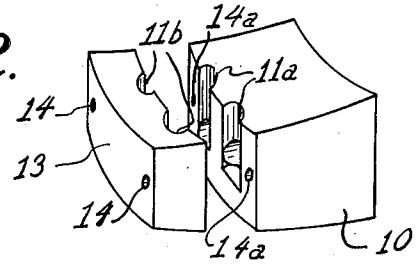
July 23, 1940. F. H. CORLBURG 2,209,052

HEADLIGHT FOR AUTOMOBILES

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Fig. 2.



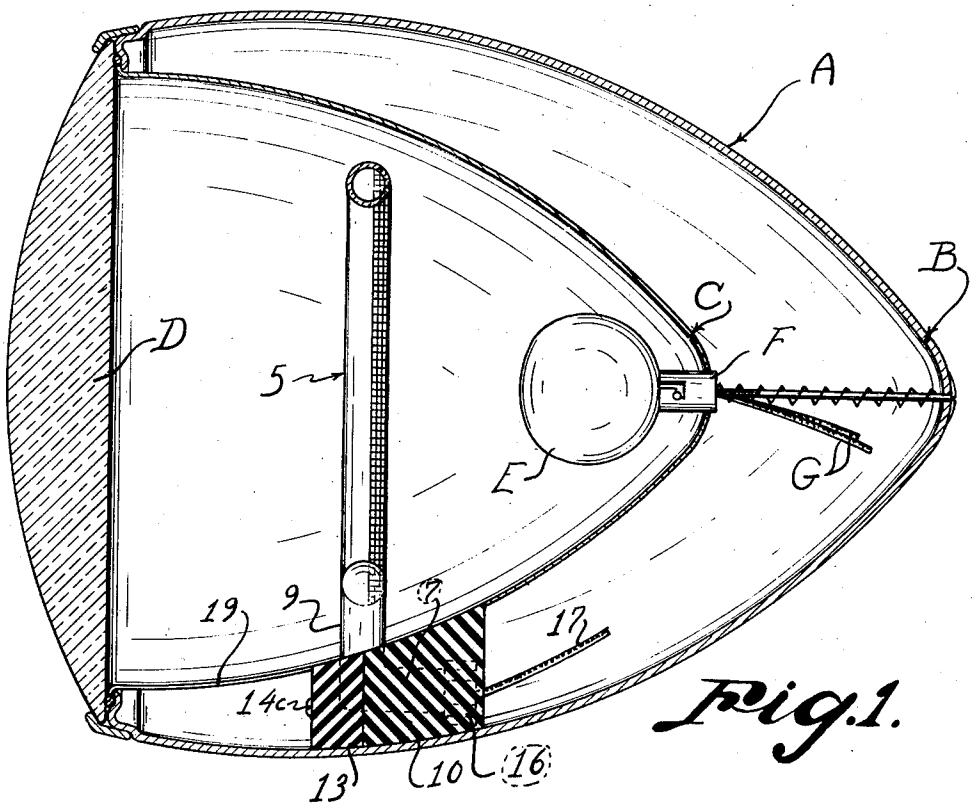


Fig. 1.

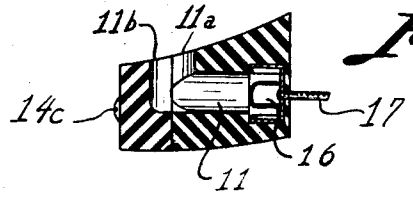


Fig. 3.

INVENTOR.

BY F. H. Corlburg
A. E. Fisher

ATTORNEY.

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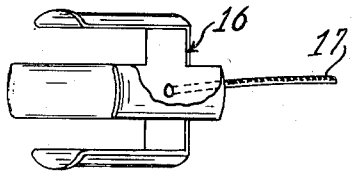


Fig. 5.

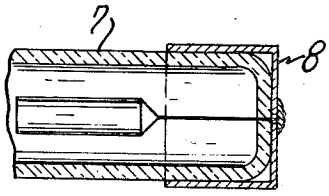


Fig. 6.

