July 6, 1926. 1,591,754

J. B. GATES

GLARELESS HEADLIGHT

Filed April 1, 1925

Fig. 2

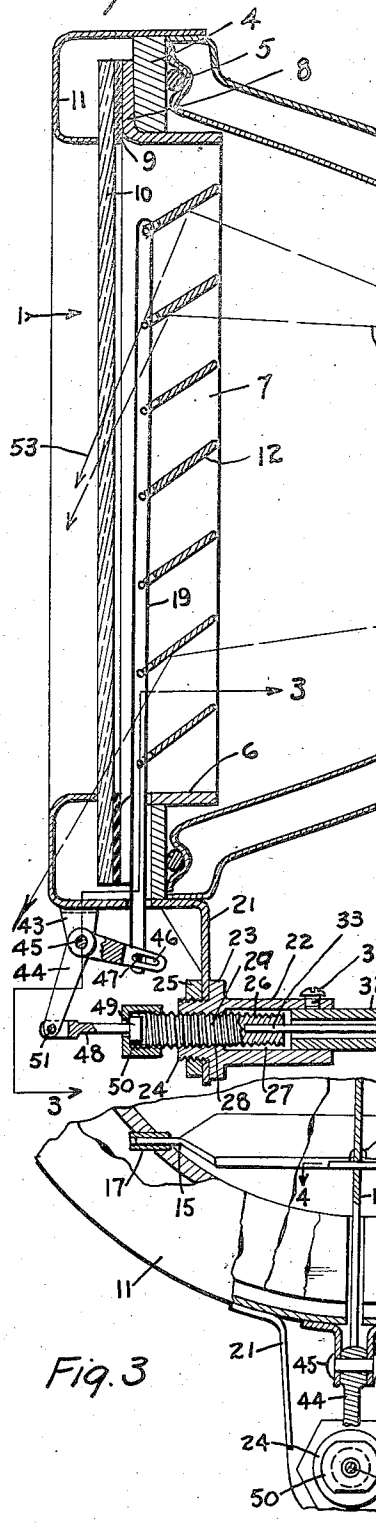


Fig. 1

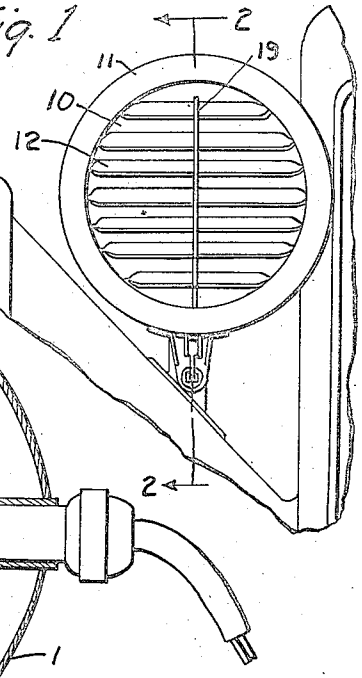


Fig. 4

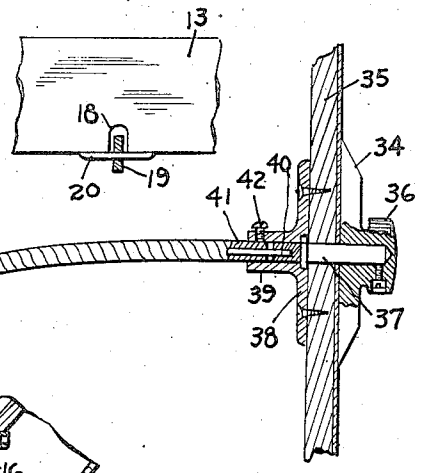


Fig. 3

Inventor
Joseph B. Gates
by: Hazard and Miller
Attys.

Patented July 6, 1926. 1,591,754

UNITED STATES PATENT OFFICE.

JOSEPH B. GATES, OF SAN GABRIEL, CALIFORNIA, ASSIGNOR TO JENNIE GATES, OF SAN GABRIEL, CALIFORNIA.

GLARELESS HEADLIGHT.

Application filed April 1, 1925. Serial No. 19,823.

This invention is a glareless headlight and consists of the novel features herein shown, described and claimed.

An object is to make a headlight having light deflectors in the form of slats extending horizontally across the light area behind the lens and adapted to deflect the light forwardly and downwardly and to provide means for adjusting the angularity of the slats.

Other objects and advantages will appear from the drawings and specifications. The drawings illustrate the invention.

Figure 1 is a front elevation of the headlight embodying the principles of my invention, the view being taken looking in the direction indicated by the arrow 1 in Fig. 2.

Fig. 2 is an enlarged vertical sectional detail on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary sectional detail on the line 3—3 of Fig. 2 and looking in the direction indicated by the arrow.

Fig. 4 is a fragmentary sectional detail on the line 4—4 of Fig. 3 and looking in the direction indicated by the arrow.

The details of construction and operation are as follows:

The frame 1, the reflector 2, the lamp 3, may be any of the ordinary constructions forming a parabolic reflector or the like. A spacing ring 4 is inserted against the usual packing 5 at the forward edge of the frame and reflector 1 and 2, a bearing opening or slot 6 is formed from the front edge of the ring 4 at the bottom and in line with the axis. The deflector supporting ring 7 fits within the spacing ring 4 and has an annular outwardly extending flange 8 fitting against the front face of the spacing ring 4. A non-metallic packing ring 9 fits against the flange 8 and the lens 10 fits against the packing 9 and is held in place by the rim 11.

