightly inside the cylinder, and a lamp socket consisting of a socket, shaped to correspond with the neck and a lamp removably fixed therein thus forming a single unit, the foot contact of the lamp being adapted to engage the other pole lug of the battery, the construction being such that a portion of the socket projects outside the neck so that it can be gripped by the hand whereby when the socket is pushed in, the lamp circuit is closed and the lamp is lit, and when the socket is only partially pushed in the circuit is interrupted, while when out of use the lamp socket is inserted into the neck in the inverted position.

In testimony whereof I have signed my name to this specification.

MAX ZEILER.