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HOUSING FOR SELENIUM CELLS

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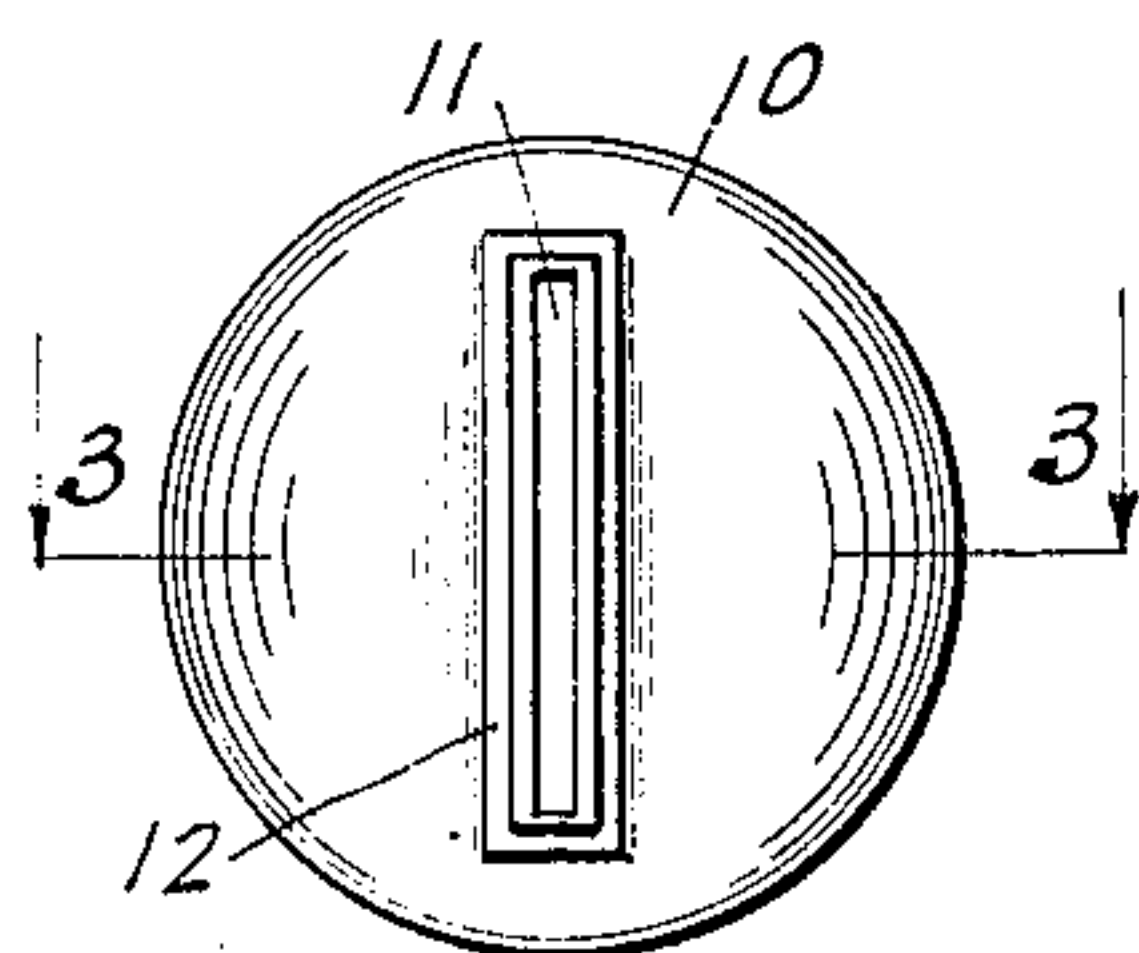


