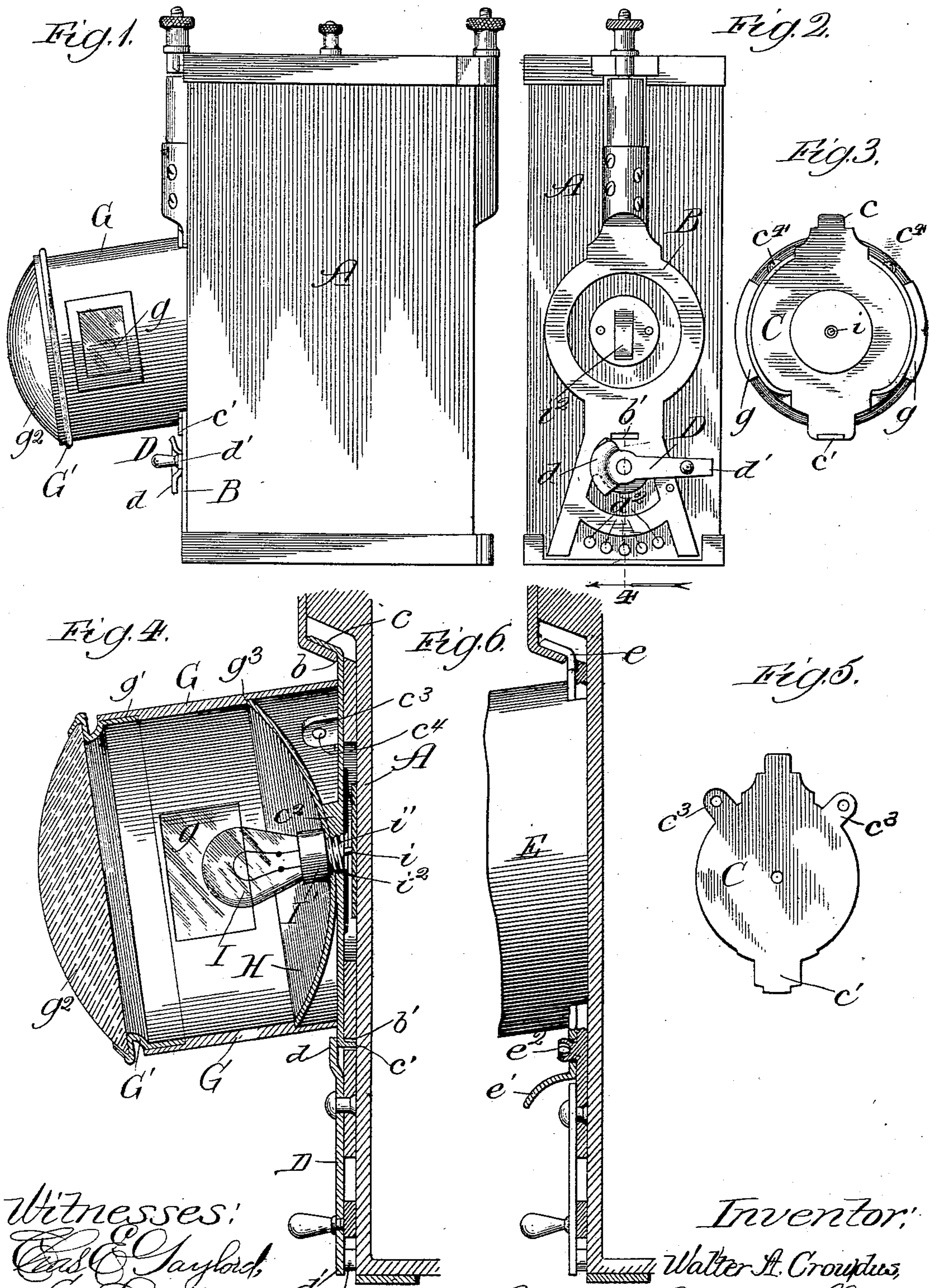


(No Model.)

W. A. CROWDUS.
ELECTRIC LAMP FOR VEHICLES.

No. 555,305.

Patented Feb. 25, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

WALTER A. CROWDUS, OF CHICAGO, ILLINOIS.

ELECTRIC LAMP FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 555,305, dated February 25, 1896.

Application filed October 4, 1895. Serial No. 564,623. (No model.)

To all whom it may concern:

Be it known that I, WALTER A. CROWDUS, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Electric Lamps for Vehicles, of which the following is a specification.

My invention relates particularly to electric lamps adapted for use on bicycles or tri- cycles and similar vehicles, and especially to the construction of the reflector portion and means for holding it in position.

