E. R. SCHOOLFIELD.

TILTING BRACKET FOR HEADLIGHTS.

APPLICATION FILED OCT. 26, 1915.

1,199,930.

Patented Oct. 3, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

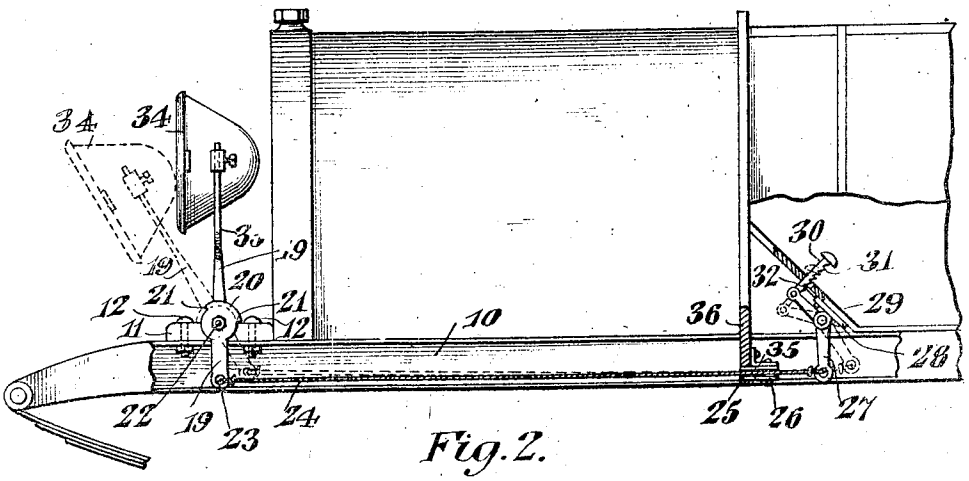
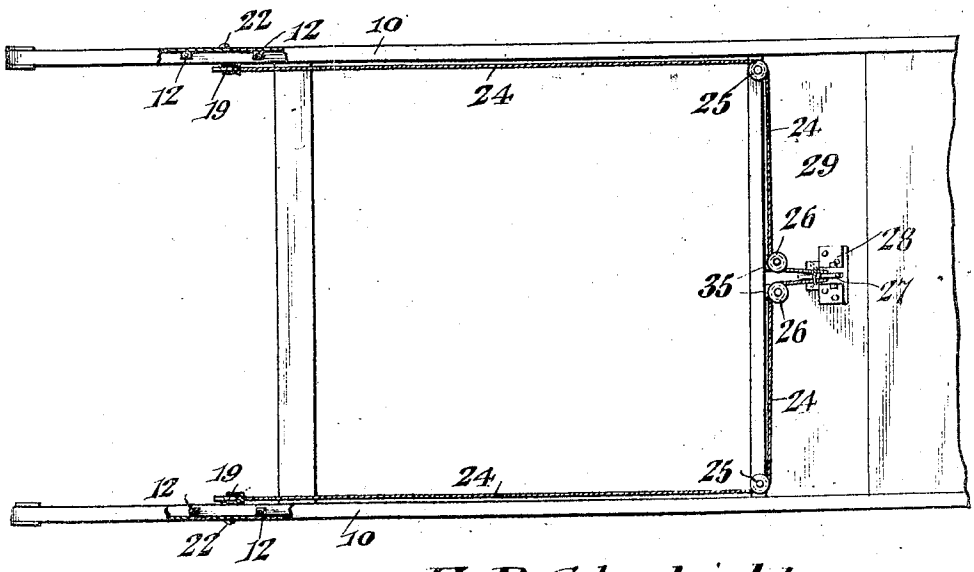


Fig. 2.



WITNESSES:

Jas. K. McCathran

T. J. Mawhinney

E. R. Schoolfield, INVENTOR

BY *E. G. Siggers*

Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

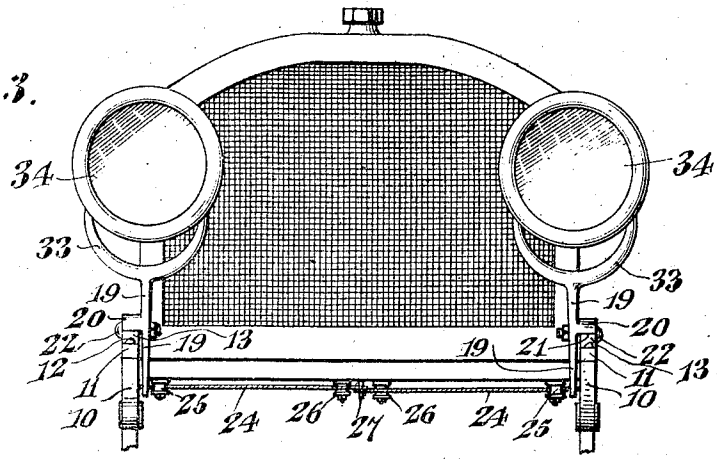


Fig. 4.

