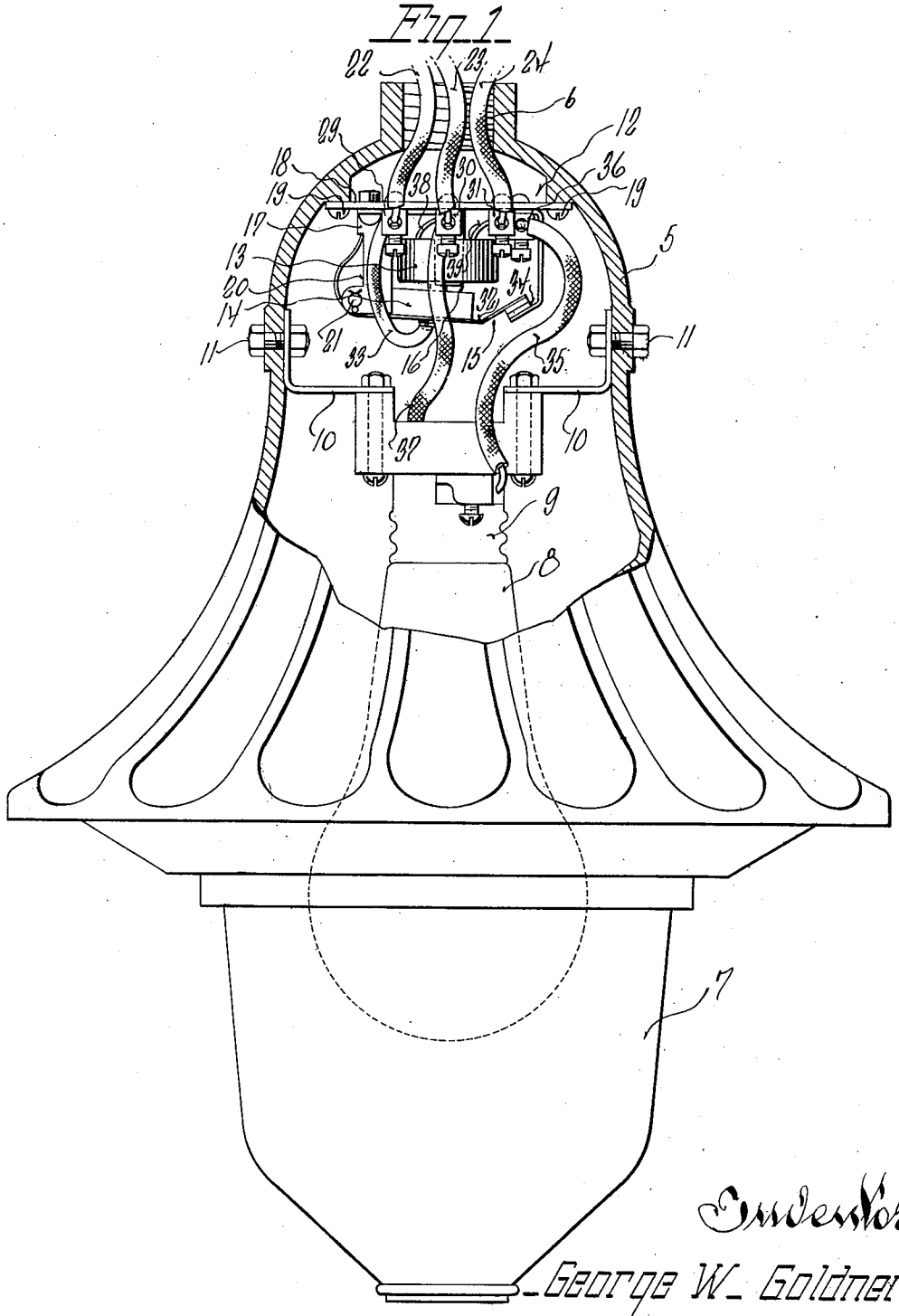
July 11, 1933. G. W. GOLDNER 1,918,031

LIGHTING FIXTURE

Filed Aug. 10, 1929 3 Sheets-Sheet 1

Fig. 1.



