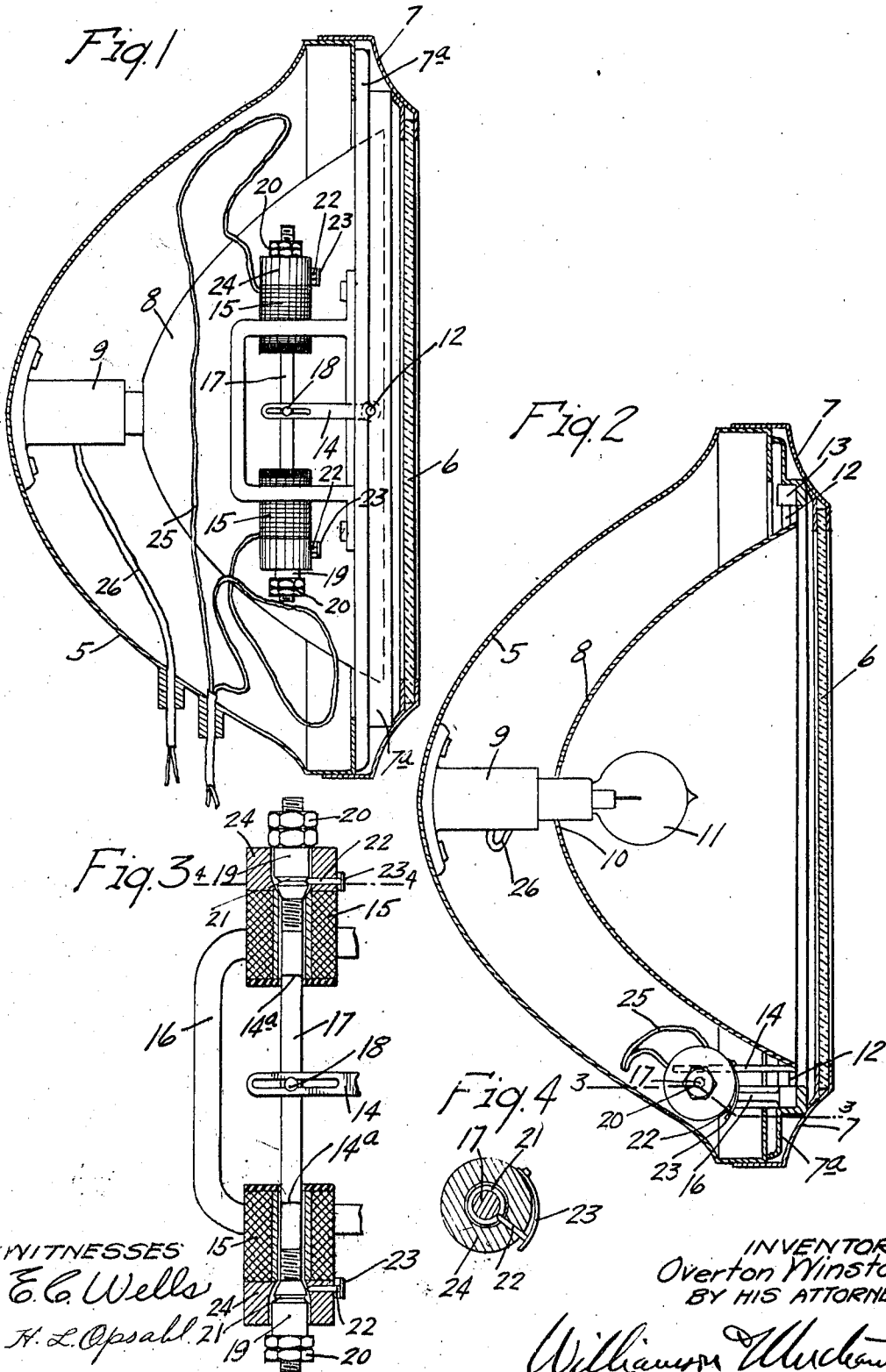


O. WINSTON.
HEADLIGHT.

APPLICATION FILED NOV. 18, 1916.

1,314,034.

Patented Aug. 26, 1919.



WITNESSES
E. C. Wells
H. L. Opsahl

INVENTOR
Overton Winston
BY HIS ATTORNEYS

William M. Throckmorton

UNITED STATES PATENT OFFICE.

OVERTON WINSTON, OF MINNEAPOLIS, MINNESOTA.

HEADLIGHT.

1,314,034.

Specification of Letters Patent.

Patented Aug. 26, 1919.

Original application filed September 13, 1915, Serial No. 50,296. Divided and this application filed November 18, 1916, Serial No. 132,039.