The object of my invention is to provide a simple, economical, and efficient reflector and other parts of an electric lamp for use in connection with bicycles and like vehicles; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a battery-cell, showing my improvements attached thereto; Fig. 2, an end elevation of the same with the lamp portion removed; Fig. 3, a rear end elevation of the lamp portion, showing the means by which it is secured to a battery or other cell; Fig. 4, an enlarged transverse section taken on line 4 of Fig. 2, showing the lamp attached to a battery-cell; Fig. 5, a plan view of the back blank, which is used to secure the lamp and battery-cell together and before it has been given its finished form; and Fig. 6, an enlarged sectional elevation showing a modification of the means by which the lamp and battery-cell are coupled together, taken on a similar line as Fig. 4.

In the use of electric lamps for bicycles and other vehicles, especially when they are used in connection with liquid primary-batteries, it is advisable that some simple and economical means be devised by which the lamp and cell may be coupled and uncoupled, so as to drain the battery-cell and clean it inside and outside without injuring or soiling the lamp or its reflector. It is also advisable and desirable to provide a simple and economical construction by which the reflector and tube for holding same may be constructed and assembled economically, or repaired when desirable.

In constructing my improvement I provide a battery or other cell A with a support-

ing-piece B for the lamp. In order to secure the lamp to the supporting-piece I provide the back of the lamp C with a projecting hinge portion *c* at its upper end adapted to be inserted in a hinging perforation or opening *b* of the supporting-piece and its lower portion, as shown in Fig. 4, with a projecting tongue *c'*, adapted to enter a perforation *b'* of the supporting-piece to position the lamp and bring it into contact with the battery-terminal. In order to lock the parts together and prevent displacement I pivot a vibrating lever D to the supporting-piece and provide it with an extending portion *d*, adapted to pass over the projection *c'* of the lamp-back and securely hold the same in place. This vibrating lever D is also used as a switch-lever and so arranged that its outer end *d'* may contact battery-terminals *d''* in order to furnish the required amount of electric energy to the lamp.

In Fig. 6 I have shown a modified form of the mechanism for coupling the lamp and cell together. The back of the lamp E is provided, as shown in Fig. 4, with a projecting hinge *e*, entering the hinging perforation in the supporting-piece, and its opposite end with a spring-hasp *e'*, provided with a perforation and adapted to engage a spring-button *e''*, which positions the parts and couples them securely together.

In constructing the lamp proper I make a tube G, preferably by spinning, and provide it with two openings *g*, in which the side lights may be inserted. The front end is shouldered, as at *g*, so as to receive and position the bezel G, that holds the lens *g''* in place. In order to hold the reflector in position and provide an economical means of repairing the lamp, I chamber out the rear portion of the lamp-tube, so as to provide a shoulder *g''*, so that the reflector H may be inserted from the back and rest against the shoulder. The reflector is firmly secured in this position by means of a back plate C, in which the incandescent lamp proper is inserted, and a portion of it, as at *c''*, is concaved to rest against the reflector and hold it up firmly against the shoulder and tube. The back plate C is preferably provided with perforated lugs *c''*, which are bent at right angles to the back portion and through which screws are passed to se-

cure it to the burner-tube, thus securing the lamp parts firmly together:

The incandescent lamp I has one terminal i passed through its socket i' , so as to contact a spring contact-piece i^2 on the battery-cell, while the other terminal of the filament is electrically connected with a metallic portion I' of the lamp, so as to contact with the metallic reflector and enable the metallic portion of the lamp to form one side of the lamp-circuit, so that when it is in contact with the metallic supporting-piece B and the switch D in contact with the terminal d^2 an electric circuit is closed and the lamp energized. The advantages of my improvement are such that the lamp and its supporting parts may be easily coupled or uncoupled for any purpose desired and the lamp may be economically and efficiently constructed.

I claim—

1. In an electric vehicle-lamp, the combination of a battery-cell provided with a metallic supporting-piece, a lamp having a metallic back portion, one of such portions provided with a projecting hinge and the other with a hinging-perforation, and means for po-

sitioning and locking the lamp on its supporting-piece, substantially as described.

2. In an electric vehicle-lamp, the combination of a supporting-piece provided with a hinging-perforation, a lamp having a back portion provided with a projecting hinge adapted to enter the hinging-perforation of the supporting-piece, and means for positioning and locking the lamp on its supporting-piece, substantially as described.

3. In an electric vehicle-lamp, the combination of a battery-cell provided with a metallic supporting-piece having a hinging-perforation and positioning-perforation, a lamp having a metallic back piece provided with a projecting hinge arranged to enter the hinging-perforation and a tongue adapted to enter the positioning-perforation piece and means for locking the parts together, so that they may be readily coupled or uncoupled, substantially as described.

WALTER A. CROWDUS.

Witnesses:

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