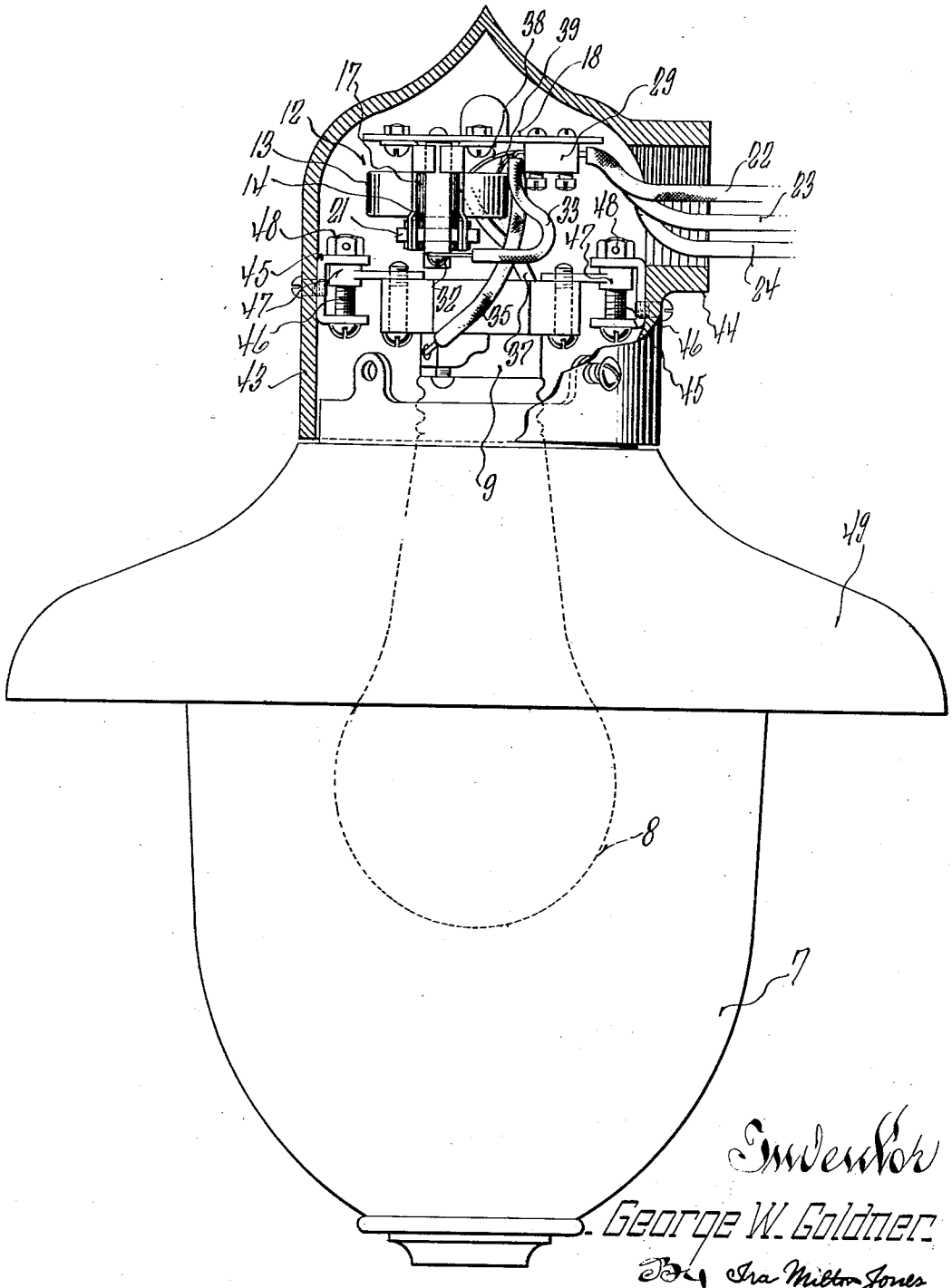
Inventor
George W. Goldner
By Ira Milton Jr. as
Attorney

July 11, 1933. G. W. GOLDNER 1,918,031

LIGHTING FIXTURE

Filed Aug. 10, 1929 3 Sheets-Sheet 2

Fig. 2.