Fig. 1

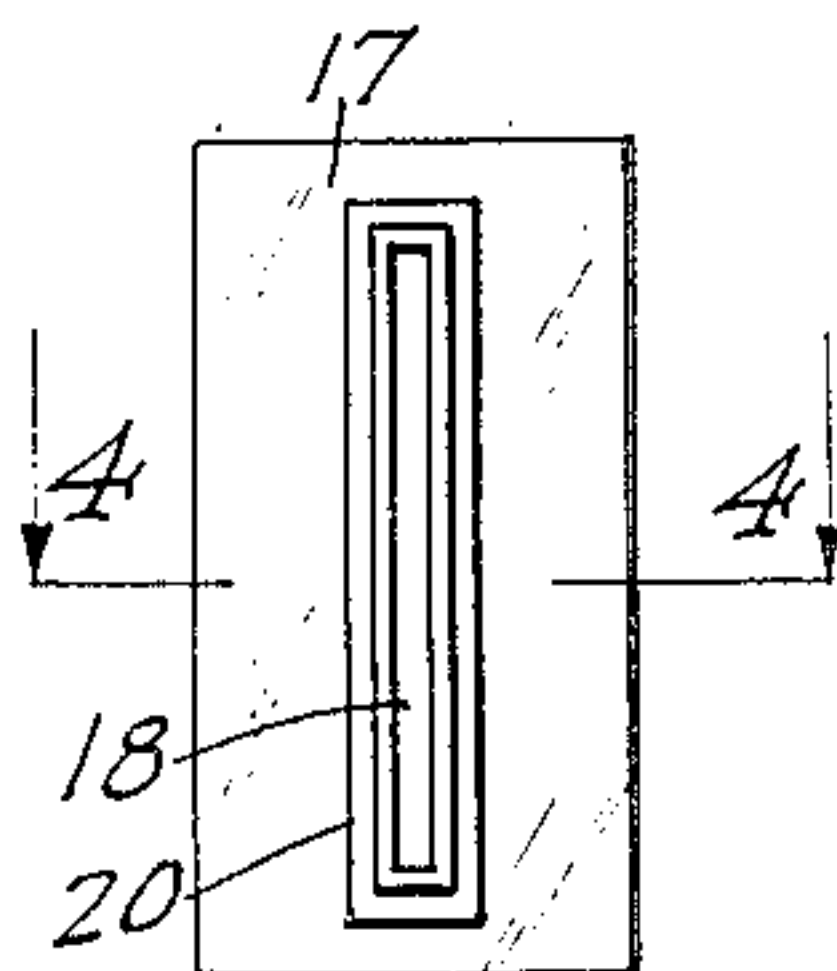


Fig. 2

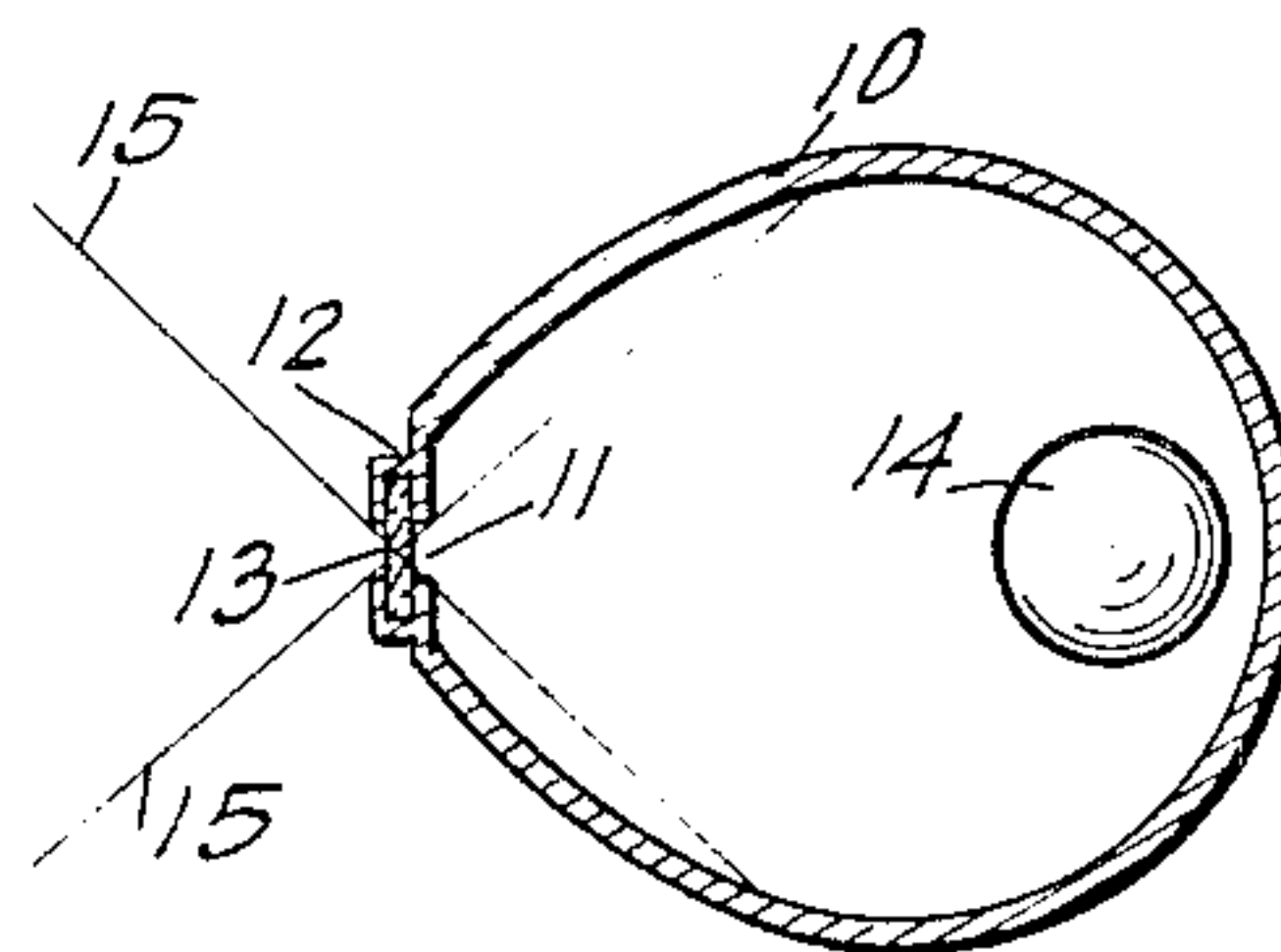


Fig. 3

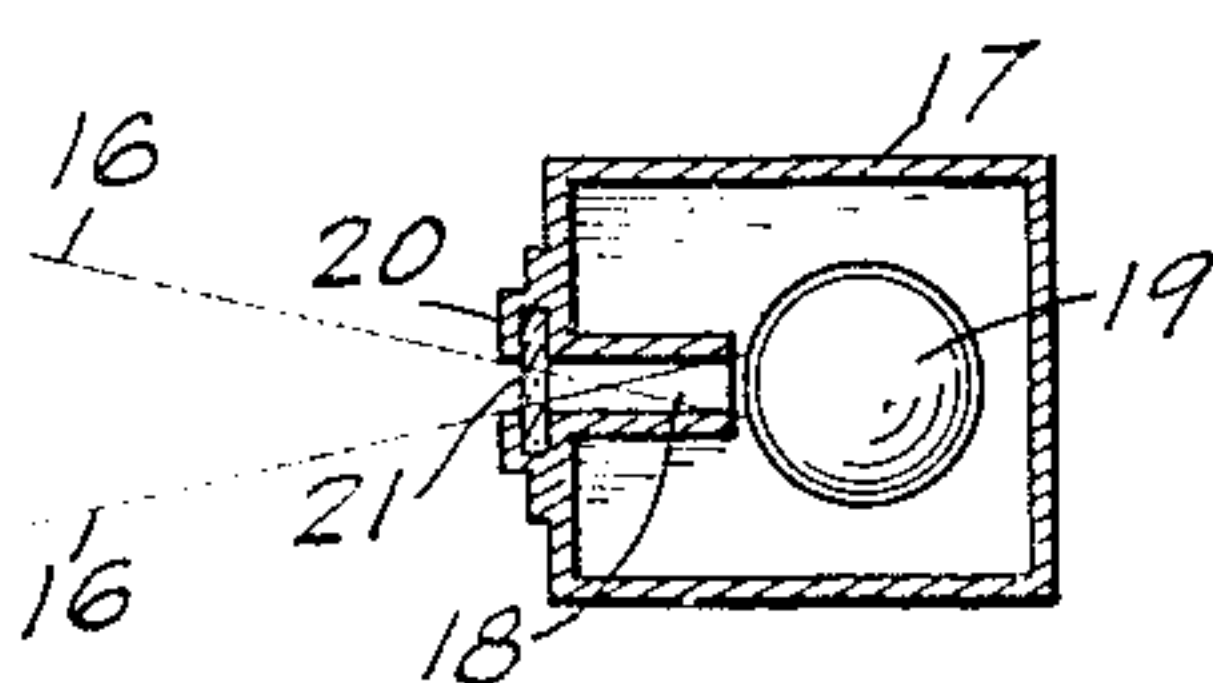


Fig. 4

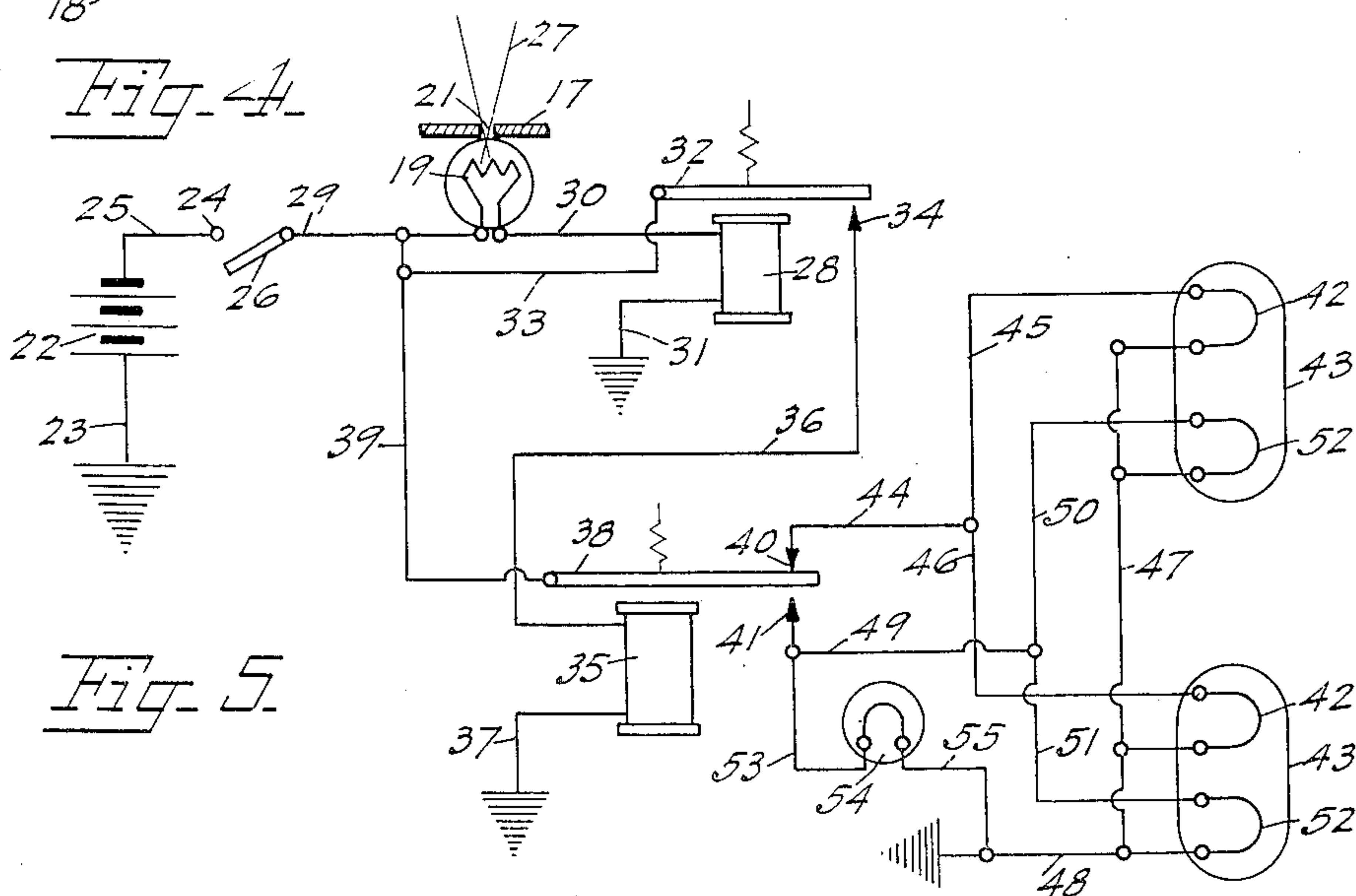


Fig. 5

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UNITED STATES PATENT OFFICE

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HOUSING FOR SELENIUM CELLS

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4 Claims. (Cl. 201—63)

This invention is an automatic headlight controlling device and has special reference to means for automatically changing the circuit from the driving filaments to the dimmer filaments, in the usual double filament lamps.

The main object of the invention is to provide a means for dimming or switching a circuit from one set of filaments to the other as the conditions of head lighting change.