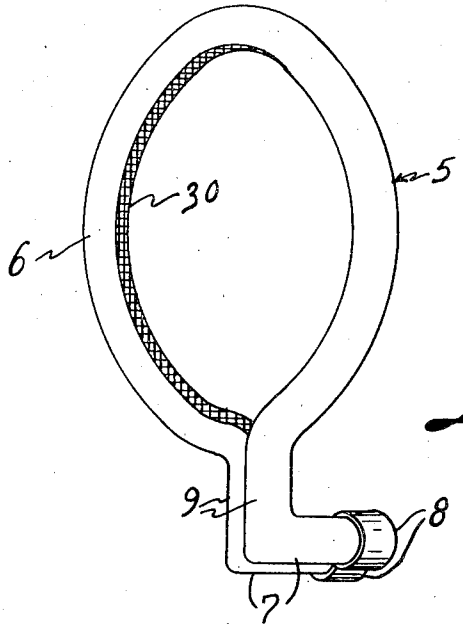


Fig. 4.

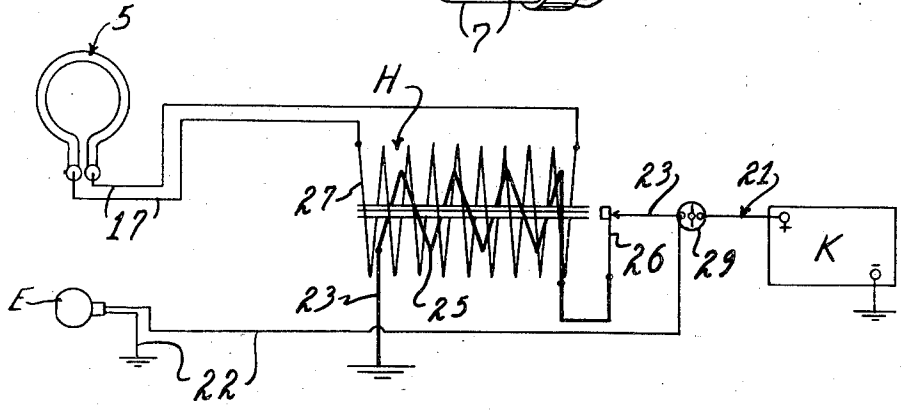


Fig. 7.

BY

INVENTOR.
F. H. Corlburg
A. E. Fisher

ATTORNEY.

Patented July 23, 1940

2,209,052

UNITED STATES PATENT OFFICE

2,209,052

HEADLIGHT FOR AUTOMOBILES

Frank H. Corlburg, Iola, Kans.

Application March 13, 1939, Serial No. 261,430

1 Claim. (Cl. 240—11.4)

This invention relates to headlights for automobiles using internal combustion engines, and the main object of the invention is to provide a headlight or headlamp in lieu of the conventional forms, and wherein is employed in combination a neon tube light and conventional electric light, the neon light serving to modify and soften the otherwise harsher and more blinding rays of the electric bulb.

Another object of the invention is to provide in combination with the conventional electric headlamp of an automobile, a neon tube mounted in front of the electric bulb of the regular lamp, the said tube being preferably circular in form and mounted concentrically with the axis of the electric bulb in spaced relation thereto, the inner wall of the circular glass tube being preferably coated or otherwise rendered impervious to light rays as emanating from the electric bulb, whereby cross-rays and light interference is avoided and a soft glowing light is projected forwardly of the automobile which is non-irritating to approaching drivers.

With the stated objects in view, and other advantages as may appear, the specification includes the accompanying drawings, wherein:

Figure 1 is a longitudinal, vertical section through a headlamp with my improvement mounted therein.

Figure 2 is a detail perspective view of the insulation block used for mounting the circular neon tube within the lamp casing.

Figure 3 is a longitudinal, vertical section through one side of the tube insulation block.

Figure 4 is a perspective view of the neon tube alone, removed from the lamp casing.

Figure 5 is an enlarged detail of one of the outer terminal clips used for mounting the neon tube.

Figure 6 is an enlarged sectional view of one of the inner terminal sockets for the ends of the neon tube, showing a broken off tube end mounted therein.

Figure 7 is a diagrammatic view showing the lay-out of the elements involved together with the wiring connections.

My improvement is used in combination with a conventional headlamp A which includes the outer casing B, inner reflector C, lens D, bulb E, socket F, and wiring G, the bulb being energized from battery H supported on the chassis (not shown).

The improvement includes a circular glass neon tube represented generally at 5, the same having the glass lighting loop 6 and the spaced and perpendicularly extended legs 7 carrying the electrodes and terminal caps 8, the legs being connected to the loop 6 through the elbows 9.

