June 17, 1930. P. THOMAS 1,764,368

RECEPTACLE FOR LIGHT SENSITIVE UNITS

Filed May 10, 1929

Fig. 1.

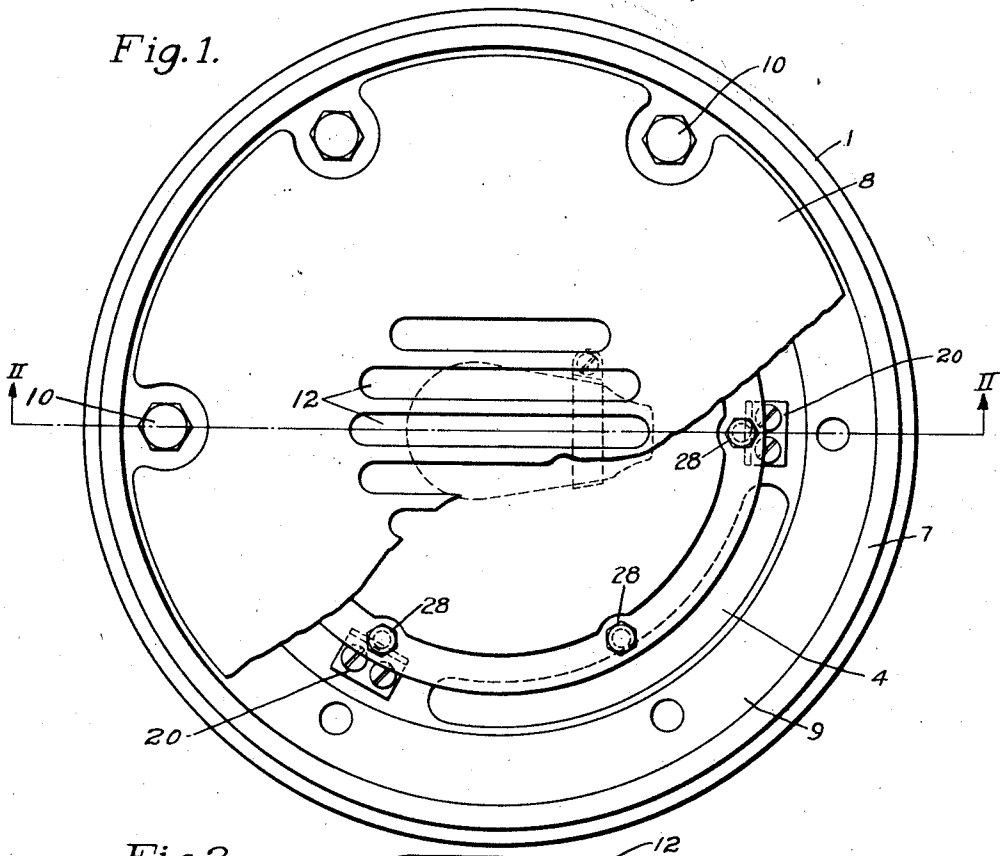
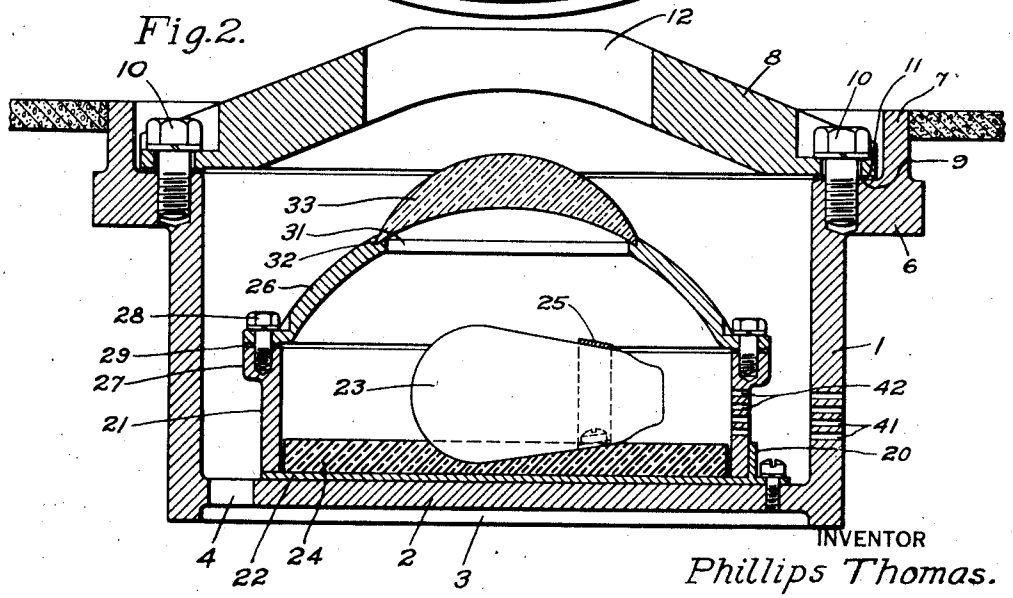


Fig. 2.



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RECEPTACLE FOR LIGHT-SENSITIVE UNITS

Application filed May 10, 1929. Serial No. 362,102.

My invention relates to receptacles and has particular relation to a receptacle suitable for the reception of light-sensitive devices.