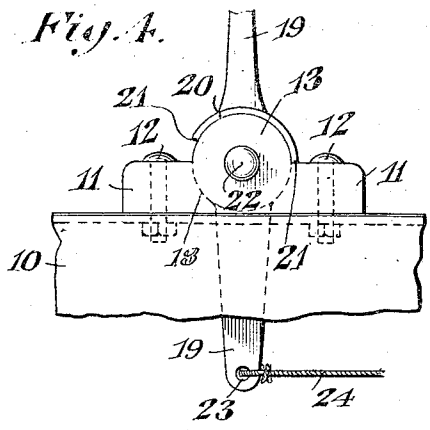


Fig. 5.

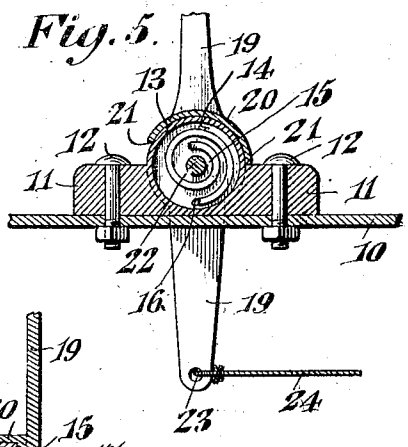
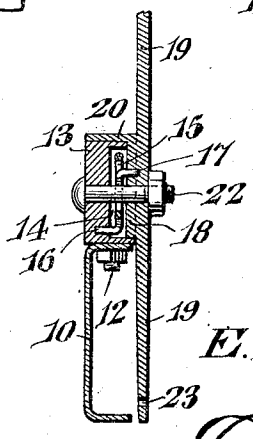


Fig. 6.



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Attorney

UNITED STATES PATENT OFFICE.

EDWARD RAYMOND SCHOOLFIELD, OF BUCYRUS, OHIO.

TILTING BRACKET FOR HEADLIGHTS.

1,199,930. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed October 26, 1915. Serial No. 58,024.

To all whom it may concern:

Be it known that I, EDWARD RAYMOND SCHOOLFIELD, a citizen of the United States, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented a new and useful Tilting Bracket for Headlights, of which the following is a specification.

This invention relates to an improvement in brackets for supporting head lights on automobiles, and the like, and has for an object to provide mountings or brackets for the head lights which admit of the swinging of the head lights into a forward angle to direct the rays of light downwardly in the road in front of the machine, and to thus prevent the glaring of the lights upon a passing vehicle.

Another object of the invention is to provide a tilting bracket which admits of this operation, and which at the same time is of substantially the same design and size as the rigid brackets commonly employed, and which admits of the use of the brackets in pairs without the employment of transverse rods, or other devices extending across the front of the machine, and at the same time providing means for operating the pair of brackets simultaneously.

The invention also contemplates means for tilting the brackets forwardly, and for holding the brackets in such position until the vehicle has passed the approaching vehicle, when the brackets may be released and be automatically returned to normal position.

The above and other objects and advantages of the invention will be more clearly brought out in the following description of the present preferred embodiment of the invention, the same being disclosed in the accompanying drawings wherein:

Figure 1 is a side elevation of the forward end of a vehicle having the improved brackets and operating mechanism applied thereto, the figure being partly shown in section to disclose the operating mechanism. Fig. 2 is a bottom plan view of the same. Fig. 3 is a front elevation of a vehicle having a pair of the brackets applied thereto, and showing the operating mechanism for both of the brackets. Fig. 4 is a detail enlarged side elevational view of one of the improved brackets. Fig. 5 is a longitudinal vertical section taken through the same. Fig. 6 is a vertical transverse section taken centrally through one of the brackets as applied to the side bar of the vehicle frame.