To all whom it may concern:

Be it known that I, **OVERTON WINSTON**, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Headlights; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to electric headlights for use in automobiles, launches, and elsewhere, and is filed as a division of my pending application S. N. 50,296, filed September 13th, 1915, and entitled "Headlights".

Generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

In the accompanying drawings: which illustrate the invention, like characters indicate like parts throughout the several views. Referring to the drawings:

Figure 1 is a vertical section taken centrally through the improved headlights;

Fig. 2 is a horizontal section taken centrally through the headlight;

Fig. 3 is a detail in section on the line 3—3 of Fig. 2; and

Fig. 4 is a section on the line 4—4 of Fig. 3.

Of the parts of the headlight, the numeral 5 indicates the casing which, in the application thereof, to an automobile, will be rigidly secured thereto, in the usual or any suitable way. The numeral 6 indicates the lens or glass disk held in the customary way by an annular frame 7 that is detachably applied to the rim of the casing; the numeral 8 indicates the reflector; the numeral 9 indicates the lamp socket that is rigidly secured to the back of said casing and that extends axially thereof and through an axial passage 10 in said reflector; and the numeral 11 indicates an electric light bulb located within the reflector and supported by the said lamp socket. 7^a indicates a supplemental rim that is circumferentially adjustable and is normally clamped in set position between the annular frame 7 and a flange of the casing.

As a feature of the invention, the reflector is mounted for pivotal movement,

both in respect to the casing 5 and in respect to the light bulb 11 and its socket 9. To thus mount said reflector, it is shown as provided at the opposite sides of its front or rim portion, with diametrically projected trunnions 12 that are journaled in bearings 13 on the supplemental rim 7^a. The axial perforation 10 of the reflector is of such size as to permit oscillatory movements thereof, in respect to the light bulb.

One of the trunnions 12, on one side of the reflector, is provided with a rearwardly projected arm 14. Oscillatory movement of the reflector may be accomplished in various different ways, but is preferably produced by a pair of reversely acting electromagnets and cooperating cores connected to said arm 14. These magnets 15 are in the form of solenoids and are rigidly supported by the arms of a bracket 16 that is rigidly secured to that side of the supplemental rim 7^a that is adjacent to said arm 14.

Working through the two solenoids 15 is a plunger 17 that acts as a core or needle, and, at its intermediate portion, is connected to arm 14 by a slot and pin connection 18. The central portion of this plunger 17 is a brass or other non-magnetic metal but its end portions, outward of the dotted lines 14^a, are of soft iron and are threaded. On the threaded portions thereof, are adjustably mounted so-called latch sleeves 19 and cooperating lock nuts 20. The inner ends of the latch sleeve 19 are conical and just outward of the said conical ends, they are formed with V-shaped annular grooves 21 which cooperate with pointed latch pins 22 that are subject to the free ends of latch springs 23 secured to the projecting outer ends of the brass sleeves 24 of the solenoids 15.

The lead wires of the magnets 15 are indicated by the numeral 25 while the lead wires of the lamp socket 9 are indicated by the numeral 26. Of course, the circuits 25 and 26 will be independent of each other, and in practice, suitable push buttons or switches will be employed in the magnet circuits 25, so that either magnet may be energized at will.

In the position of the parts shown in the drawings, the reflector is adjusted so that its axis will approximately intersect the hot spot of the filament of the light bulb 11, and it will be then held in such position

by the engagement of the upper latch pin 22 with the groove 21 of the upper sleeve 19, and in this position, the reflector is adjusted for long beam projection, as required, for instance, for country road driving.

When the lower magnet 15 is energized, it will draw upward the plunger 17, forcing the groove 21 out of engagement with the pointed end of the upper latch pin 22, and by raising the arm 14, will oscillate the reflector and tilt the same so that its axis will have a downward inclination, as required to throw the light beam on the road a short distance ahead of the machine. This gives a low short beam projection such as required to meet the conditions of city driving where blinding effects are usually prohibited.

When the plunger is thus raised, the lower latch pin 22 will engage the groove 21 with the lower sleeve 19 and hold the reflector

adjusted, as stated. Obviously, when the upper magnet 15 is energized, the operation will be reversed and the plunger will be lowered, thereby throwing the reflector back to its horizontal position, or into a position in which its axis intersects the filament of the light bulb.

What I claim is:

In a headlight, the combination with a casing having a rotatively adjustable annular support, of a reflector connected to said annular support by diametrically opposite pivots, and a light bulb within said reflector, fixed in respect to said casing the said reflector being shiftable on its pivot to vary its axis in respect to said light bulb.

In testimony whereof I affix my signature in presence of two witnesses.

OVERTON WINSTON.

Witnesses:

CLARA DEMAREST,
B. G. WHEELER.