

Dec. 27, 1927.

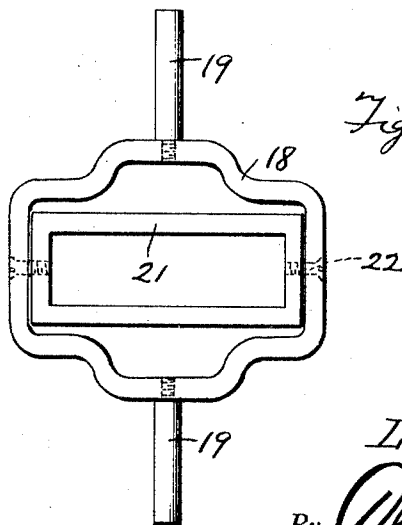
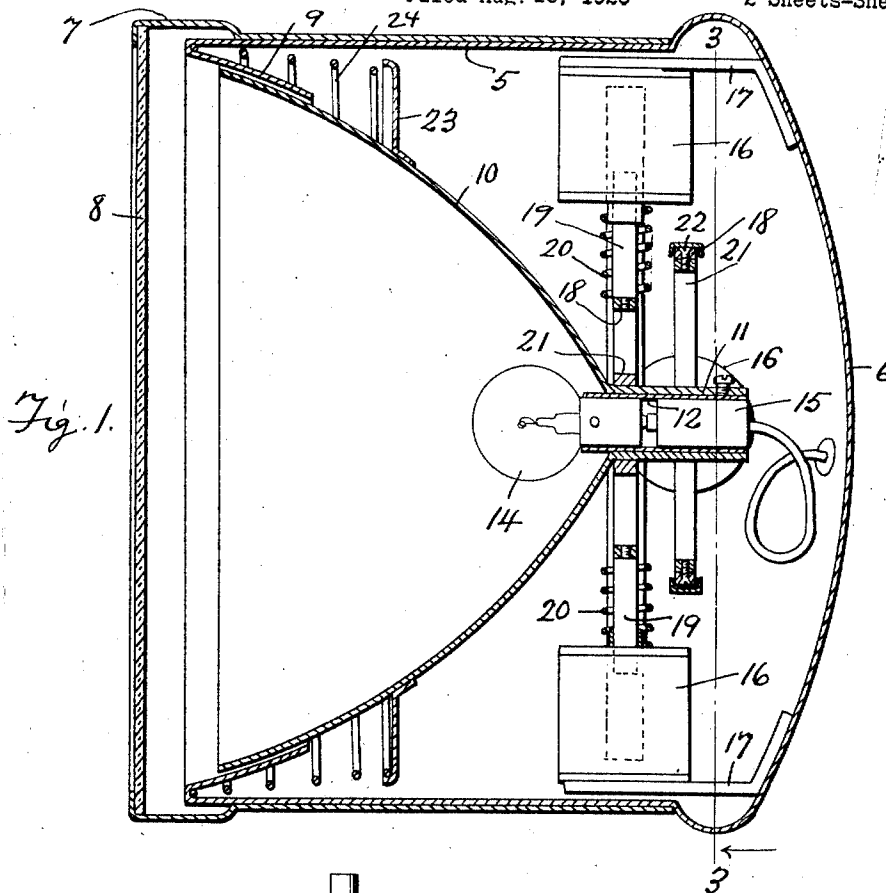
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L. ANDERSON

ELECTRIC HEADLIGHT CONTROL

Filed Aug. 16, 1926:

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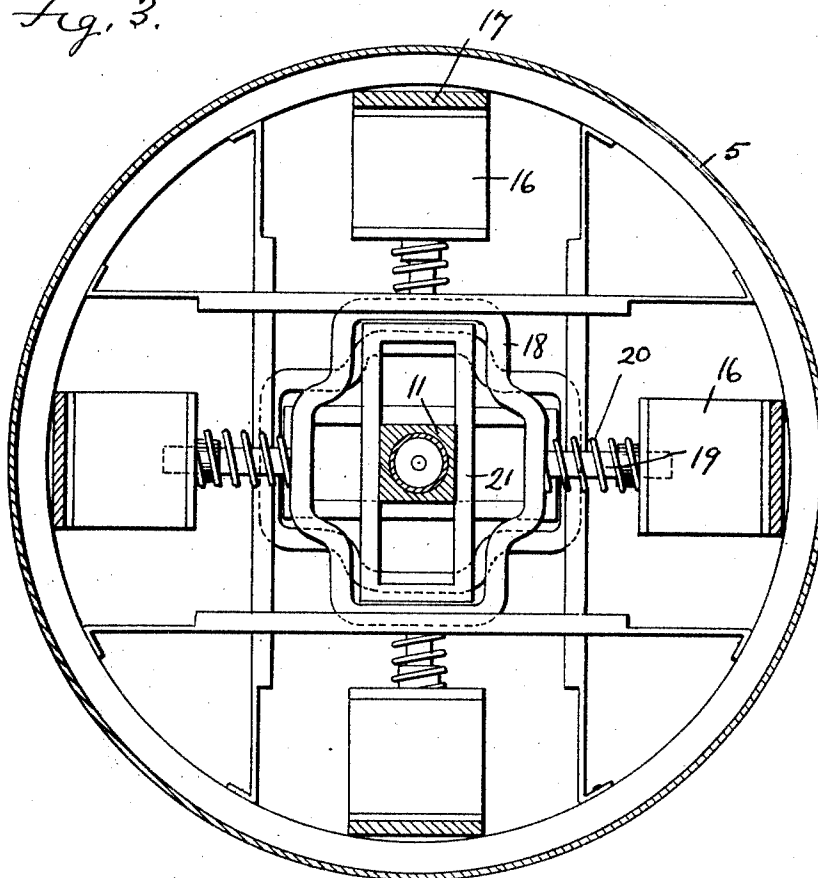
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Fig. 3.