Referring to the drawings, wherein like parts are designated by similar characters of reference throughout the several views, 10 designates the side bars of a vehicle frame, upon the forward end of which is mounted a pair of the improved brackets. Each one of the brackets comprises a bracket plate 11 situated on the upper edge of the side bar 10 of the frame, and held thereto by bolts 12, or the like. The bracket plates 11 are thus held rigidly in position, and are each provided at their intermediate portions with an upstanding socket 13 of cylindrical form, and provided in its inner face with a depression or cavity 14, adapted to house a spiral spring 15. The spring 15 has its outer extremity turned at right angles to provide a retaining pin 16, which pin enters an aperture formed in the wall of the socket 13 as shown in Fig. 6, to retain the outer end of the spring 15 stationary. The inner end of the spring 15 is turned abruptly at right angles to provide a retaining pin or stud 17, which latter extends in an opposite direction from the pin 16, and is adapted to engage in a suitable opening formed in the face of a boss 18 projecting from the inner side of a bracket arm 19. The bracket arm 19 is enlarged and given substantially circular form, at its intermediate portion, as shown in Fig. 4, which intermediate portion carries the boss 18. The boss 18 fits into the cavity or recess 14 of the socket and is provided at its upper edge with an arcuate flange 20, extending inwardly over the socket 13, as shown in Fig. 6. The lower half of the socket 13 merges into the bracket plate 11, as shown to advantage in Figs. 4 and 5, and the arcuate flange 20 extends around the boss 18 a little less than 180 degrees, and constitutes at its opposite ends, stops or shoulders 21 adapted for alternate engagement with the top of the bracket plate 11 at the forward and rear sides of the socket 13. It will be noted from Fig. 6 that the upper part of the socket 13 is reduced in depth to accommodate the overhanging flange 20 carried upon the boss 18. A pivot bolt 22 passes centrally through the socket 13, the boss 18 and arm 19, so as to pivotally connect the arm to the socket. The

spring 15 normally urges the arm 19 to turn about the pivot bolt 22 into upright position, as shown in the full lines in the drawings.

For the purpose of tilting or swinging the bracket arm 19 forwardly, the lower end thereof is apertured as at 23 for the reception of a flexible connector 24, the same being in the form of a steel cable, a chain or the like, and which passes backwardly against the inner side of the bar 10 of the frame of the vehicle and over a pulley 25, from which the connector 24 is carried to a convenient point between the side bars of the frame. The connectors 24 from the opposed brackets 19 are carried over pulleys 26 at the middle portion of the frame, are extended backwardly therefrom, and are secured to the lower end of a bell crank lever 27. The bell crank lever 27 is hinged in a bracket 28 preferably secured to the underside of the slanting foot board 29 of the vehicle, as shown to advantage in Figs. 1 and 2, and has its opposite arm extending upwardly and having pivotal engagement with a pedal 30. The pedal 30 is preferably in the form of a bar suitably headed for engagement with the foot of the operator, and provided upon its lower or rear edge with upwardly extending ratchet teeth 31 adapted for engagement with the lip 32 of a locking plate, which is fixed to the foot board 29 about the opening through which the pedal 30 passes. The upper end of the bracket arm 19 is forked or yoked, as at 33, to support the reflectors or head lights 34 in the usual manner, and as shown in the drawings.

In operation, when the vehicle approaches a second vehicle, and it is desired to direct the beams of light downwardly away from the second vehicle, so as to prevent the blinding of the operator of the second vehicle by the glare of the head lights, it is only necessary to press down on the foot pedal 30. This movement of the foot pedal swings the bell crank lever 27 about its pivotal support, draws the ends of the connectors 24 rearwardly, as shown in dotted lines in Fig. 1, and thus draws the lower ends of the bracket arms 19 backwardly to swing the same about the pivot bolts 22 and against the tension of the springs 15; thus tilting the brackets 19 forwardly, as shown in dotted lines in Fig. 1. In this position, the forward shoulder 21 of each bracket arm 19 is brought into engagement with the bracket plate 11 to limit the forward movement of the bracket arm, and offset any damage to the lamps which might result from an unlimited movement of the bracket. The foot lever 30, which is hinged to the upper arm of the bell crank lever 27, may be swung down, when depressed so as to engage one of the ratchet teeth 31 with the lip 32; and thus hold the brackets 19 in forwardly tilted position. To release the bracket arms 19, it is only necessary to swing the foot lever 30 forwardly out of engagement with the lip 32, and to admit the rise of the lever under the tension of the flexible connectors 24, which are urged forwardly by the springs 15. As soon as the connectors 24 are released, the springs 15 return the arms 19 to upright position, and bring the rear shoulders or stops 21 against the upper faces of the bracket plates 11.

