C. A. DEAN.

LIGHTING SYSTEM FOR VEHICLES.

APPLICATION FILED JUNE 12, 1912.

1,072,096.

Patented Sept. 2, 1913.

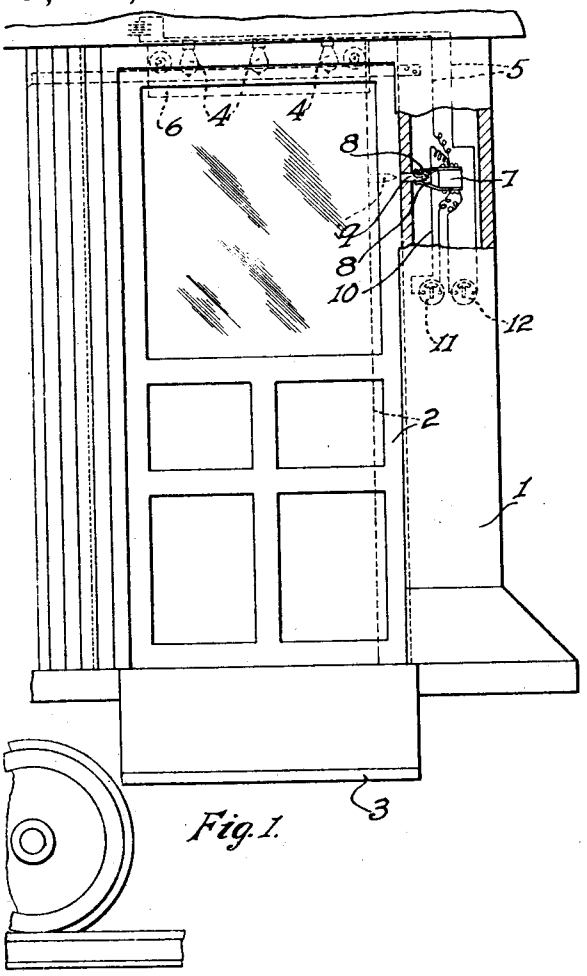

Fig. 1.

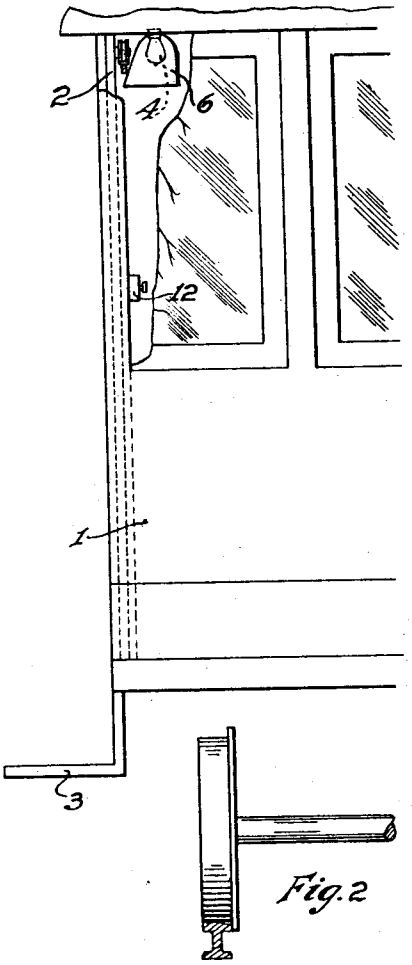

Fig. 2

Witnesses:
N. Brandt.
A. A. Olson

Inventor:
Clark A. Dean.
By Joshua R. H. Potts
his Attorney.

UNITED STATES PATENT OFFICE.

CLARK A. DEAN, OF HARVEY, ILLINOIS.

LIGHTING SYSTEM FOR VEHICLES.

1,072,096. Specification of Letters Patent. Patented Sept. 2, 1913.

Application filed June 12, 1912. Serial No. 703,222.

To all whom it may concern:

Be it known that I, CLARK A. DEAN, a citizen of the United States, and a resident of the city of Harvey, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Lighting Systems for Vehicles, of which the following is a specification.

My invention relates to lighting systems for vehicles, and more specifically to a lighting system designed for use especially in street or railway cars, for lighting the entrance, entrance-step, and the ground or platform adjacent the entrance-step so as to prevent injuries such as frequently result by reason of the non-lighting of the locations mentioned, when entering or leaving a car.

