Feb. 2, 1926. **1 571,824**

F. E. WEILAND

TILTABLE HEADLAMP MOUNTING

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Fig. 1.

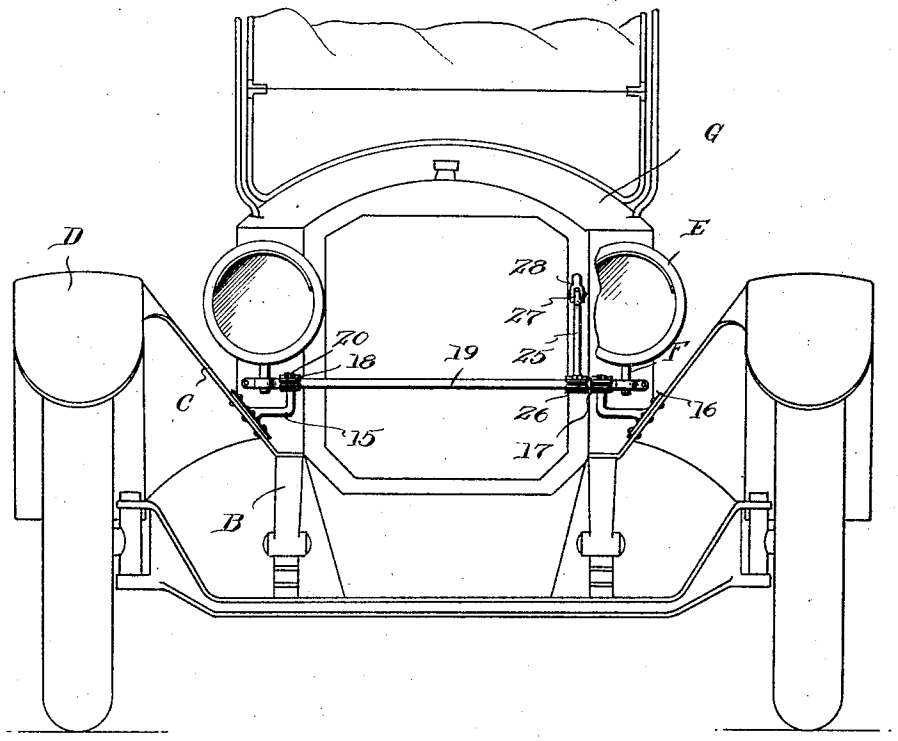


Fig. 3.

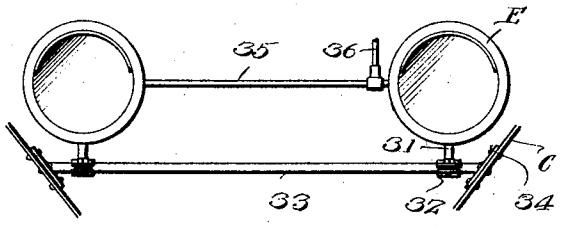


Fig. 5.

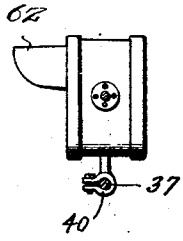
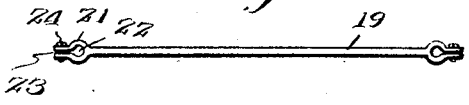


Fig. 11.



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Fig. 2.

