J. R. PRATT.

ADJUSTABLE HEADLIGHT REFLECTOR.

APPLICATION FILED JUNE 12, 1908.

915,477.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

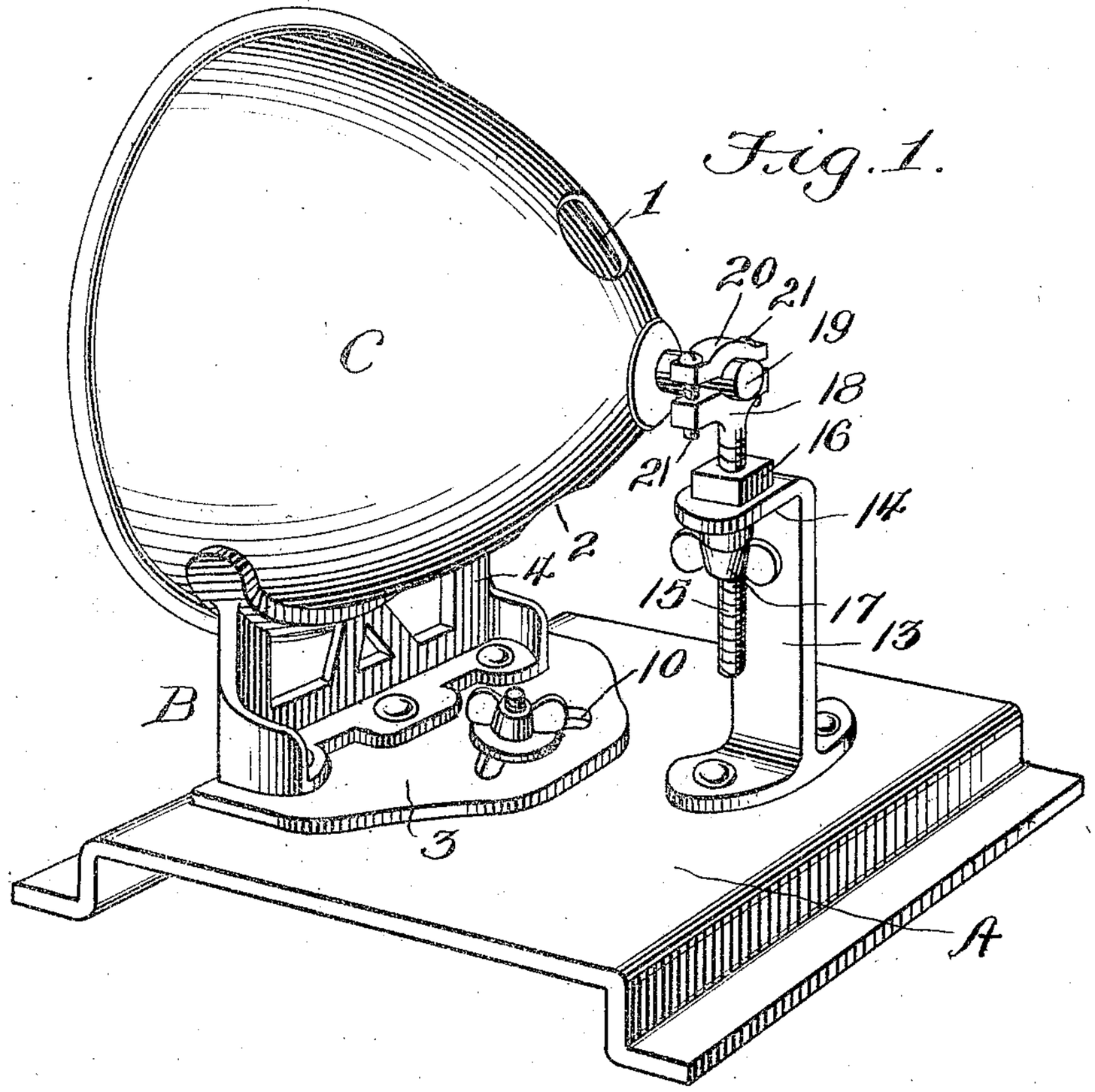


Fig. 2.