Another object of the invention is to provide means whereby the rays from advancing headlights will automatically cause the headlights of a vehicle to become dim so as to obviate glare to the advancing motorist.

A further object of the invention is to provide a light sensitive system for automatically dimming the headlights, whereby oncoming vehicles, street lights or daylight will cause the headlights to remain dimmed, the device being sensitive to only frontal rays, but being coincidentally sensitive to rays reflected from a road surface so as to be actuated by a tilted headlamp of an approaching vehicle.

Other objects and advantages of the invention will become apparent as the following description is read on the drawings forming a part of this specification and in which similar reference characters are used to designate similar parts throughout the several views and in which:

Fig. 1 is a front elevation of the light receptor.

Fig. 2 is a front elevation of a modified form of light receptor.

Fig. 3 is a section taken on line 3—3 of Fig. 1.

Fig. 4 is a section taken on line 4—4 of Fig. 2.

Fig. 5 is a wiring diagram of the system.

The light receptor consists of a housing in which a selenium cell is mounted, and is shown in Fig. 1 as an ovoidal housing 10, which is provided at the small end with an elongated slot 11 and a frame 12 for receiving a screen 13 for cutting down the intensity of the light rays whereby the sensitivity may be adjusted. Mounting means for a selenium cell 14 is provided, and the device is mounted on the car, with the slot 11 projecting forwardly in the direction of travel. The device may be mounted on any part of the car, though preferably on the windshield, either inside or outside.

In this type of housing, widely divergent rays are permitted to enter as indicated by the lines 15, which in some instances may be of special advantage.

It is preferable however to provide means for restricting the rays received to a comparatively narrow angle as indicated by the lines 16, Fig. 4,

in which case a very inexpensive housing 17 is provided with a slot 18 extending inwardly adjacent to the selenium cell 19, means 20 being provided to receive a screen 21 for cutting down the intensity of the light rays as may be required.

The control system is clearly indicated in the wiring circuit Fig. 5, in which the usual battery 22 which is standard equipment on the vehicle, or which may be specially supplied where other uses are desired apart from a vehicle, has one terminal grounded as at 23. The other terminal is connected to a switch terminal 24 by a wire 25, the switch 26 being the usual lighting switch.