It will be noted that the pulleys 26 are mounted upon brackets 35 which are carried upon the lower end of the dash board 36 of the vehicle. Thus the dash board constitutes a solid support for the pulleys 26 and at the same time, the pulleys and the connectors 24 are disposed beneath the foot board 29 and out of sight. It will thus be seen that the brackets support head lights of ordinary construction, the brackets have the appearance of the usual rigid bracket, and the brackets are operated simultaneously so as to tilt both of the lamps downwardly when desired, and without the employment of any transverse rods or other coupling members extending across the forward end of the vehicle. It will, of course, be understood that this improved bracket may be used not only on automobiles and the like, but also in any place where it is desired to mount a head light, or other device, and to provide means for tilting the same.

From the above description, it will be noted that the invention provides a bracket arm for supporting a lamp, which is of the usual type of bracket arm, has no material enlargements or projections, so that it is of neat appearance and design, and a bracket arm wherein the operating spring is entirely housed and protected, and a bracket arm which may be quickly and easily applied to the vehicle or other support.

What is claimed is:

1. In a device as specified, a bracket plate having a laterally opening socket deeper at its lower half, a lamp supporting arm pivoted against the socket and having a boss fitting into the deeper lower half of the socket and abutting against the edge of the upper half of the socket, and a spring within the socket having connection therewith and with the boss to urge the arm for turning in one direction, operating means engaging the arm to swing it in an opposite direction, said boss having an arcuate flange at its top overlapping the socket to close the joint between the boss and the socket, the flange being offset circumferentially on the boss to engage the bracket plate and hold the arm in vertical position against the tension of the spring and to limit the forward tilting of the arm by said operating means.

2. In a device as specified, a bracket plate having a socket portion rising therefrom

and open at one side, an arm pivoted to said socket portion and having a boss adapted to fit into the open side of said socket portion, a spring interposed and housed between the boss and the socket portion and having its ends secured respectively thereto, shoulders on the arm for engagement with the socket plate to limit the forward and rearward movements of the arm, and means connected to the lower end of the arm for swinging the arm forwardly and downwardly against the tension of said spring.

3. In a device as specified, a bracket plate provided with a laterally open socket, an arm pivoted to the socket and having a boss fitting into the open side thereof, an overhanging flange projecting inwardly from the boss for engagement over the socket and adapted for engagement against the bracket plate to limit the tilting of the arm, a spring interposed between the socket and the boss, and having oppositely extending pins at its ends for engagement in openings in the socket and boss, and means for tilting the arm forwardly against the tension of the spring, said spring being adapted to return said arm to normal upright position.

4. In a device as specified, a pair of bracket plates adapted for securement upon the opposite sides of a vehicle-frame and having laterally facing pivotal supports, an arm pivoted upon each of said pivotal supports and adapted to swing in a vertical plane, a spring interposed between each bracket plate and each arm to hold the latter in upright position, a foot pedal on the vehicle, and a connection between the foot pedal and each of said arms whereby to swing the same simultaneously against the tension of the springs.

5. In a device as specified, a pair of independent arms pivoted upon a vehicle-frame and adapted to swing upon a pivotal center lying substantially within the plane of the frame, means for yieldingly and normally holding said arms in upright position, and means connected to said arms for actuating the same simultaneously to tilt the upper ends of the arms forwardly.

6. In a device as specified, a bracket plate provided with an upstanding socket opening laterally of the plate, a bracket arm enlarged intermediate its ends and provided thereat with a boss for engagement in the open side of said socket, a pivot bolt passing through the socket and the boss to connect the same, and admit their relative movement, an overhanging flange on the upper edge of the boss extending over the socket and adapted for engagement at its opposite ends against the upper face of said bracket plate to limit the swinging of the arm on the pivot bolt, a spring arranged in the socket against the boss for normally holding the arm in upright position, and operating means connected to the lower end of the arm for tilting the same forwardly against the tension of the spring.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD RAYMOND SCHOOLFIELD.

Witnesses:
W. A. BLICKE,
C. E. GEBHARDT.