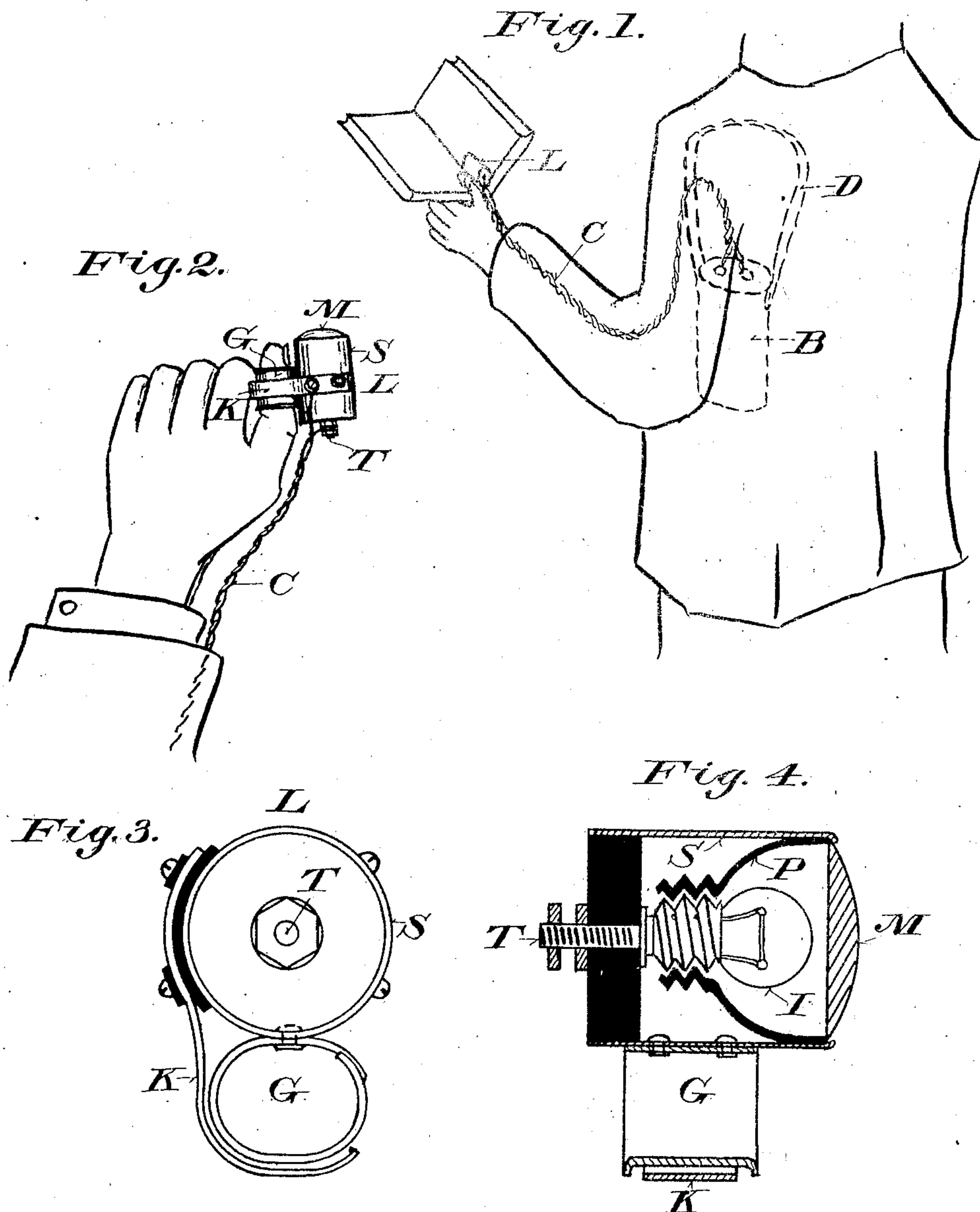


G. R. RADLEY.
PORTABLE ELECTRIC LIGHT.
APPLICATION FILED JULY 27, 1905.

914,975.

Patented Mar. 9, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

GUY R. RADLEY, OF MILWAUKEE, WISCONSIN.

PORTABLE ELECTRIC LIGHT.

No. 914,975.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed July 27, 1905 Serial No. 271,423.

To all whom it may concern:

Be it known that I, GUY R. RADLEY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Portable Electric Lights, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

The main objects of this invention are to provide an electric lamp which may be readily attached to and held upon the thumb in position to throw light upon any object or objects it may be desired to see without interfering with the use of the hands and of the thumb and fingers of each hand; to provide for carrying upon the person a battery for supplying such lamp with current in such a manner and position as will not pull the clothing out of shape, occasion discomfort, take up pocket room, or interfere with the free movement of the arms and hands, and as will admit of connecting the lamp with the battery by a flexible conductor cord which will not be in the way or conspicuous; to provide for closing the circuit through the lamp and temporarily turning on the light by closing the thumb against an opposing finger of one hand, as in the act of grasping or holding a book without interfering with the employment of the other hand for other work; and generally to improve the construction and operation and increase the convenience of devices of this class.

The invention consists in certain novel features of construction and in the peculiar arrangement and combinations of parts hereinafter particularly described and pointed out in the claims.