Connected in circuit with the other terminal of switch 26 is the cell 19, mounted in a housing 10 or 17 with the slot 21 facing in the direction of travel and adapted to pass light rays 27 to the cell 19 from approaching vehicles or other sources of light.

The cell 19 or 14 is connected in series with the switch 26 and a sensitive relay 28 by means of wires 29 and 30 thence through wire 31 to ground.

The armature 32 of relay 28 is also electrically connected to switch 26 through a wire 33, the armature 32 being normally open to the switch point or contact 34.

The contact 34 is connected in series with a relay 35 by means of a wire 36, the other terminal of the relay being connected to ground by a wire 37.

The armature 38 of relay 35 is electrically connected to switch 26 by means of a wire 39, there being opposed contacts 40 and 41 adapted to cooperate with the armature 38 which is normally closed to contact 40.

Contact 40 is electrically connected to one terminal of the driving filaments 42 of the headlights 43 in parallel, by means of wires 44, 45 and 46, the other terminal of these filaments being connected to ground through wires 47 and 48.

Contact 41 is electrically connected through wire 49 and parallel wires 50 and 51 to the dimmer light filaments 52 through one terminal, the other terminal being connected to ground through wires 47 and 48, and a third parallel circuit is provided through wire 53 to an indicating device 54 and thence through wire 55 to ground.

The operation of the invention is as follows:

The diagram shows all parts in dimming position. When the light switch 26 is closed, in the event no light rays of sufficient intensity are entering the slot 21, the armature 38 remains in contact with the contact 41, the current then passes from battery 22 through switch 26, wires

29, 39 armature 38 wire 44 wires 45 and 46 through driving filaments 42 to ground, and, coincidentally through wire 29 cell 19 wire 30, relay 28, through wire 31 to ground, this current being too feeble to energize the relay 28.

As light rays enter the slot 21, the resistance of the selenium cell is decreased, current passing through the relay 28, energizes the relay, drawing down armature 32 closing a circuit through wires 29 and 33 armature 32, contact 34 wire 36 relay 35 wire 37 to ground, energizing relay 35, drawing armature 38 down breaking the circuit to contact 40 and making circuit to contact 41, completing the circuit through wires 29 and 39, armature 38 wire 49, wires 50 and 51 filaments 52 to ground and, coincidentally through wire 53, indicator 54 wire 55 to ground, this indicator being preferably mounted on the instrument board to indicate if the device is working properly. Thus it will be noted that an oncoming headlight will cause the circuit to change from filaments 42 to filaments 52.

Having described an operable method of constructing and using the invention, it will be noted that variations in construction and arrangement of parts which are consistent with the appended claims may be resorted to without detracting from the spirit or scope of the invention or sacrificing any of the advantages thereof.

We claim:

1. A housing for a selenium cell, consisting of

an elongated shell having a slot in its wall arranged substantially symmetrical with respect to the major axis of the shell, and means for mounting a selenium cell positioned adjacent the opposite wall of said shell and in line with said axis.

2. A housing for a selenium cell, consisting of an elongated casing having a slot in its wall disposed in the major axis of the casing, means for mounting a selenium cell at the opposite end of said casing in line with said axis, and a screen for said slot adapted to modify rays of light entering said slot and impinging upon a selenium cell mounted therein.

3. A housing for a selenium cell, consisting of an elongated casing having a slot in its wall disposed in the major axis of the casing, means for mounting a selenium cell in said casing arranged symmetrically with respect to said axis, and an inwardly extending shield about said slot to direct rays of light upon the cell mounted therein.

4. A housing for a selenium cell, consisting of an elongated casing having a slot in its wall arranged substantially symmetrical with respect to the major axis of the casing, a shield about the said slot extending in line with said axis, and means for mounting a selenium cell disposed in said axial line.

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