Inventor
George W. Goldner
By Ira Milton Jones
Attorney

July 11, 1933. G. W. GOLDNER 1,918,031

LIGHTING FIXTURE

Filed Aug. 10, 1929 3 Sheets-Sheet 3

Fig. 3

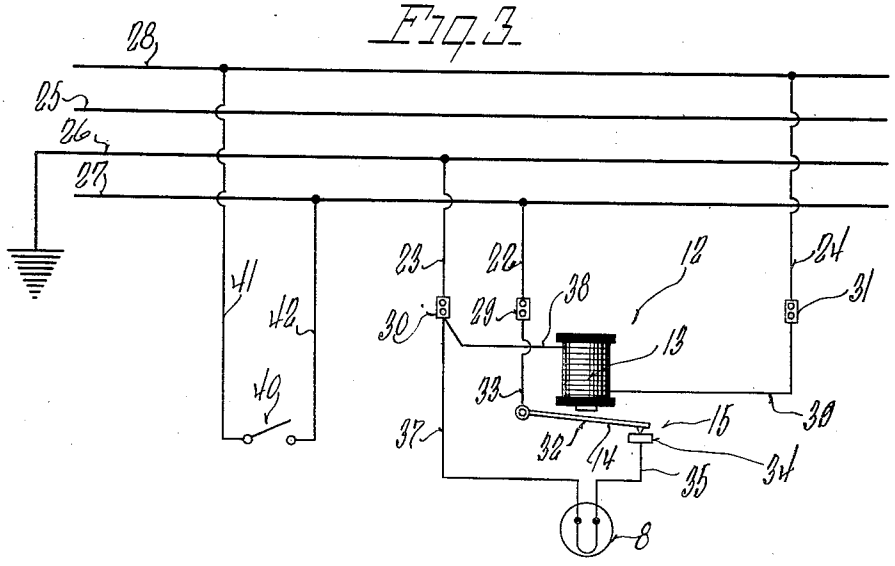
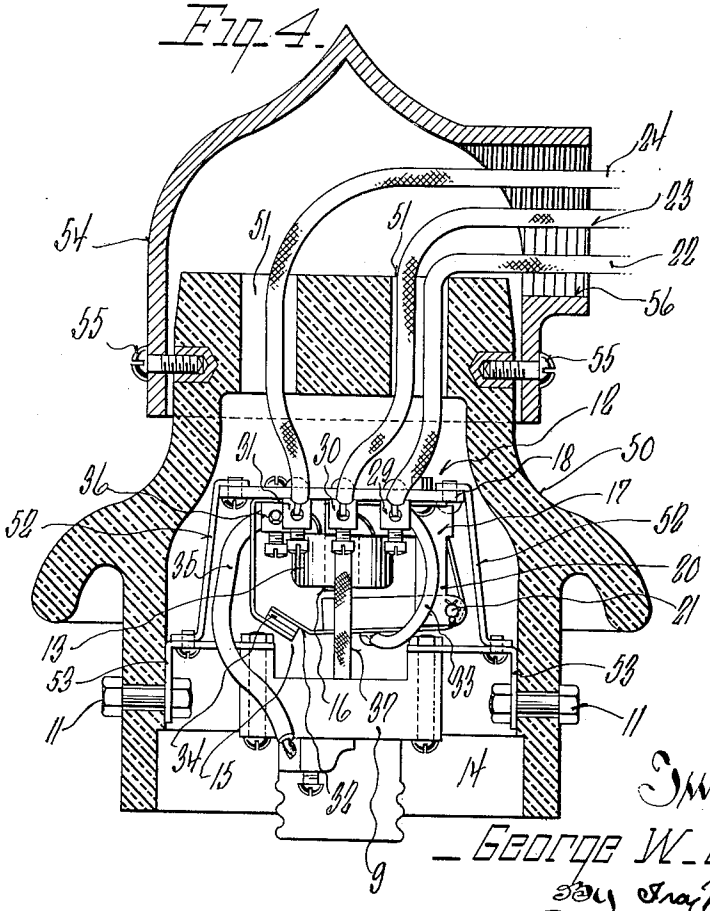


Fig. 4



Inventor

George W. Goldner

By Ira Milton Jones

Attorney

Patented July 11, 1933 1,918,031

UNITED STATES PATENT OFFICE

GEORGE WESLEY GOLDNER, OF JACKSON, MICHIGAN, ASSIGNOR TO LINE MATERIAL COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF DELAWARE

LIGHTING FIXTURE

Application filed August 10, 1929. Serial No. 385,057.

This invention relates to improvements in lighting fixtures and refers more particularly to fixtures of the type adapted for use with multiple street lighting systems.

Heretofore, it has been common practice to arrange the lamps of a multiple system of street lighting in sections to be connected across the lines upon actuation of a section control switch, which was governed by the energization and de-energization of a control wire; and as the section control switches carried the load of a number of lamps, they were of necessity expensive and complicated in design.