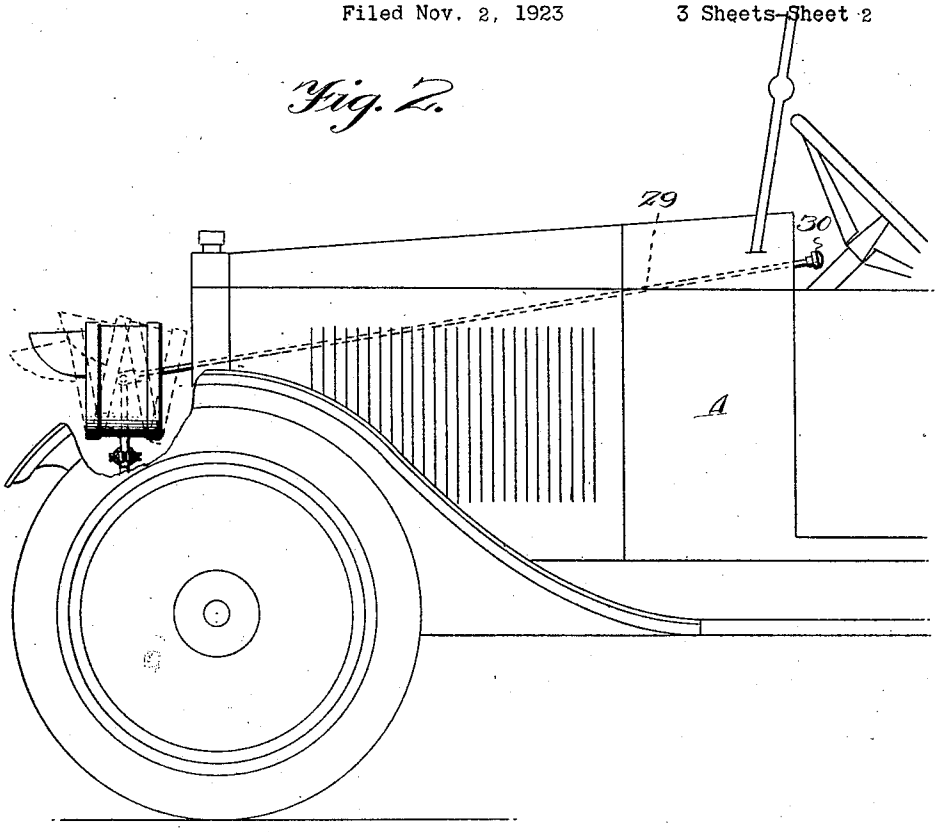


Fig. 4.

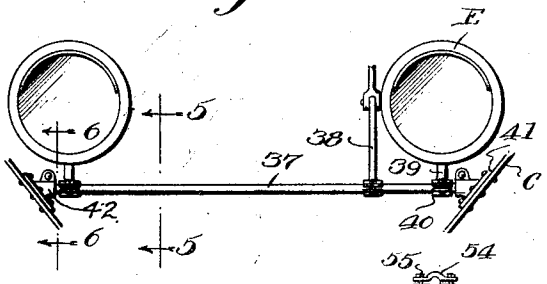


Fig. 6.

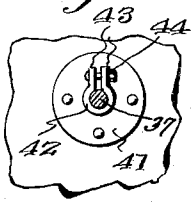


Fig. 7.

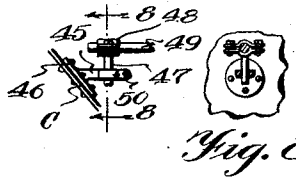


Fig. 8.

Fig. 9.

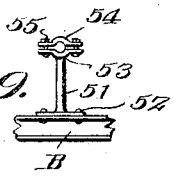
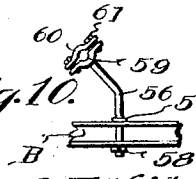


Fig. 10.



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TILTABLE HEADLAMP MOUNTING

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Fig. 12.