In the accompanying drawing like letters designate the same parts in the several figures.

Figure 1 is a general view on a reduced scale showing the lamp attached to the thumb of the left hand and connected in the preferred manner by a flexible conductor cord with a battery slung from the shoulder; Fig. 2 is an enlarged view of the lamp with the means for holding it on the thumb, and the circuit controller for closing and automatically opening the lamp circuit; Fig. 3 is a rear elevation of the lamp on a still larger scale; and Fig. 4 is an enlarged axial section of the same.

Small incandescent electric lamps directly

attached to dry batteries which are designed to be carried in the hand and are provided with contact keys or buttons for closing the circuit when light is desired, have come into extensive use for temporarily affording a small light when needed in dark places, but lamps of this kind as heretofore constructed are cumbersome and inconvenient when both hands are needed, as for example in taking and recording the readings of meters which are located in dark places, it being necessary to inspect the meter, find the page having the corresponding meter number in a book, and then enter in the book the proper reading. These operations must be performed quickly, and sufficient light must be thrown upon the meter dial and on the book to prevent errors. Changing the lamp from one hand to the other is very apt to cause the reader to unconsciously transpose the figures of the reading. The battery must be large enough to supply light for more than a single day's use. In the endeavor to free the hands, various expedients have been resorted to, such as carrying the battery in the pocket and attaching the lamp to the lapel of the coat, or even to the end of a pencil, but all these expedients have been found unsatisfactory and have failed because the cord connecting the lamp with the battery was in the way, and the battery, if large enough to be of service, was too bulky to be conveniently carried in the pocket. All these difficulties and objections are overcome and the objects hereinbefore stated are attained, with my improved apparatus, in which the lamp is adapted to be held on the thumb of one hand, and the battery is preferably suspended by a band or strap from the shoulder and connected with the lamp by a flexible conductor cord passing through the coat sleeve.

Referring to the drawing illustrating the preferred form of the apparatus, L designates the lamp, which in Figs. 1 and 2 is shown as attached to the thumb of the left hand by an adjustable holder consisting of a metal ring or clasp G.

B is the battery, which as indicated by dotted lines in Fig. 1, is suspended from the left shoulder by a strap or band D, and is connected with the lamp L by a flexible conductor cord C passing through and mostly concealed by the coat sleeve.

The lamp comprises a metallic shell S, provided with a socket and reflector P, as

shown in Fig. 4, an exhausted glass bulb I containing the filament and having a stem or base fitted in the socket, and an insulated binding screw T adapted to make contact with a part of the base or neck of the lamp bulb I when it is inserted in said socket.

As shown in Fig. 3, the metal ring or clasp G is rigidly secured to the shell S and is severed and lapped on one side to render it expansible and contractible, so that it will readily adapt itself to different thumbs and securely hold the lamp in place thereon.

A spring K attached to and insulated from the shell S extends therefrom partially around and underneath the ring G, terminating in a contact point F, which is normally held out of engagement with said ring. When the elastic clasp formed by the severed ring G is placed on the thumb and the contact spring K is pressed against anything held in the hand, such as a book, or against the opposing finger, it is forced against said ring and the circuit is closed through the lamp and battery, one terminal of the battery being connected through one part of the flexible cord C with the spring K, and the other terminal of the battery being connected by the other part of said cord with the binding screw T.

The circuit is completed between one of the terminals of the lamp bulb I and the circuit closer or controller through the metal shell S and the reflector P.

In addition to, or in place of the reflector P, the lamp may be provided as shown in Fig. 4, with a lens M.

The ring or clasp G is attached to the lamp parallel with its axis, that is, parallel with the main or central light rays projected by the lamp, so that when the ring or clasp is placed and held on the thumb as shown in Figs. 1 and 2, the act of grasping and holding an open book with the same hand will without other effort or attention, close the circuit through the lamp and its light will be thrown upon the exposed pages of the book and upon the meter or other object in front of the observer.

Various changes in the minor details of construction and in the arrangement of parts may be made without departing from the principle and intended scope of the invention.

I claim:

1. A portable electric lamp provided with a holder consisting of an elastic clasp having its axis approximately parallel with the axis of the lamp, said clasp constituting a part of a circuit closer, and a contact piece attached to the lamp adjacent to and normally out of contact with said clasp and constituting the other part of the circuit closer, one of said parts being movable into engagement with the other to close the lamp circuit by the act of closing the member of the hand on which it is held against an opposing member or object, substantially as described.

2. A portable electric lamp provided with an annular holder constituting a part of a circuit closer and having its axis approximately parallel with the axis of the lamp and a contact piece adjacent to and normally out of contact with said holder and constituting the other part of the circuit closer, one of said parts being movable into engagement with the other to close the lamp circuit, substantially as described.

3. In a portable electric lamp the combination of a metallic shell provided with a socket and reflector in electrical connection therewith, an annular metallic holder constituting a part of a circuit closer and attached to said shell with its axis approximately parallel with the axis of the lamp, and an insulated metallic spring attached to said shell adjacent to and normally out of contact with said holder and constituting the other part of the circuit closer, substantially as described.

In witness whereof I hereto affix my signature in presence of two witnesses.

GUY R. RADLEY.

Witnesses:

CHAS. L. GOSS,
BERNARD C. ROLOFF.