A series of light deflectors 12 is mounted horizontally across the deflector supporting ring 7. Each deflector 12 consists of a metal slat 13 having pintles 14 and 15 extending from its ends and bearing sockets 16 and 17 mounted in the ring 7 so that the slats may tilt about the axis.

Notches 18 are formed from the front edges of the slats at their forward sides, an operating bar 19 fits loosely in these notches and pins 20 are inserted through the bar 19 and soldered against the edges of the slats to pivotally connect the operating bar 19 to the slats and to connect the slats together, so that as the bar 19 is moved upwardly or downwardly, the deflecting angularity of the slats is varied. The bar 19 operates loosely in the slot or opening 6 and extends downwardly through the rim 11.

A supporting bracket 21 extends downwardly from the rim 11. A bearing assembly 22 is supported by the bracket 21 and consists of a flange 23 fitting against the backside of the bracket, an externally screw threaded nipple 24 passing through bracket 21, a nut 25 upon the nipple 24 against the bracket, a sleeve 26 extending backwardly from the flange 23 and having a chamber 27 extending from its rear end to the plane of the flange 23 and a screw threaded bearing 28 extending through the flange 23 and nipple 24.

An adjusting screw 29 is mounted in the screw threaded bearing 28 and extends into the chamber 27 one way and extends beyond the nipple 24 the other way. A Bowden cable 30 has one end 33 of the wire inserted into the end of the screw 29 and soldered or otherwise fastened and has the end 32 of the housing inserted into the chamber 27 and secured by a set screw 31.

A dial 34 sets against the front face of an instrument board 35 in convenient position to be manipulated by the operator of the motor vehicle. A knob 36 is formed integral with the dial or secured thereto. A stem 37 extends from the knob and dial through the board 35. Attaching plate 38 is secured to the opposite side of the board 35 from the dial. A bearing 39 extends from the plate 38 and the rear end of the stem 37 extends into the bearing 39. The end 40 of the Bowden cable wire extends into the end of the stem 37 and is soldered or otherwise secured and the end 41 of the Bowden cable wire covering or housing extends into the bearing 39 and is secured by a set screw 42.

A bearing bracket 43 is secured to the rim 11 in front of the bracket 21. A bell crank lever 44 is connected to the bracket 43 by a pivot 45; one end of the bell crank lever 44 has a slot 46 and is forked or bifurcated to receive the lower end of the operating bar 19 and a pin 47 is fixed in the bar 19 and operates in the slot 46 so that as the bell crank lever is rocked the bar 19 moves up

and down to change the angularity of the deflectors 12.

A connecting rod 48 has a head 49 fitting against the end of the screw 29 and a union nut 50 is placed upon the rod 48 against the head 49 and screwed upon the screw 29 to make a swivel connection between the rod 48 and the screw 29. The outer end of the rod 48 is connected to the lower end of the bell crank lever 44 by a pivot 51.

When the operator desires to change the angularity of the deflectors 12, he manually engages the knob 36 and rotates the dial 34 to the desired extent and this operation rotates the screw 29 to move the screw forwardly or backwardly through the bearing 28 thereby operating the bell crank lever 44, to operate the bar 19, to raise or lower the forward edges of the deflectors 12, thereby swinging the deflectors upon the pivots 14 and 15.

The deflectors 12 consisting of a series of slats 13 of various lengths as required to fit in the ring 7, are opaque and preferably black upon their upper faces and are silvered on their lower faces. The slats normally set at an angle of about 45 degrees relative to a vertical or horizontal plane, with their silvered sides downwardly and towards the light, so that the rays 52 coming from the lamp 3 and deflected by the parabolic deflector 2 will strike the silvered faces of the slats and be deflected forwardly and downwardly as indicated by the arrows 53 and the angularity of the arrows 53 may be accurately adjusted by manipulating the knob 36 and adjusting the angularity of the deflectors 12.

If desired the deflectors may be adjusted to horizontal positions so that the light rays will go straight through.

Thus I have produced a glareless headlight having a series of pivotally mounted deflectors with their axis extending horizontally and having means for adjusting the angularity of the deflectors from the operator's seat, the means being mounted upon the dash or instrument board of the vehicle.

Various changes may be made without departing from the spirit of my invention as claimed.

I claim:

1. A headlight having a frame, a series of deflector slats pivotally mounted within said frame, an operating bar connected to each of said slats, a bell crank lever pivotally supported from the frame, one end of the lever being connected to the operating bar, a supporting bracket attached to the frame, an internally screw threaded bearing mounted on said supporting bracket, an adjusting screw threaded therein, a rod swivelly connected to said screw, the rod being connected to one end of the bell crank lever and a flexible remote control device connected to said screw, adapted to rotate same and through the operation of the rod the bell crank and the operating bar control the slats.

2. A headlight comprising in combination a frame of suitable shape for a headlight, a spacing ring positioned on the outer edge of the frame, a deflector supporting ring mounted on the spacing ring, a plurality of deflector slats pivotally mounted in the supporting ring, an operating bar connected to the edge of each of the slats, a rim positioned outside of the spacing ring and the supporting ring, a bell crank lever pivotally connected to the said rim, a supporting bracket attached to the rim, an internally screw threaded bearing fitted in said bracket, the bearing having a chamber, an adjusting screw threaded in the bearing and having one end extending into the chamber, a rod swivelly connected to the outer end of the screw, the said rod being connected to the free end of the bell crank lever, a fixed flexible tube having one end secured in the chamber of the threaded bearing and a flexible wire having a remote control device thereon extending through the tube and being secured to the inner end of the adjusting screw.

In testimony whereof I have signed my name to this specification.

JOS. B. GATES.