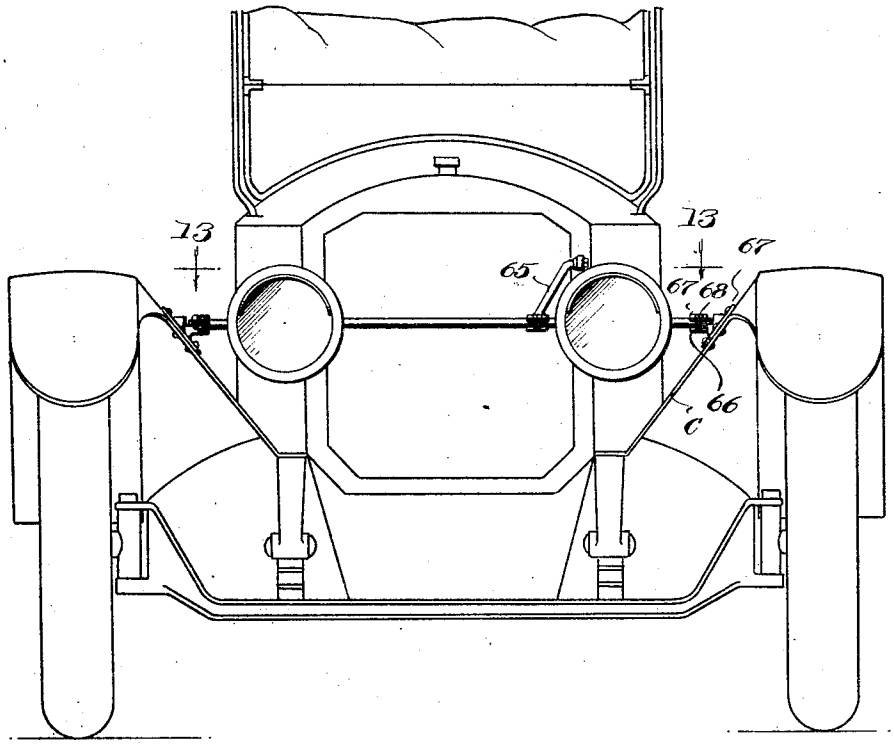


Fig. 13.

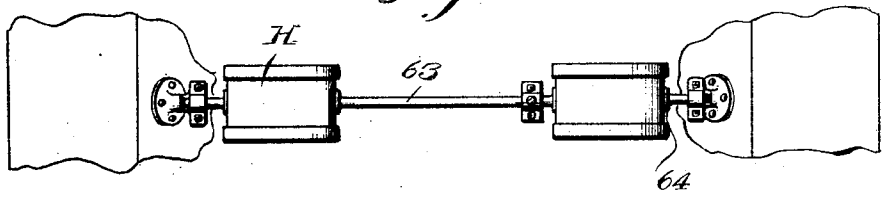
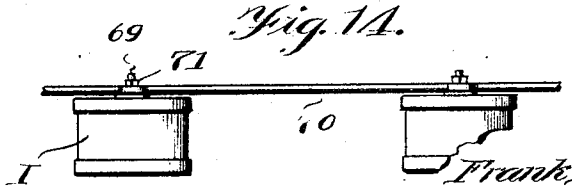


Fig. 14.



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Patented Feb. 2, 1926. 1,571,824

UNITED STATES PATENT OFFICE.

FRANK E. WEILAND, OF FORT MYERS, FLORIDA, ASSIGNOR OF ONE-HALF TO RICHARD L. HEVERLE, OF FORT MYERS, FLORIDA.

TILTABLE-HEADLAMP MOUNTING.

Application filed November 2, 1923. Serial No. 672,356.

To all whom it may concern:

Be it known that I, FRANK E. WEILAND, a citizen of the United States, residing at Fort Myers, in the county of Lee and State of Florida, have invented new and useful Improvements in Tiltable-Headlamp Mountings, of which the following is a specification.

This invention relates to headlamps for motor vehicles, particularly to the mountings therefor, and has for its object the provision of an arrangement by means of which the lamps may be tilted to throw their light downwardly upon the ground when approaching other cars in order to avoid blinding, dazzling or bewildering other drivers, the intention being to maintain the lamps in a normally upright position so that the maximum illumination may be had on a clear road.

Most communities have regulations prohibiting the use of glaring headlights and to overcome this, various dimming devices have been designed and used for the purpose of preventing the rays from the lamps from passing above a certain level. Shutters, light diffusing devices, bulb shields and other expedients have been resorted to in the endeavor to eliminate the objectionable and dangerous glare but all of these attempts are only partly successful inasmuch as the light is absorbed to such a great extent that adequate illumination of the roadway is impossible. Especially when traveling at high speeds, it is imperative that a car be equipped with lamps which will throw a beam of light a long distance ahead and the well known existing dimming devices fail to permit this to a sufficient extent to render night driving safe.

It is with the above facts in view that I have designed the present arrangement in which the lamps are tiltably mounted and operated by a slight push or pull upon a control element located within convenient reach of the driver so that the inclination of the lamps, either forwardly to effect dimming or when going down hill, or upwardly and rearwardly as when approaching a hill, may be effected.

An important object is the provision of a mounting arrangement which in one embodiment involves the use of replacement parts adapted to be used in connection with the ordinary headlamps and their usual holding standards, and which in other embodiments includes the provision of a complete or unitary structure capable of being mounted in suitable brackets or bearings, the latter mentioned form being particularly designed for installation as new equipment.

Another object is the provision of an adjustable friction bearing structure for supporting the rotatable element which carries the lamps so that sufficient frictional resistance may be opposed to the turning movement to permit the lamps to remain in any desired adjusted position without necessitating the employment of any latches or other fastening means.