The object of my invention is the production of a lighting system as mentioned, which will be simple and economical in construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view, my invention consists in the combinations and arrangements of parts hereinafter described and claimed.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification, and in which—

Figure 1 is a fragmentary sectional side elevation of one end portion of a conventional street car equipped with a lighting system embodying my invention, Fig. 2 is a fragmentary sectional front elevation of the car.

Referring now to the drawing, 1 designates a street or railway car of conventional form, provided at each end with a sliding door 2 for gaining access to the interior of the car. At the door 2 is provided the usual entrance-step 3 which is utilized on entering or leaving the car. Arranged within the car vestibule above the door 2 and adjacent thereto, is a plurality of electric lamps 4 which are included in an electric circuit 5, the latter, if desired, being the usual line circuit of the car. Coöperating with the lamps 4 is a reflector 6 adapted to reflect or direct the light generated downwardly and outwardly so that, when the door 2 is open, the doorway, the step 3, and a portion of the platform or ground adjacent said step will be lighted. Interposed in the circuit 5 is a switch 7 in which are included two spring arms 8 adapted to normally contact with each other so as to close the circuit, spreading of arms 8 effecting opening of said circuit. The arms 8 are arranged adjacent the jamb of door 2, the adjacent edge of the latter being provided with a projecting tapering stud 9 of insulating material adapted, when said door is in closed position, to be positioned between the contacting arms 8 to effect the spreading thereof and hence to open the circuit including the lamps 4. With this arrangement it will be seen that the lamps 4 will be in operation only when the door 2 is in open position, hence only when the lighting of the doorway and step 3 is desired, said lamps being inoperative when the door is in closed position. However, it may be desired to continually operate lamps 4 in order to illuminate the vestibule or interior of the car, and in order to secure such lighting or operation of said lamps a bridge 10 is employed for bridging or cutting out the switch 7. A switch button 11 is interposed in the conductor wire of bridge 10 which will ordinarily be open, said switch being closed only when a continuous burning or operation of the lamps 4 is desired. A switch 12 is also preferably interposed in the circuit 5 which controls the entire system.

A lighting system of the construction set forth will be found efficient in use and economical in the consumption of fuel or electric energy, by reason of the fact that the system, if desired, may be so adjusted that the lighting means will be in operation only when the car door is open or only at the time when illumination of the doorway, entrance-step, and the ground or platform adjacent the entrance-step is of advantage.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the exact details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a vehicle having a movable door and a step positioned at said door, of an electric circuit and lighting

means arranged to illuminate said doorway and said step; means controlling said circuit whereby said lighting means will be inoperative when said door is closed and operative when said door is open; and means in said circuit for bridging said controlling means to effect continuous operation of said lighting means, substantially as described.

2. The combination with a vehicle having a movable door and a step positioned at said door; of an electric circuit; an electric lighting means included in said circuit and arranged in said vehicle above said door; a reflector coöperating with said lighting means for directing the light generated toward the doorway and said step, and a switch controlling said lighting means, whereby said light will be inoperative when said door is closed and operative when said door is open; and means in said circuit for bridging said switch to effect continuous operation of said lighting means, substantially as described.

3. The combination with a vehicle having a movable door, and a step positioned at said door, of an electric circuit; an electric lighting means included in said circuit and arranged in said vehicle above said door; a switch controlling the lighting means whereby said lighting means will be inoperative when the door is open; and means in said circuit for bridging said switch to effect continuous operation of said lighting means, substantially as described.

4. The combination with a vehicle having a movable door, and a step positioned at said door, of an electric circuit; an electric lighting means included in said circuit and arranged in said vehicle above said door; a reflector coöperating with said lighting means for directing the light toward the doorway and said step; a normally closed switch interposed in said circuit; means carried by said door adapted, when the latter is in closed position, to open said switch, and means in said circuit for bridging said switch to effect continuous operation of said lighting means, substantially as described.

5. The combination with a vehicle having a movable door and a step positioned at said door, of an electric circuit; an electric lighting means included in said circuit and arranged in said vehicle above said door; a reflector coöperating with said lighting means for directing the light toward the doorway and said step; a normally closed switch interposed in said circuit; means operative by said door adapted, when said door is in closed position, to open said switch; and means in said circuit for bridging said switch to effect continuous operation of said lighting means, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLARK A. DEAN.

Witnesses:
SIDNEY OAKLEY,
JOHN F. SEARIGHT.