Dec. 19, 1961 W. L. GARDNER 3,014,153

SEALED BEAM LAMP

Filed Dec. 30, 1958

Fig. 1

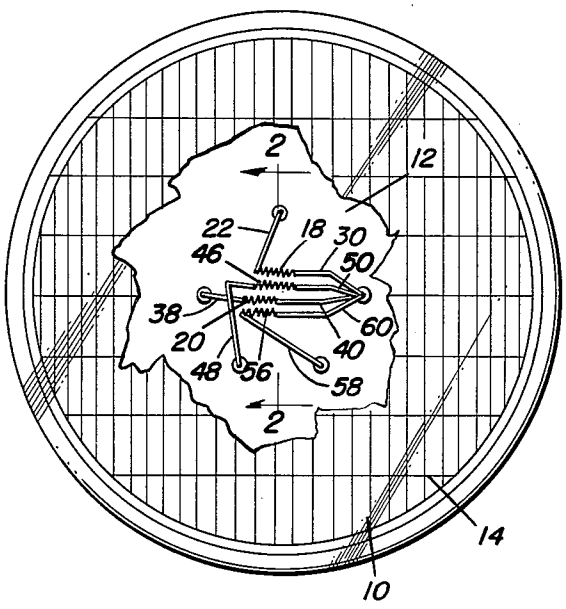


Fig. 2

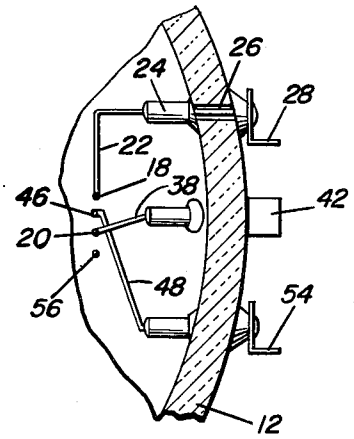


Fig. 3

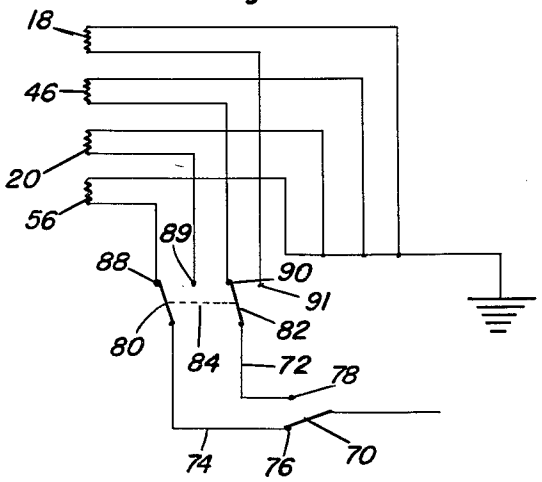
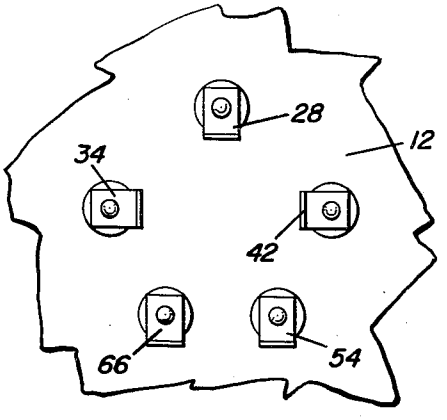


Fig. 4



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SEALED BEAM LAMP

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This invention relates to electric lamps and more particularly to electric lamps which are especially useful in connection with motor vehicles as the head lamps thereof.

An object of the invention is to provide a motor vehicle electric lamp for a headlight, wherein the conventional high and low beam filaments are supplemented by additional filaments, one being a high beam and the other being a low beam. In this way instead of having only a selection of two beams, the operator of the motor vehicle may select between four available beams for each head lamp.

When the conventional head lamp shines too high due to a load on the vehicle, for instance a heavy load in the trunk compartment at the rear or due to heavy passengers in the rear seat of the motor vehicle, or when the conventional head lamp shines too high because of weather conditions, the motor vehicle operator may select a lower beam filament by choosing one of the filaments added in accordance with this invention, there being one that will cast a beam between the conventional high and low beams and one which will cast a beam lower than the conventional low beam.

The lamp made in accordance with this invention may be used in a conventional motor vehicle with very little modification of the vehicle electrical system. All that is necessary is a new wiring with a terminal plug for five prongs instead of three, and an additional switch capable of being connected in the motor vehicle lighting circuit without affecting the conventional dimmer switch operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a front view of a lamp constructed in accordance with this invention, portions being broken away to more clearly expose the filaments of the lamp.