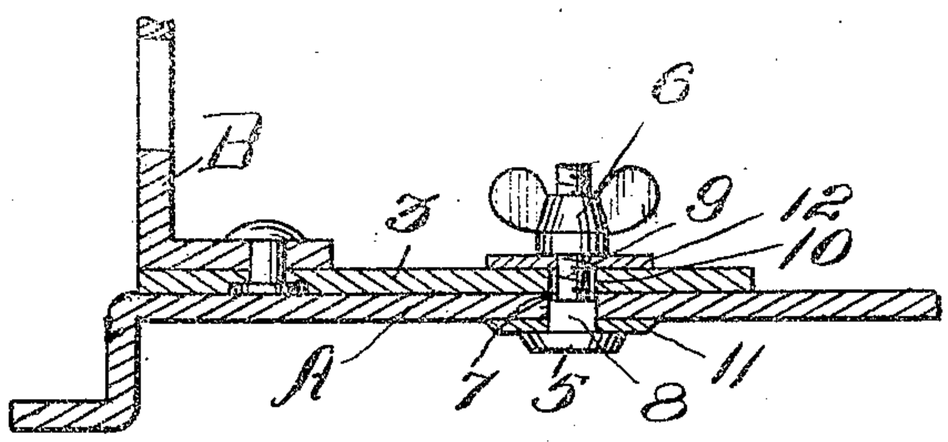
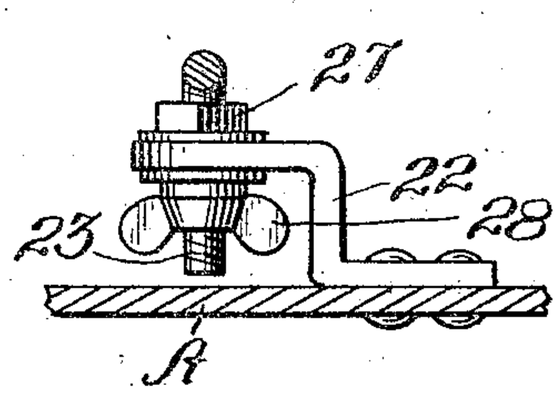