It is, therefore, an object of this invention to provide a street lighting fixture of the character described which has a contactor switch, to open and close its lamp circuit, incorporated therein. The provision of an individual contactor switch for each lighting fixture of a system, while increasing the number of contactors used, makes the installation of fixtures more convenient and permits a relatively cheaper construction for the contactors as they carry the load of only a single lamp.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated several complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is an elevational view of a lighting fixture embodying my invention with parts broken away and in section;

Figure 2 is a view similar to Figure 1 illustrating a modified form of my invention;

Figure 3 is a diagrammatic view illustrating the electrical connection of the fixture and its application in a multiple lighting system, and

Figure 4 is a view similar to Figure 1 of another modified form of my invention.

Referring now more particularly to the accompanying drawings in which like numerals designate like parts throughout the several views, 5 represents the housing of my improved lighting fixture, which may combine the usual body and canopy in a single structure, and the top of which is provided with an internally threaded aperture 6, to receive a suitable support, not shown. A refractor 7 is connected with the lower periphery of the housing 5 to diffuse the light of a lamp 8 carried by a receptacle 9 supported within the fixture by brackets 10.

The brackets 10 are substantially right angular and have their horizontal arms connected with the receptacle and their vertical arms fixed to the inner walls of the housing by bolts 11 or the like.

Mounted within the housing 5 above the receptacle 9, is a contactor comprising a solenoid 13 and an armature 14 connected with a switch 15, by which the lamp circuit is opened and closed. The solenoid 13 is wound about one arm 16 of a substantially U-shaped laminated core 17, suspended from a base plate 18 of suitable insulating material, the base plate 18 being secured to the adjacent walls of the housing by screws 19. The other arm 20 of the core 17 has its outer laminations extended laterally and provided with aligned apertures through which a pivot pin 21 extends to pivotally mount the armature 14 for movement toward and away from the pole piece formed by the core arm 16.

Current for the solenoid and the lamp 8 enters the fixture through lead-in conductors 22, 23 and 24, which pass through the opening 6 in the top of the housing and through the supporting member, not shown, to be connected with supply lines 25, 26 and 27 and a control wire 28, see Figure 3; the inner ends of the lead-in conductors 22, 23 and 24 being connected with terminal members 29, 30 and 31, respectively, carried by the insulating plate or panel 18.

The lead-in conductor 22 is connected with the line wire 27, and through its terminal

member 29 and a conductor 33, with the movable arm 32 of the switch 15 carried by the armature 14. It will be noted that the arm 32 extends beyond the pivot 21 and has its end directed at an angle to engage the adjacent portion of the core and provide a yielding spring tension to urge the armature away from the pole piece and maintain the switch normally closed. The stationary contact 34 of the switch 15 is connected with one side of the lamp 8 through a conductor 35, one end of which is connected with a terminal member 36 which also serves to secure the supporting arm of the stationary contact to the panel 18.

The other side of the lamp 8 is connected with the terminal member 30 through a conductor 37 and through the lead-in wire 23, with the neutral or grounded wire 26 of the supply line, so that when the solenoid 13 is de-energized the switch 15 closes and illuminates the lamp. Energization of the solenoid 13 attracts the armature 14 which opens the switch and breaks the lamp circuit. One side of the solenoid is connected with the terminal member 30 by a conductor 38, and the other side thereof is connected with the terminal member 31 through a conductor 39 and thus with the lead-in wire 24 which extends from the control wire 28.

The circuit for the solenoid 13, however, remains open until a master control switch 40, placed across the control lead 28 and the line wire 27 by means of conductors 41 and 42, respectively, is closed. The master control switch is preferably located at a remote central point and when closed energizes the entire control wire 28 and effects the operation of all solenoid switches connected therewith. In this manner, failure of any single solenoid or lighting fixture does not in any way affect the other fixtures connected with the control wire.

In Figure 2 is illustrated a slightly modified form of my invention which differs from that illustrated in Figure 1 in that the housing is not formed in one piece but is more on the order of the conventional type of fixture. In this instance the body, which is usually formed of porcelain, is replaced by a metal housing 43 whose top is closed and from one side of which an internally threaded boss 44 extends, to provide means for attaching the fixture to a suitable support, not shown.