FIGURE 2 is an enlarged sectional view taken on the line 2—2 of FIGURE 1.

FIGURE 3 is a diagrammatic wiring view.

FIGURE 4 is a fragmentary rear elevational view of the lamp in FIGURE 1 showing the plug prong pattern.

In the accompanying drawings there is a sealed beam lamp 10 made of a reflective back wall 12 and a lens 14 which may be completely transparent or tinted or otherwise altered in accordance with manufacturing desires. The most popular arrangement, though, is to have the lens 14 transparent.

Lamp 10 has two conventional filaments 18 and 20, filament 18 being the conventional high beam producing filament and filament 20 being the conventional low beam producing filament. Filament 18 has one end connected to conductor 22 which is passed through a sleeve 24 in alignment with a passage 26 in wall 12 of the lamp 10. Prong 28 is attached to the conductor 22 and is located at the rear of the lamp. The opposite end of filament 18 is attached to conductor 30 and after passing through a sealed passage in wall 12, is attached to a common ground prong 34 on the back of the lamp. All filaments, including the additional filaments provided in accordance with the invention, are connected with prongs in the same way. Low beam filament 20 has conductors 38 and 40 at its ends, the conductor 40 being attached to

the common ground prong 34, and the conductor 38 being attached to prong 42 at the back of the lamp.

The additional high beam filament 46 is parallel to the other filaments, and it has conductors 48 and 50 at its ends. The conductor 50 is connected to the common ground prong 34, and conductor 48 is attached to the additional high beam filament energizing prong 54. The additional low beam filament 56 has conductors 58 and 60 at the ends thereof, with the conductor 60 attached to the common ground prong 34, and the conductor 58 connected with the added low beam filament energizing prong 66. The two low beam filaments 20 and 56 are parallel and slightly shifted to the left (as viewed in FIGURE 1) from the parallel high beam filaments 18 and 46.

A typical installation in a motor vehicle for one head lamp is shown in FIGURE 3. This is merely a diagrammatic view showing a conventional dimmer switch 70 to select either high or low beam filaments. Conductors 72 and 74 extend from the terminals 76 and 78 of the dimmer switch and to the switch arms 80 and 82 of gang switch 84. This gang switch is installed in a convenient place within a motor vehicle and for the lamp 10 and another lamp exactly like it. Since the wiring for the additional lamp at the front of the motor vehicle is identical to the wiring illustrated in FIGURE 3, it is not shown. All that is necessary, though, is to attach additional wires to the four contacts 88, 89, 90 and 91 of switch 84. The switch 84 is shown in position at which the added filaments 46 and 56 are selected that is, either one or the other depending on the position of dimmer switch 70. Wires extend from contacts 88 and 90 to the filaments 56 and 46 respectively, and additional wires extend to ground. The contacts 89 and 91 have wires extending from them to the filaments 20 and 18 respectively, these being the conventional low beam and high beam producing filaments of the lamp or at least, filaments which correspond directly to such conventional filaments. Wires extend from filaments 20 and 18 to ground. It is now evident that the motorist has a selection of four beams for each head lamp instead of merely two beams as is common.

For motor vehicles that have four head lamps instead of two, the same arrangement in accordance with the invention may be followed by using a combination of two lamps 10 and two 2-filament type lamps. On conventional four head lamps vehicle lighting systems, the additional two lamps burn only with high beams. In an emergency the head lamp 10 may be replaced with a conventional lamp by leaving the control switch in normal position or lamp 10 may replace a conventional lamp by plugging into a conventional three terminal socket. The prong pattern (FIGURE 4) is such that a conventional motor vehicle conventional three terminal head lamp socket will accept only the correct prongs.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A vehicle lighting circuit comprising a single pole double throw dimmer switch, a double pole double throw beam selection switch serially connected to said dimmer switch and including a pair of contact arms individually attached to the individual contacts of said dimmer switch for high and low beam circuit completion, an electric

lamp having high and low beam producing upper and lower filaments, said beam selection switch having four contacts arranged in two pairs of two contacts each, said high beam producing filament attached to one of said contacts of a first of said pair, said low beam producing filament attached to one of said contacts of a second pair of said contacts in said beam selection switch, an additional high beam producing filament in said lamp connected to the other of said contacts of the first pair in said beam selection switch, an additional low beam producing filament connected to the other contact of the second pair of contacts of said beam selection switch.

2. The combination of claim 1 wherein the first mentioned high beam and low beam producing filaments together with a common ground have prongs which are connected therewith arranged in a pattern which will enable them to be plugged into a conventional three contact head lamp socket to the exclusion of any other prong insertion and orientated so that the head lamp may be substituted for a three prong head lamp as an emergency replacement therefor.

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