Fig. 5.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

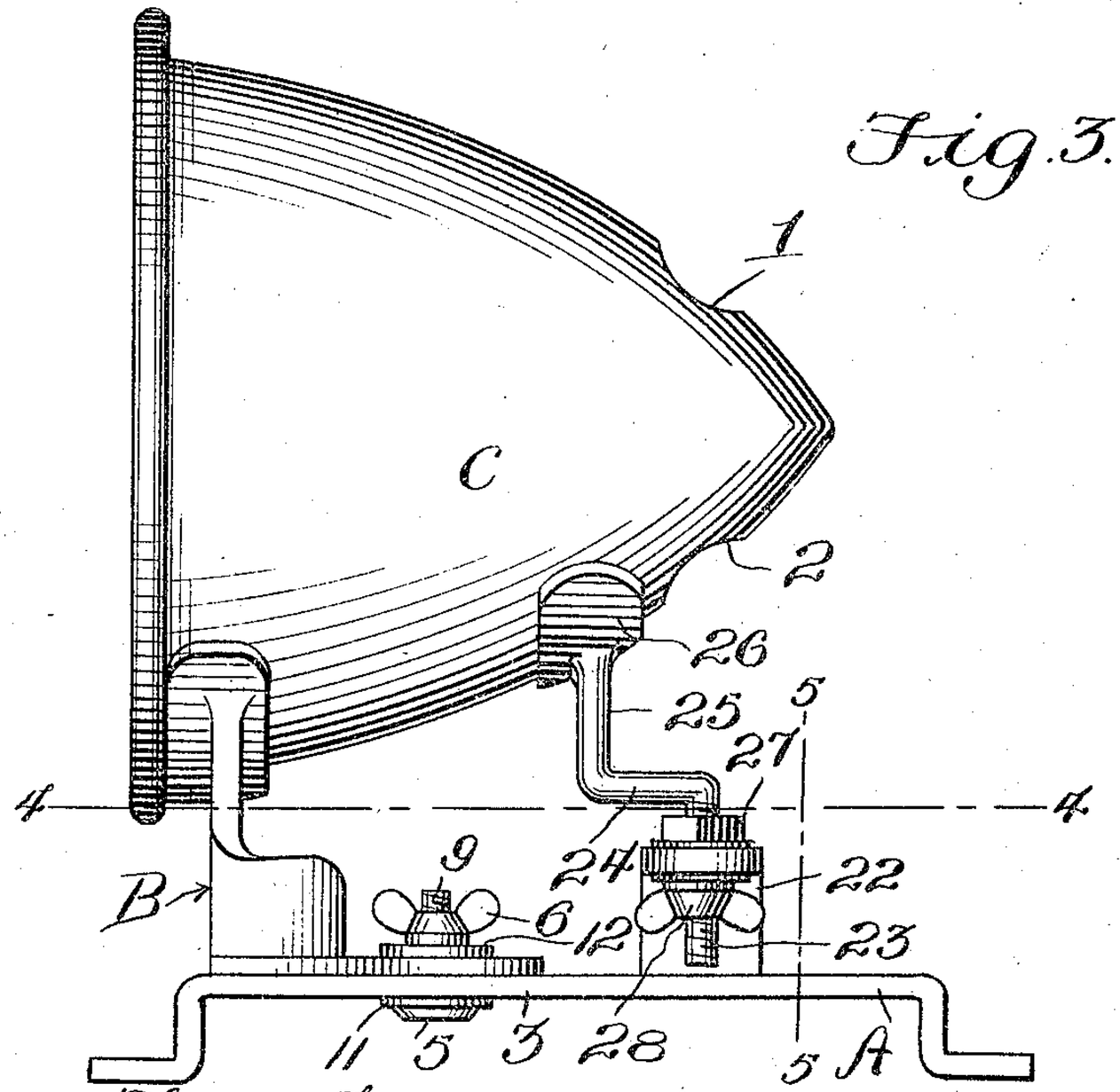


Fig. 4.

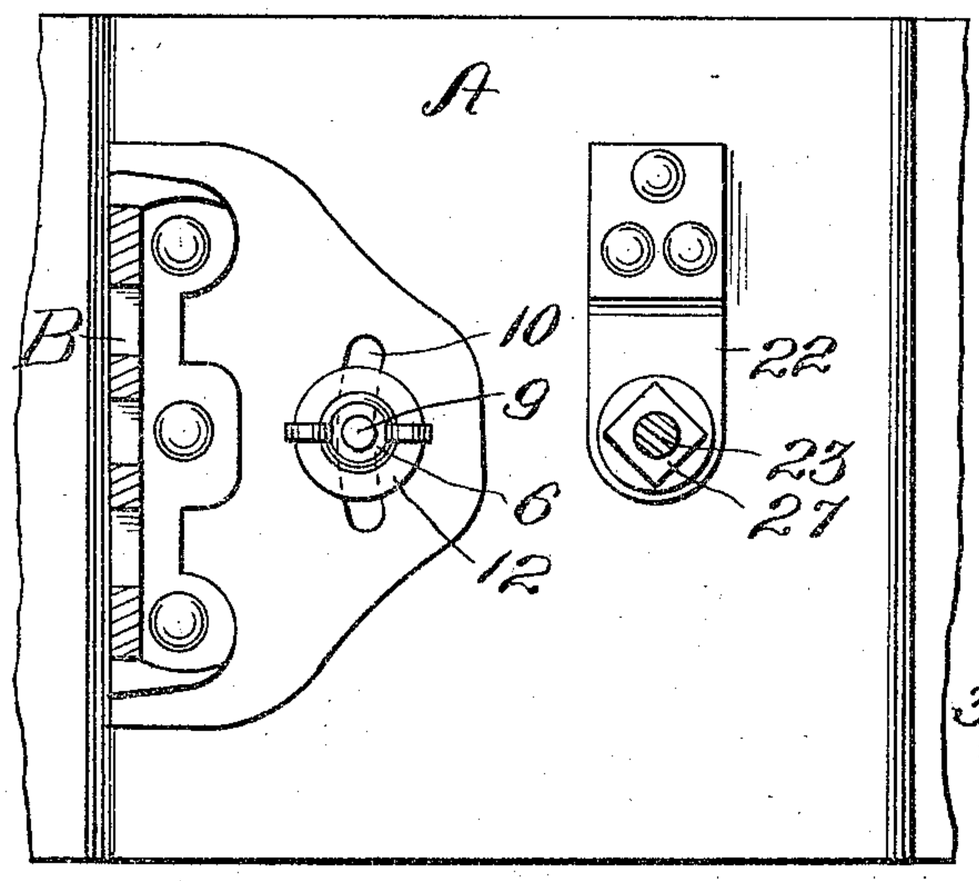
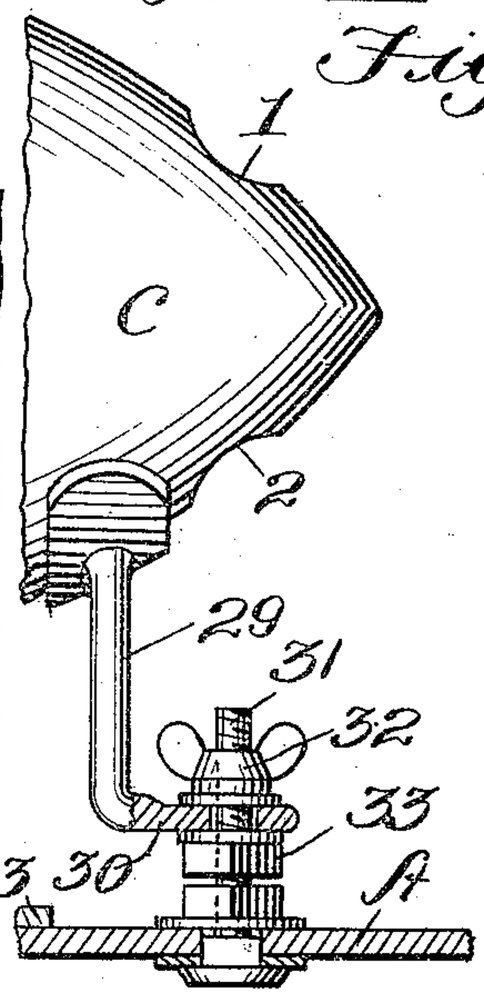


