(No Model.)

J. H. FARREL.

POCKET LAMP.

No. 479,741. Patented July 26, 1892.

Fig. 1.

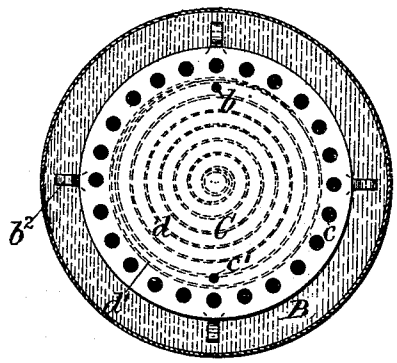


Fig. 2.

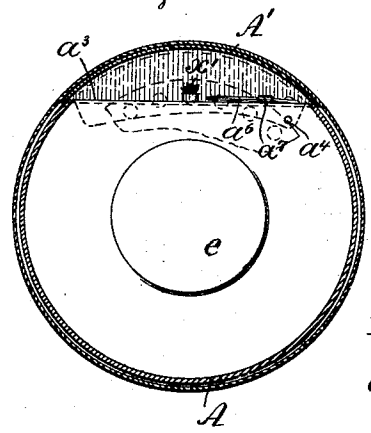


Fig. 3.

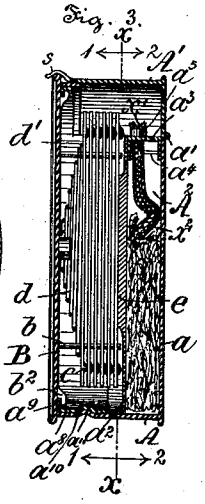
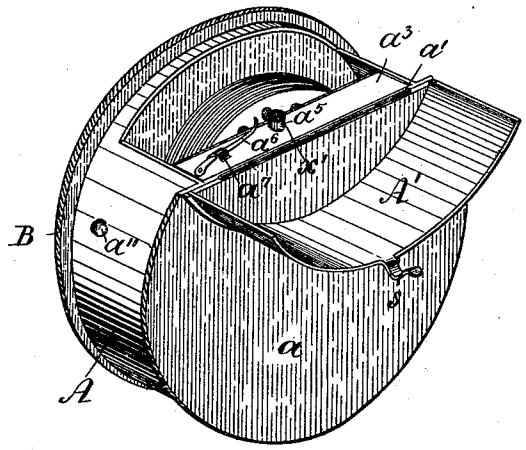


Fig. 4.



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Att'y.

UNITED STATES PATENT OFFICE.

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POCKET-LAMP.

SPECIFICATION forming part of Letters Patent No. 479,741, dated July 26, 1892.

Application filed December 15, 1890. Serial No. 374,743. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARVEY FARREL, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Pocket-Lamps, of which the following is a specification.

My invention relates to a class of lamps or lighting devices designed to be carried in the pocket and such as may be used for lighting cigars, lamps, gas-burners, and many other similar purposes.

The principal objects of my present invention are, first, to provide an inexpensive, compact, reliable, and convenient lamp adapted to be carried in the pocket with perfect safety, and, second, to provide simple, efficient, and inexpensive means for retaining a supply of igniting substance or material in any suitable form and so that successive parts or portions of such substance or material may be presented successively to an ignitor in close proximity to a wick, in order to explode or ignite the same and light the wick.

My invention consists in providing a pocket or similar lighting device with a rotatable carrier adapted to support one or a series of removable disks having bits, drops, or pellets of ignitible material applied thereto, and means for actuating said carrier in order to cause said drops, bits, or pellets to be ignited in the manner and for the purposes hereinafter described, and pointed out in the claims; and my invention further consists of a pocket or other lighting device, constructed and arranged for operation in the manner hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a transverse sectional view on the line $x\ x$ of Fig. 3, taken in the direction indicated by the arrows 1 and showing a rotatable carrier provided with one or more removable disks having bits, drops, or pellets of ignitible material applied thereto. Fig. 2 is a similar view taken in the direction indicated by the arrows 2 in Fig. 3, showing an oil-receptacle provided with a hinged cover having a wick passing therethrough and also showing an ignitor for exploding the drops, bits, or pellets of ignitible material. Fig. 3 is a transverse central section of a lighting device embodying features of my invention and showing a housing provided with an oil-receptacle having a hinged cover through which a wick passes and disposed adjacent to an ignitor and also showing a rotatable carrier provided with a removable series of superposed disks having bits, drops, or pellets of ignitible material applied thereto, and means for permitting of the rotation of said carrier within the housing; and Fig. 4 is a perspective view of the pocket lamp or lighting device, showing the exterior lid of the housing in an open position, exposing to view the wick-ignitor and portions of the rotatable carrier and series of removable disks provided with drops, bits, or pellet of ignitible material applied thereto.