In traffic-control systems utilizing light-sensitive cells for controlling the signal mechanism, the light-sensitive cells may be placed in the street or roadway in such manner that light, either daylight or from an artificial light source, may be directed downwardly upon the light-sensitive device which is placed in a suitable receptacle in the roadway. It has been found, however, that a receptacle, such as those utilized for beacons and markers for highway marking and the like, is unsuitable for this purpose, for the reason that the device must be flush with the roadway, in order to permit passage of vehicles over the receptacle, and must be so arranged that the greatest possible amount of light passes downwardly through the cover of the receptacle to be concentrated upon the light-sensitive device. The receptacle must be disposed in such manner that ice and snow and extraneous matter does not collect upon the cover of the receptacle, thus preventing the passage of light through the cover.

Therefore, an object of my invention is to provide a receptacle for light-sensitive units which will at all times, pass the greatest possible amount of light to the light-sensitive device and will shed extraneous matter might prevent the passage of light through the cover of the device.

Another object of my invention is to provide a receptacle which shall be water-tight and be suitably disposed for supporting a light-sensitive device.

Another object of my invention is to provide a receptacle which shall be substantial and which shall be inexpensive to manufacture and maintain.

Other objects will become apparent from the following description of my device, taken in conjunction with the drawing.

In practicing my invention, I provide an outer box adapted to be set within a pavement or roadway. The outer box is provided with openings in its lower wall and the lower wall is so disposed that moisture may be drained from the outer box. A cover, having slotted openings therein, is adapted to be seated upon the outer box. A water-proof inner box is provided having a transparent cover, preferably of lens-shape, adapted to permit the passage of light and to concentrate it upon the light-sensitive device disposed within the inner box. The lens is preferably of dome-shape so that extraneous matter drains off into the lower portion of the outer box.

Referring to the drawing, in which like figures indicate like parts,

Figure 1 is a top plan view of the device, a portion of the cover thereof being broken away for better illustration of the inner portion of the receptacle, and

Fig. 2 is a side elevational view, partly in section and partly in elevation, taken along the line II—II of Fig. 1.

My device, in its preferred embodiment, comprises a cylindrical receptacle 1 having the bottom surface of its base portion 2 recessed in order to provide a space 3 between the bottom of the box and the roadway, thus providing a space into which water may drain and of sufficiently large area to permit the water to seep through the roadway. The box may be set on a tile or the like to provide a greater space beneath it. The bottom of the outer box 1 is provided with one or more openings 4 in order to permit drainage of the moisture which may collect in the receptacle. The upper portion of the outer box is provided with an outwardly-extending flange 6 having a cylindrical upwardly-extending portion 7 which is adapted to coact with, and partially protect, the cover 8 of the receptacle. The outwardly extending flange 6 is provided with a shoulder 9 to receive the cover, the latter being secured to the receptacle by means of bolts 10. The outer box preferably is set in the pavement with its upper edge flush with the paving (Fig. 2).

A resilient washer 11 is disposed between the cover and the receptacle. The cover 8 is provided with a number of parallel-extending slotted openings 12 to permit the passage of light. By utilizing parallel-extending slots, the cover structure is not greatly weak-

ened and can withstand the impact of vehicles passing over the receptacle. The dome-shape of the cover increases its ability to resist shocks from above. Since the receptacle is placed in the roadway, it must necessarily be subjected to a certain amount of snow and ice, slush and extraneous matter but the slotted raised construction of the cover permits only a minimum amount of this matter to pass through.

An inner box 21 is also cylindrical in shape and has a solid base 22 which is water-tight. The inner box is centrally located with respect to the outer box by means of clips 20. The light-sensitive device 23 rests upon a resilient pad 24 within the inner receptacle and may be secured in place by means of a clip 25. A cover 26 of dome-shape is provided for the inner receptacle which is secured to a suitable flange 27 on the inner receptacle by means of bolts 28. A resilient washer 29 is disposed between the flange 27 of the inner receptacle and the cover to provide a water-tight joint.

A circular opening 31, having a suitable shoulder 32, is provided in the cover of the inner receptacle, and a circular lens 33 is disposed in the cover in coacting engagement with the shoulder 32 to close the opening 31. The lens is of dome-shape in order to cause water and extraneous matter to drain off the lens and down the side of the inner receptacle and through the openings 4 in the outer receptacle. The lens is preferably so disposed that light which passes through the cover is concentrated upon the light-sensitive device 23.

Conduits for carrying the electrical conductors utilized in furnishing electrical energy to the light-sensitive devices are brought in through suitable openings 41 in the wall of the outer receptacle and other openings 42 in the wall of the inner receptacle.

Although I have described a certain embodiment of my invention, it is apparent that modifications may be made without departing from the spirit and scope thereof, as set forth in the appended claims.

I claim as my invention:

1. In a receptacle for a light-sensitive cell, an outer box and a cover therefor having slots therein for the admission of light, an inner water-tight box and a light-sensitive cell therein, said inner box being provided with a transparent cover of dome-shape for admission of light and the shedding of extraneous matter.

2. In a receptacle for a light-sensitive cell, an outer box and a cover therefor having slots therein for the admission of light and an inner water-tight box and a light-sensitive cell therein, said inner box being provided with a transparent cover of lens-shape for concentration of the light upon the light-sensitive cell and for the shedding of extraneous matter.

3. In a receptacle for a light-sensitive cell, an outer box and a cover therefor having slots therein for the admission of light and an inner water-tight box and a light sensitive cell therein, said inner box being provided with a transparent cover of dome and lens shape for concentration of light upon the light-sensitive cell and for the shedding of extraneous matter, said outer box being provided with drain holes for the draining of liquid which has passed through the cover from the outer box.

In testimony whereof, I have hereunto subscribed my name this 4th day of May, 1929.

PHILLIPS THOMAS.