An additional object is the provision of a structure of this character which will be simple and inexpensive in manufacture, easy to install and operate, positive in action, efficient and durable in service and a general improvement in the art.

With the above and other objects and advantages in view the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a front elevation of an automobile equipped with my invention,

Figure 2 is a side elevation showing the normal position of the headlamps by full lines and the possible tilted positions by dotted lines.

Figure 3 is a front elevation showing a modification,

Figure 4 is a front elevation of still another form of mounting,

Figure 5 is a cross section on the line 5—5 of Figure 4,

Figure 6 is a detail section on the line 6—6 of Figure 4,

Figure 7 is an elevation showing another type of supporting bracket,

Figure 8 is a detail section on the line 8—8 of Figure 7,

Figure 9 is a side elevation of still a different bearing bracket,

Figure 10 is a similar view disclosing another variation,

Figure 11 is a detail view of the lamp carrying rod used in the form of the device shown in Figure 1,

Figure 12 is a front elevation of an automobile equipped with my lamp arrange-

ment and mounting showing the construction of the invention as a unitary structure,

Figure 13 is a view on the line 13—13 of Figure 12 showing a plan of the mounting and

Figure 14 is a plan view showing still a different mounting.

Referring more particularly to the drawings and especially Figures 1, 2 and 11, the letter A designates a portion of the body of an automobile mounted upon the usual frame B to which are secured the innermost portions or aprons C of the fenders D. The letter E represents the headlamps which are of the type commonly provided with a downwardly extending post F which is ordinarily mounted in a socket in a suitable bracket carried either upon the frame, the fender itself or upon the fender stay rod. The usual mounting is not disclosed as it forms no part of the present device.

In carrying out my invention and particularly this form thereof, I provide a pair of angular brackets 15 which are here shown as formed with attaching feet 16, riveted or otherwise secured to the fender aprons C. The upper ends of these brackets are provided with bearing members 17 having cooperating therewith caps 18 which mate therewith and which define bearings within which is rotatably mounted a rod 19 extending transversely of the car in advance of the radiator. Bolts 20 are provided for adjusting the bearings so as to regulate their frictional grip upon the rod 19 so as to permit the rod to turn while preventing it from turning too freely. At its ends, the rod 19 is widened as indicated at 21 and formed with a hole 22 and from this point to the end there is a slit or slot 23 traversed by a clamping bolt 24. The lamp standards or posts F are passed through the holes 22 and secured by tightening the bolts 24. It is to be noted that it is a simple matter to adjust the lamps so that they will be exactly parallel or so that they may toe in slightly as may be found advisable in some instances. Furthermore there is a possibility of adjusting the lamps vertically to a certain extent if such is desired.

The operating means consists of an arm 25 which terminates in a clamp 26 engaged upon the rod 19, and having pivotally connected with its other end, as shown at 27, the forked forward end 28 of a rod 29 which extends rearwardly through the radiator shell G, beneath the hood and through the instrument board or dash of the car. The rear end of this rod carries a knob or other handle 30 which is within convenient reach of the operator and which may be readily grasped and pulled or pushed as the case may be to effect rocking of the rod 19 and consequent tilting of the lamps.

In Figure 3 I have shown a somewhat different arrangement in which the lamps E are equipped with posts 31 provided with clamp bearings 32 engaged upon a rigid rod 33 which is secured to the fender aprons C as by means of attaching feet 34. The lamps themselves are connected by a transverse rod 35 which carries a rigid arm 36 adapted to have the above described rod 29 connected therewith. In this form the lamps rock or tilt upon the rod 33, too free movement being prevented by properly adjusting the bearings 32 carried by the lamp posts or standards.

In Figures 4, 5 and 6 I have illustrated another modification in which I provide bearings secured to the apron fenders C for supporting a rotatable rod 37 carrying an arm 38 corresponding to the arm 25 of the first described form. The lamps E have their posts or standards 39 equipped with clamps 40 engaged upon the rod 37 so as to be immovable with respect thereto. In this instance I have shown the friction bearings as including base portions 41 secured to the fender aprons and formed with integral split sleeves 42 receiving the ends of the rod 37, the sleeves being provided at the edges of the split with ears 43 through which extends a clamping bolt 44 for the purpose of contracting the sleeves to the proper extent for permitting the rod 37 to turn without it having too free movement.