In the drawings, A is a cylindrical housing or case having one extremity thereof closed by a circular plate a and provided with an exterior lid or cover A′. In the drawings this lid or cover A′ is represented as attached to the circular plate a by means of a hinge a', but the lid or cover A′ may, if preferred, be hinged to the cylindrical portion A of the housing. s is a spring-catch of any preferred construction for retaining the lid or cover A′ normally in a closed position.

A^2 is a receptacle formed between a partition-plate a^2, the side plate a, and a portion of the cylindrical casing A and adapted for the reception of oil or absorbent material saturated with oil.

a^3 is a lid attached or applied to the oil-receptacle A^2 in any convenient manner—for example, by means of a hinge a^4—in order to permit of the filling and cleaning of the oil-receptacle A^2 by the simple operation of opening the lid. This lid a^3 is provided with a nipple or aperture a^5, through which one extremity x' of the wick x^2 passes and in proximity to an ignitor a^6. This ignitor a^6 may be attached to any convenient portion of the housing and in any preferred manner, but excellent results have been attained in practice by attaching it to the lid a^3 of the oil-receptacle A^2 by means of loops a^7 "struck up" therefrom, and preference is given to such construction and arrangement of the same.

a^8 is a ring provided with a flange a^9, constituting an annulus which is adapted to be fitted into the open end of the cylindrical casing A. This ring a^8 is provided with projections a^{10}, adapted to engage in recesses or indentations a^{11}, formed in the cylindrical housing A, so that the ring a^8 is normally held to place in the housing, but is nevertheless susceptible of being readily removed therefrom.

B is a carrier provided with lugs or pins b of any shape or form and adapted to engage with apertures c' of corresponding shape or form, cut or otherwise formed in each of the disks C, not only to cause said disks to revolve with the carrier B, but also to permit of their ready removal therefrom.

c are bits, drops, or pellets of ignitible material applied to each of the disks C in any suitable manner.

For the sake of a further explanation of my invention a brief description of the mode of operation of the rotatable carrier B, provided with one or more disks C, having drops, bits, or pellets c of ignitible material applied thereto, will now be given with reference to the hereinabove-described lighting device; but it must be understood that the rotatable carrier B and removable disk or disks C, provided with drops, bits, or pellets c of ignitible material, may be applied to any type of lighting device which comprises an ignitor having a wick or its equivalent in proximity thereto.

In use the carrier B and with it the disk or disks C is or are rotated so that the bits, drops, or pellets c are brought successively into contact with the ignitor a^6 and are exploded or ignited in close proximity to the exposed extremity x' of the wick x^2, whereby the latter is lighted. The carrier B may of course be rotated by means of a number of different appliances—for example, by means of a knob extending through the housing—or this result may be accomplished by providing the carrier B with lugs or dogs b^2, adapted to engage with the flange a^9 of the ring a^8, as shown in the drawings, so that the carrier B constitutes one of the side covers of the cylindrical housing or casing A, and may be rotated by hand.

d is a spiral spring, preferably terminating in a flat ring d' and interposed between the carrier B and disk or disks C, so as to insure contact between the ignitor a^6 and the bits, drops, or pellets c not only when a series of disks C is employed, but also when only a single disk is used.

e is a boss or circular projection attached to or formed integral with the partition-plate a^2 in order to permit of the rotation of the disks C without danger of the drops, bits, or pellets c being prematurely ignited by contact with the partition-plate a^2, as will be readily understood by reference to Fig. 3.

