



LUMINOUS ARC HEADLIGHTS

For Railway Service



Wide Angle of Illumination Given by a Form D-12 Headlight Equipped with Metal Parabolic Reflector

The details of trees and the side hill on the left are plainly visible and the steam road tracks on the right can be seen.



Illumination Given by a Form D-15 Headlight Equipped with a Semaphore Lens

The extreme concentration of the light rays is indicated by the fact that the trees on the left cannot be discerned at all, nor can the steam road tracks on the right. It will also be noticed that there is a very slight illumination of the paralleling tracks.

The line of G-E luminous arc headlights meets all possible requirements and conditions of service. The long burning electrodes and consequent economy of operation together with simple mechanical construction combine to make these headlights extremely popular. Thousands are in operation on both high speed interurban and suburban cars.

For the concentration of the light rays, the headlights are equipped with either a parabolic metal reflector or a semaphore lens. The semaphore lens type concentrates in a small area the light from the luminous arc. The advantage of this lens is that the zone of light is comparatively small and is projected a great distance.

The parabolic reflector type throws a wider beam than the preceding type, and while it does not illuminate the track for so great a distance ahead, the wide angle of light insures a broad illumination of the track and surroundings, and when taking sharp curves permits a view of objects approaching at right angles to the track.

For in-town dimming these headlights are equipped with incandescent lamps or can be so connected through a double-pole, double-throw switch that the current can be reversed, thus materially cutting down the illumination. This feature is necessary, as most municipalities forbid the use of brilliant headlights within the town or city limits.

Both the incandescent and polarity reversing features are very effective and convenient for the motorman in dimming the light, as it is simply necessary to throw the switch provided for this purpose.

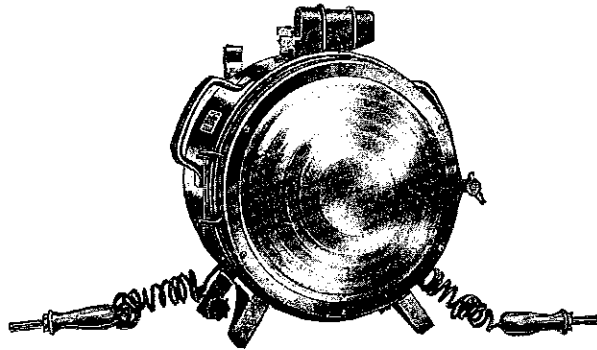
General Electric Company, Schenectady, N. Y.

SALES OFFICES IN ALL LARGE CITIES



Luminous Arc Headlights

Forms D-15 and D-18



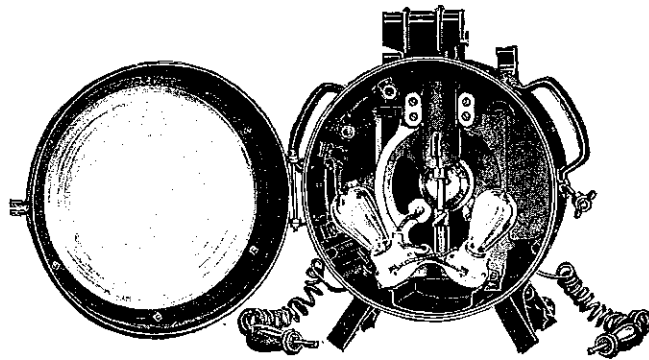
**Form D-15, 4-Amp. Luminous Arc Headlight
With Semaphore Lens**

Cat. No. 153214—D-15 Headlight, with one Plug and Cable, Grounded Circuit, without Reversed Polarity Dimming.
Cat. No. 153215—D-15 Headlight, with two Plugs and Cable, Metallic Circuit Reversed Polarity Dimming.

These headlights are equipped with a semaphore lens and concentrate in an extremely small area the light of the luminous arc. The light beam is sufficient to illuminate the tracks without interfering with traffic on the roadway paralleling the track and the narrowness and concentration of the light beam also prevents the motor-man on an approaching car from being blinded.

The light projected from these lamps is very steady. It illuminates the track for a straightway distance of approximately 2000 ft. This is all important, as a car traveling at 60 miles per hour requires, with good braking, approximately 1750 ft. in which to stop.

The Form D-18 headlight is identical with the Form D-15 except that two incandescent lamps are used for in-town dimming.



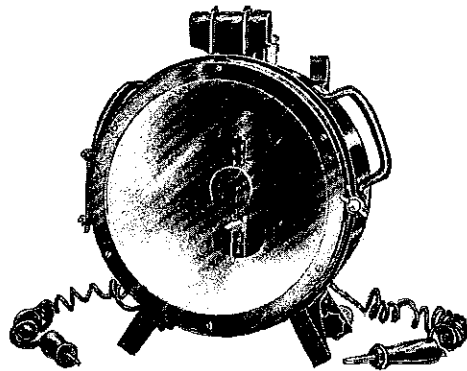
**Form D-18, 4-Amp. Luminous Arc Headlight
With Semaphore Lens**

Cat. No. 153218—D-18 Headlight, Grounded Circuit, Equipped with two Incandescent Lamp Receptacles, two Plugs and Cable.