In Figures 7 and 8 I have shown another variation in which I have provided a bracket 45 having an attaching portion 46 adapted to be secured to the fender apron C, the bracket having a construction similar to the post receiving end of the rod 19 disclosed in Figure 11. In other words the bracket 45 is formed with a hole through which passes a stem 47 carrying a friction bearing 48 for the transverse rod 49 which corresponds to the rods 19 and 37 above described. The bracket 45 must have its end portion split or slit so as to be contracted about the stem by tightening a suitable bolt 50.

Figure 9 shows an alternative bracket construction which may be used to replace the bracket 15 shown in Figures 1 and 2. In this instance the bracket 51 is of elongated shape and provided at its bottom with an attaching foot or portion 52 riveted or otherwise secured to the frame bar B of the vehicle chassis, the upper end of the bracket having a bearing member or portion 53 with which is associated a mating cap 54 adjustable by means of bolts 55 or the like.

In Figure 10 I have illustrated still another mounting in which use is made of an angular bracket arm 56 which extends through the frame bar B and which is provided with an outstanding flange 57 resting upon the top thereof and equipped at its lower end with a clamping nut 58. The upper end of the bracket arm 56 carries a seat

or bearing portion 59 with which co-operates a mating cap 60 adjusted by bolts 61.

In each and every instance, I find it of advantage to provide a short visor 62 which is suitably mounted at the upper portion of the lamp and which projects forwardly therefrom so that under ordinary conditions the rays of light emitted from the lamps are checked in an upward direction and so that when the lamps are tilted even slightly the light will be thrown properly down on to the roadway. However the visors need not be provided as the operation is quite effective even without them. In all of the forms above described the operation is substantially the same and it is to be noted that the various alternative forms of brackets and bearings are intended as replacement parts to be used instead of the ordinary equipment on the car.

In Figures 12 and 13 I have illustrated a construction in which my device is made as a unitary structure adapted to be built into new cars at the time of their manufacture or assembling. In this form I have shown lamps H of the drum type. These lamps are connected by a transverse rod 63 and are equipped at their outermost sides with trunnions 64. An operating arm 65 corresponding to the previously described arm 25 is clamped onto the rod 63. I also provide a peculiar bearing structure which includes a saddle or socket member 66 for each trunnion 64, which saddle or socket member is formed integrally upon an attaching base 67 constructed and designed to be secured to the fender apron C or a fender stay rod in case one is provided. Coacting with each socket or saddle member is a cap 67 mating therewith to form a proper bearing and held in adjusted position by bolts 68 or the like. In assembling this form, the socket or saddle members are secured upon the fenders, or their stay rods, and the assembled lamps placed in position by engaging the trunnions 64 upon these saddles or sockets, after which it is merely necessary to apply the caps 67 and tighten the bolts 68 for holding the trunnions in such a way as to permit movement while preventing too free rocking.

In Figure 14 I have shown lamps I provided centrally of their rear sides with threaded posts 69 which pass through holes in a transverse rod 70 mounted in any preferred bearings hereinbefore described. The lamps are held rigidly upon the rod by nuts 71 screwed onto the threaded members 69.

From the foregoing description and a study of the drawings it will be apparent that I have thus provided a simply constructed, inexpensive and easily installed headlamp mounting which permits tilting of the lamps in a very easy and convenient manner so that they may be shifted into such position as to eliminate the objectionable and illegal glare, while at the same time enabling the driver to use the lamps in their full illuminating position in case of necessity. It is to be observed that a wide variety of bearing brackets may be used depending upon the make of the car to be equipped with my arrangement. A distinct feature of advantage is the adjustable friction bearing which may be set so as to oppose the proper degree of resistance to turning movement of the rod journaled therein so that the lamps carried by the rod will be maintained in any adjusted position without any necessity whatever for the employment of catches or other holding means.

While I have shown and described the preferred embodiments of my invention it is of course to be understood that I reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention I claim:

In a dirigible headlight mechanism for vehicles, bracket members having plate portions secured to the inner sides of the front fenders of the vehicle, said brackets further including split bearing portions having terminal ears, a rod journaled in said bearing portions, headlamps carried by the rod, means connected with the rod and extending rearwardly of the vehicle to a point within reach of the operator whereby the rod may be turned, and means passing through the ears of said bearings to effect contraction for opposing frictional resistance to turning movement of the rod whereby the rod and lamps will remain in selected position.

In testimony whereof I affix my signature.

FRANK E. WEILAND.