The mode of operation of the hereinabove-described lighting device is as follows: The carrier B and ring a^8 are withdrawn from the cylindrical casing A and one or more disks C, provided with drops, bits or pellets c of ignitible material, are applied to the carrier B, and are attached thereto by passing the lugs or pins b through the slots c', so that the carrier B and disks C are constrained to revolve as one piece. The carrier B and ring a^8 are then inserted into the housing and are retained to place therein by means of the projections a^{10} and recesses or indentations a^{11}. The spiral spring d, interposed between the disks C and the carrier B, serves to press the former into contact with the boss e in the manner and for the purposes above described. The lamp may be lighted by opening the cover or lid A', as shown in Fig. 4, and then rotating the carrier B by means of the fingers or in any other convenient manner. The rotation of the carrier B advances the drops, bits, or pellets c of ignitible material into contact with the ignitor a^6, which explodes the former in close proximity to the exposed extremity x' of the wick x^2, thereby lighting the same. Whenever all the drops, bits, or pellets c of ignitible material applied to one of the disks C have been consumed, the carrier B may be withdrawn from the housing in the manner above described and such disk removed, whereupon the next disk of the series is brought or pressed by the spring d into operative position. When all the pellets, drops, or bits c have been consumed, the series of disks C may be removed and replaced by a series of fresh disks, as will be readily understood. The disks may of course be employed singly; but preference is given to the employment of a series thereof.

It will be obvious to those skilled in the art to which my invention appertains that many changes or modifications may be made in details of construction and the arrangement of the parts without departing from the spirit of my invention, and hence I do not limit myself to the exact construction and arrangement of parts herein described; but

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. A lighting device having an oil-receptacle provided with a wick, an ignitor in proximity thereto, a rotatable carrier, a disk applied thereto and having drops, bits, or pellets of explosive material, and means for rotating said carrier and bringing the drops, bits, or pellets of said disk into contact with said ignitor, substantially as and for the purposes set forth.

2. A lighting device having a wick, an ignitor, a rotatable carrier, and a disk having drops, bits, or pellets of explosive material applied thereto, the construction being such that when the carrier is revolved the drops, bits, or pellets of said disk are ignited, substantially as and for the purposes set forth.

3. A lighting device having an ignitor, a rotatable carrier provided with pins or studs, and a disk having bits, drops, or pellets of explosive material applied thereto and holes formed therein, the construction being such

that the disk may be removed from and applied to the carrier and revolved therewith, for the purposes set forth.

4. A lighting device having an oil-receptacle provided with a wick, a rotatable carrier supporting a removable disk having bits, drops, or pellets of explosive material applied thereto, a spring interposed between said disk and carrier, and an ignitor, the construction being such that the pellets, drops, or bits are successively presented to the ignitor, substantially as and for the purposes set forth.

5. A lighting device having an oil-receptacle provided with a wick and a boss formed integral with the inner wall of said receptacle, a rotating carrier supporting a removable disk having bits, drops, or pellets of explosive material applied thereto, a spring interposed between said carrier and disk, and an ignitor, the construction being such that the disk is normally in contact with the boss, substantially as and for the purposes set forth.

6. A lighting device having a cylindrical casing provided with a lid, an oil-receptacle attached to a plate closing one extremity of said casing, a wick, an ignitor, a carrier removably fitted to the other extremity of said casing, and a disk having explosive material applied thereto and removably attached to said carrier, the construction being such that the carrier may be rotated within the casing, substantially as and for the purposes set forth.

7. The combination, in a lighting device, of a cylindrical casing provided with a lid closed at one extremity thereof, with an oil-receptacle, a wick, an annulus having a flange and fitted into the other extremity of said casing, a carrier provided with lugs engaging said flange and closing one extremity of said casing, an ignitor, and a removable disk having explosive material applied thereto, substantially as and for the purposes set forth.

8. The combination, in a lighting device, of a cylindrical casing provided with a lid closed at one extremity thereof, an oil-receptacle provided with a boss, a wick, an annulus fitted into the other extremity of said casing, a carrier engaging said annulus, an ignitor, a removable disk having explosive material applied thereto and attached to said carrier by pins or lugs engaging in slots, and a spring interposed between said disk and carrier, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my signature in the presence of two subscribing witnesses.

JOHN HARVEY FARREL.

Witnesses:
HERMANN BORMANN,
THOMAS M. SMITH.