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ELECTRIC HEADLIGHT CONTROL.

Application filed August 16, 1926. Serial No. 129,456.

The present invention relates to an automobile headlight, and aims to provide a structure whereby the direction of the rays of light from the headlight may be changed at will by an electrical control.

Another very important object of the invention lies in the construction of an automobile headlight having a movable reflector mounted therein adapted to support an electrical bulb and having means associated therewith, whereby the axis of the reflector may be disposed at various angles in respect to the axis of the casing for the purpose of directing the rays of light in a desired direction.

Another very important object of the invention lies in the provision of a headlight structure of the class described in combination with a plurality of electro-magnets arranged for changing the reflector to different positions for the purpose specified.

A still further very important object of the invention lies in the provision of a headlight structure of this nature which is simple in its construction, inexpensive to manufacture, compact and convenient, and otherwise well adapted to the purpose for which it is designed.

With the above and other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawing:—

Figure 1 is a longitudinal section through the headlight embodying the features of my invention,

Fig. 2 is a detail view of one of the operating frames, and

Fig. 3 is a transverse section taken through the headlight substantially on the line 3—3 of Fig. 1.

Referring to the drawing in detail, it will be seen that the numeral 5 denotes a headlight casing having a suitable rear end structure 6 and a cap 7 for supporting lens 8. The forward end of the casing 5 is provided with an interiorly extending flange 9 for receiving a parabolic reflector 10 which at its center is provided with an extension 11 having a square exterior and a round interior bore for holding a socket receiving member 12 in which the bulb 14 and plug 15 may be

engaged in any suitable or well known manner.

Four electro-magnets 16 are supported by brackets 17 at 90° intervals about the axis of the casing. The electro-magnets 16 are disposed in diametrically opposite pairs, one pair being in a different plane from the other pair, as is more apparent from an inspection of Fig. 1, taken in connection with Fig. 3. The mechanism for connecting one pair of the magnets operatively with the extension 11 of the reflector 10 will be described in detail, it being understood that the same mechanism is used in a duplicated form with the other pair of electro-magnets.

The numeral 18 denotes a main frame having armatures 19 projecting therefrom in opposite directions for association with the electro-magnet 16. Springs 20 are disposed about the armatures 19 and tend to maintain the extension 11, as will be apparent as the description proceeds, centrally with respect to the two electro-magnets 16. An auxiliary rectangular frame 21 is rockably mounted as at 22 in the frame 18, the axis of rocking being disposed at right angles to the alinement of the armatures 19.

The squared extension 11 is slidable in the rectangular frame 21. It will therefore be seen that if one of the magnets 16 is energized, the two frames 18 and 21 will be drawn toward said magnet and the reflector shifted accordingly. The auxiliary frame 21, of course, will rock in relation to the main frame 18.

A rim 23 is provided exteriorly on the reflector 10 and a coiled spring 24 is impinged against the flanged end 9 of the casing 5 and the rim 23 for normally holding the reflector 10 co-axially disposed with respect to the casing 5.

From the above detailed description, it will be readily apparent that by the proper energization of the magnets 16, the reflector may be shifted to practically any desired position for throwing the light rays up or down or to one side or the other. These electromagnets may be controllable by suitable circuits from a handy place.

The present embodiment of the invention has been disclosed in detail merely by way of example, since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description. It is apparent that

numerous changes in the details of construction, and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the invention as hereinafter claimed, or sacrificing any of its advantages.

Having thus described my invention, what I claim as new is:—

10 A headlight of the class described including a casing, a reflector, means for movably mounting the reflector in the casing, a

squared extension on the reflector, a pair of rectangular frames slidable on the squared extension and disposed at right angles to each other, a second pair of frames, means 15 for rockably mounting the first frames in the second frames, electromagnets mounted in the casing, and armatures projecting from the second frames into the electromagnets.

In testimony whereof I affix my signature.

LAWRENCE ANDERSON.