Another feature of difference in this modification, is the means for adjusting the lamp receptacle 9 vertically within the housing. This means consists of substantially U shaped supporting members 45 fixed to the inner wall of the housing 43 at diametrically opposite points and provided with aligned apertures through which adjusting screws 46 extend to be threaded in arms 47 extended from the receptacle so that turning of the screws 46 raises and lowers the receptacle; the screws being held against longitudinal movement with respect to the supporting members 45 by nuts 48 pinned to the ends thereof. The refractor 7 in this form of the invention is provided with a suitable reflector hood 49.

In the modification illustrated in Figure 4, the contactor is mounted within a conventional porcelain housing 50, the top of which is provided with apertures 51 through which the lead-in conductors 22, 23 and 24 enter the interior of the housing. The insulating panel 18, in this instance, is supported by brackets 52, whose lower ends are connected with brackets 53 similar to the supporting members 10. The housing 50 is adapted to be supported in a manner similar to the disclosure in Figure 2, i. e., by having a canopy or housing 54 secured on the upper portion thereof by screws 55 or the like, the canopy 54 being provided with an internally threaded boss 56, as in the modification illustrated in Figure 2 to attach the device to a suitable supporting member, not shown.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the art to which an invention of this character appertains that I provide an improved lighting fixture adapted for use with multiple lighting systems which incorporates an individual contactor switch, and which because of a lack of necessity for excessive insulation may have its body formed entirely of metal to lend itself particularly well for ornamental use.

What I claim as my invention is:

1. A street lighting fixture of the character described comprising a protecting housing having means for mounting the fixture from a support, a lamp mounted within the housing, a switch within the housing, conductors within the housing connecting the lamp and the switch in series so that the switch controls the lamp, electroresponsive means directly connected with the switch within the housing, and conductors leading from the electroresponsive means to the exterior of the housing to enable selective energization of the electroresponsive means whereby the lamp may be selectively controlled from a point remote from the lighting fixture.

2. In a lighting fixture of the character described, a housing, a socket support mounted in said housing, a light socket mounted from said support, conductors within the housing to supply said light socket with current, a base supported in spaced relation from said socket support, an electro-magnetic switch connected with said conductors and mounted on said base to control the flow of current to said socket, and conductors leading from the electro-magnetic switch to the exterior of

the housing to enable selective energization of said electro-magnetic switch.

3. A street lighting fixture of the character described comprising, an inverted cup-shaped housing having means at its upper portion for attachment to a support, a lamp receptacle adapted to receive an incandescent lamp, an electric switch having a stationary and a movable contact, an electro-magnet for actuating the movable contact of the switch, conductors connecting the lamp receptacle and the switch in series so that the switch controls the supply of current to the lamp receptacle, conductors leading from the solenoid of the electro-magnet to the exterior of the housing to enable energization of the electro-magnet from a point remote from the housing, and means mounting the lamp receptacle, the switch and the electro-magnet within the housing with the switch and electro-magnet spaced above the lamp receptacle so that the receptacle forms a heat insulating barrier between the switch and electro-magnet, and a lamp mounted in the receptacle.

4. A street lighting fixture of the character described comprising, an inverted cup-shaped housing, a lamp receptacle adapted to receive an incandescent lamp which depends downwardly toward the open bottom of the housing, an electric switch connected with the lamp receptacle to control the supply of current to the receptacle, an electro-magnet to actuate said switch, and means mounting the lamp receptacle, the electric switch and the electro-magnet within the housing with the switch and electro-magnet disposed above the lamp receptacle, so that the lamp receptacle affords a heat insulating barrier between the switch and electro-magnet, and a lamp mounted in the receptacle.

5. A street lighting fixture of the character described comprising, an inverted cup-shaped housing, a lamp receptacle adapted to mount an incandescent electric lamp, means mounting said lamp receptacle within the housing at a distance from its closed top so that a lamp mounted therein depends downwardly from the receptacle toward the open bottom of the housing, an electric switch connected with the lamp receptacle to control the flow of current thereto and having a stationary contact and a movable contact, an armature connected with the movable contact to normally hold the same by gravity in engagement with the stationary contact, a solenoid adapted upon being energized to attract the armature thereto and open the switch, conductors connected with the solenoid and the switch and exending to the exterior of the housing to selectively supply current to the solenoid and the lamp, and means mounting the switch and solenoid above the lamp receptacle so that the receptacle affords a heat insulating barrier between the solenoid and a lamp mounted in the receptacle.

In testimony whereof I have hereunto affixed my signature.

GEORGE WESLEY GOLDNER.