Luminous Arc Headlights

Forms D-12 and D-20

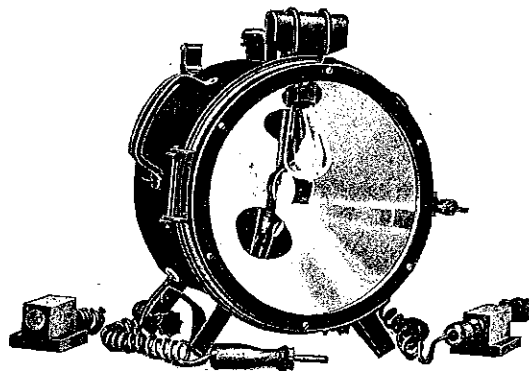


Form D-12, 4-amp. Luminous Arc Headlight
With Parabolic Metal Reflector—Without Incandescent Lamps
Cat. No. 153216—D-12 Headlight, with one Plug and Cable,
Grounded Circuit without Reversed Polarity Dimming.
Cat. No. 153217—D-12 Headlight, with two Plugs and Cable,
Metallic Circuit, Reversed Polarity Dimming.

When the D-12 headlight is operated in its normal position, not only is the track illuminated for 1200 to 1500 ft. ahead of the car but for 50 ft. each side of the track as well. This is especially valuable when the car is approaching or taking curves, as it enables the motorman to see whether or not the track is clear.

These lamps are suitable for operation on suburban lines where there are numerous curves and intersecting roads, as the width of the beam enables the motorman to see to some extent around the curve when approaching it. It also makes it possible for him to see persons or vehicles approaching at right angles to the track.

The Form D-20 headlight is identical with the Form D-12 except that the former has one incandescent lamp for dimming, while the reversed polarity feature is used with the latter.

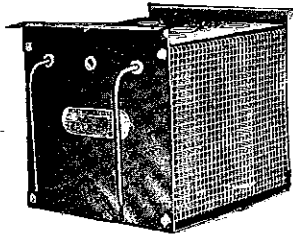


Form D-20, 4-amp. Luminous Arc Headlight
With Parabolic Metal Reflector
Cat. No. 153219—D-20 Headlight, Grounded Circuit, equipped with
one Incandescent Lamp Receptacle, two Plugs and Cable.



Luminous Arc Headlights

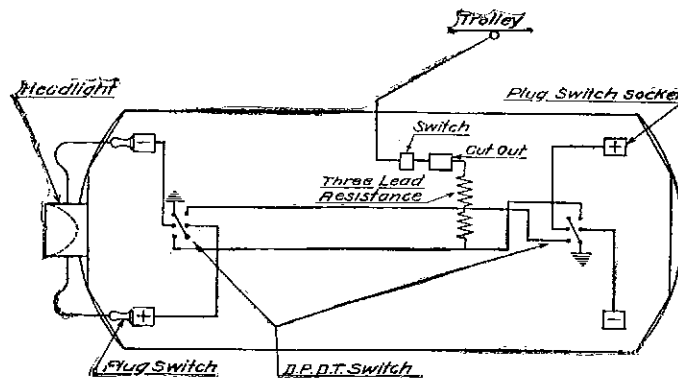
Resistors and Connections



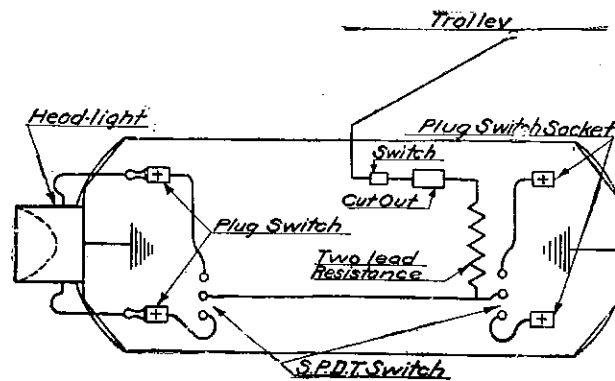
Two-lead Steadying and Dimming Resistor

The resistor used with the luminous arc headlight has the wire wound on 2-in. hollow threaded porcelain spools which are enclosed in a perforated steel box having lugs for convenient mounting under the car on porcelain spacers.

A two-lead resistor is used with headlights utilizing incandescent lamps for in-town dimming or where regulations do not require a reduced light and the three-lead resistor is used with headlights in which the dimming is done by reversing the polarity.



Connections of Form D 4-amp. Luminous Arc Headlight with Three-lead Resistor (for Reversed Polarity In-town Dimming)



Connections of Form D 4-amp. Luminous Arc Headlight with Two-lead Resistor (for Incandescent Lamp In-town Dimming)