This assembly is dimensioned and adapted to seat freely within the parabolic reflector C, in a frontally spaced relation to and concentrically with the light bulb E. To mount and support the neon tube in the stated position, an insulation block 10, preferably of somewhat elastic rubber, is mounted at the lower side of the headlamp between the casing and reflector, where it may be cemented in place.

This insulation block 10 is formed at its forward end with a pair of spaced sockets 11 which open out forwardly in the form of perpendicularly disposed half sockets 11*a*, adapted to engage the legs 7, terminal caps 8 and elbows 9 of the neon tube 5. A facing plate 13 having the complemental half sockets 11*b* for engaging the outer sides of the tube elbows, is also provided, and is adapted to be secured over the forward end of the block by screws 14*c* passed through aligned bores 14 formed through the plate and into the bores 14*a* of the block.

Outer terminal sockets or clips 16 are seated at the inner ends of the sockets 11, adapted to frictionally engage the caps 8 which are soldered to the electrodes of the neon tube in conventional manner. Wires or leads 17 are connected to these clips. These elements are assembled by passing the legs 7 and caps 8 into the sockets 11 and the caps into clips 16, the wires or leads 17 being passed rearwardly out through the block 10. The plate 13 is then secured in place upon the forward end of the block and over the elbows 9 by means of screws passed through the holes 14 of the plate 13 into the aligned holes 14*a* of block 10.

In order to mount the neon tube inside the reflector C, the latter is slotted longitudinally out along the lower wall, as shown at 19, in spaced relation corresponding to the spacing of the legs 7 and elbows 9, so that the rising portions of these elbows may be passed along through these slots in the process of mounting the neon tube in place within the casing and reflector, as above described. If desired the slots 19 may be covered by plates of metal (not shown) with reflective inner faces, after the installation is completed.

To energize the neon tube a conventional form of vibrator-step-up coil represented generally at H may be incorporated in the regular wiring system 21 as fed from the battery K, the same being connected in parallel with the regular leads 22

supplying the bulb E and including leads 23 energizing the primary coil 25 which operates the vibrator blade 26. The leads 17 from the neon tube 5 are then connected to the ends of the secondary coil 27 and the installation is complete. The vibrator step-up unit H may of course be mounted at any convenient place on the chassis or car frame (not shown). A conventional switch 29 may be incorporated in the circuit and mounted on the car dash (not shown) for controlling the neon light.

The gaseous filler of the neon tube may be formulated as necessary to provide the desired color of light, said formulas being well known in the art. Thus a blue, yellow or any other color of light beam may be provided for.

If desired the inner annular face or side of the glass loop 6 which lies in direct line with the bulb E, may be painted black as represented at 30, so as to provide a narrow opaque band to neutralize any interference or cross rays emanating from the bulb E, thus preventing any harsh or glaring light effects.

While a circular neon tube is here shown, other forms might be employed that would not obstruct the direct, forward rays from the bulb E. Also any other make and break device for the induction coil might be used. Of course two or more neon loops might be unitarily mounted in the lamp.

In operation the light from the regular light bulb passes directly through the neon loop or circle, while the soft light from the latter, encircling as it does the inner periphery of the reflector, serves to neutralize any glaring effect of reflected rays from the light bulb. The resulting effect of the combination is a very soft and pleasant forwardly projected beam of light.

The resilient or elastic mounting for the neon tube afforded by the rubber block 10 and plate 13, prevent breakage of the tube under the vibration of the car in motion.

While I have here described certain structural features of the invention, same may be varied as necessary within the scope of the appended claim.

I claim:

In a headlamp for an automobile, the lamp embodying a cupped casing, a cupped reflector mounted concentrically therein, a lens in the open end of the casing, and an electric light bulb in the closed end of the reflector, the said reflector having two slots extending longitudinally out along its lower wall in parallel spaced relation, an insulation block seated at the lower side of the assembly between the casing and the reflector and at the inner ends of the slots thereof, the block having two sockets opening horizontally forward in alignment with the slots of the reflector and ending in perpendicularly disposed half sockets formed across the forward end of the block, an insulation facing plate removably mounted at the forward end of the said insulation block, said plate being formed at its inner side with half sockets complemental with the half sockets of the block, and a parted circular glass neon tube encircling the light bulb within the casing, elbows extended down from the parted ends of the neon tube, and legs extended perpendicularly rearward from the elbows, the said legs being dimensioned to seat in the horizontal sockets of the said insulation block, the elbows being embraced within the half sockets of the insulation block and the facing plate.

FRANK H. CORLBURG.