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES R. PRATT, OF DENISON, TEXAS.

ADJUSTABLE HEADLIGHT-REFLECTOR.

No. 915,477. Specification of Letters Patent. Patented March 16, 1909.

Application filed June 12, 1908. Serial No. 438,188.

To all whom it may concern:

Be it known that I, JAMES R. PRATT, a citizen of the United States, residing at Denison, in the county of Grayson and State of Texas, have invented new and useful Improvements in Adjustable Headlight - Reflectors, of which the following is a specification.

This invention relates to head-lights for locomotive engines and more particularly to an adjustable reflector so designed as to permit the rays of light to be directed in a true line in front of a locomotive.

The invention has for one of its objects to improve and simplify the construction and operation of apparatus of this character so as to be comparatively simple and inexpensive to manufacture, reliable and efficient in use, and readily manipulated to obtain an accurate adjustment.

Another object of the invention is the provision of a supporting means for a reflector intended for use in connection with electric arc lights and so designed as to permit of adjustment of the reflector to the right or left, or up or down, as required, while substantially maintaining the arc of the lamp at the focal center of the reflector.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawings, which illustrate certain of the embodiments of the invention, Figure 1 is a perspective view of the improved reflector. Fig. 2 is a central vertical section of the front support. Fig. 3 is a side view showing a modified form of rear support. Fig. 4 is a horizontal section on line 4—4, Fig. 3. Fig. 5 is a section on line 5—5, Fig. 3. Fig. 6 is a fragmentary sectional view showing a modified form of rear support.

Similar reference characters are employed to designate corresponding parts throughout the views.

Referring to the drawing, A designates the base plate for the head-light which has at its front a bracket or support B on which rests the parabolic reflector C. This reflector is of ordinary construction and has upper and lower openings 1 and 2 into which the electrodes of the electric arc lamp extend. The front support B comprises a base piece 3 from which rises a saddle 4 to which the reflector is secured.

The base piece 3 bears directly on the top of the base plate A and is adjustably secured thereto by a bolt 5 having a winged clamping nut 6. The base plate has a non-circular opening 7 for receiving the non-circular portion 8 of the shank of the bolt, and the threaded portion 9 of the bolt passes through an arcuate slot 10 in the base piece 3, there being washers 11 and 12 on the bolt engaging the base plate A and base piece 3, respectively. The slot 10 is struck from a center coincident with the axis on which the reflector is adapted to be tilted to the right or left, and the front support B can be adjusted to one side or the other around the center on which the reflector swings so as to accurately adjust the reflector to direct the rays of light in a true line in front of the locomotive.

According to the construction shown in Fig. 1, the rear support comprises a standard 13 that has a horizontally extending arm 14 at its upper end, and extending vertically through this arm is a screw 15 that supports the rear part of the reflector and serves to raise or lower the latter and also as a pivot on which the reflector is turned to right or left. On this screw are nuts 16 and 17 that engage respectively the top and bottom sides of the arm 14 and which are adapted to be manipulated to raise or lower the screw. On the upper end of the screw is a head 18 on which rests a rearwardly-extending horizontal stud 19 secured to the outside of the reflector and this stud is secured to the head 18 by a clamping piece 20 removably fastened to the head by screws 21.

Referring to the form shown in Fig. 3, the rear support comprises a bracket 22 on which is mounted a vertical screw 23, said screw having a forwardly-extending offset portion 24 and a vertical portion 25, the latter carrying a yoke 26 that is suitably secured to the reflector. The screw 23 is disposed vertically in line with the openings 1 and 2 of the reflector so that the axis on which the reflector is turned to the right or left is coincident with the focal center of the reflector and the arc of the electric light is adjusted so as to coincide with such focal center. On the screw 23 are clamping nuts 27 and 28 whereby the reflector can be raised or lowered. In the form shown in

Fig. 6, the reflector is supported at its rear by means of a bracket 29 that has a horizontally-disposed eye 30 through which extends a clamping bolt 31, the said bolt being securely fastened to the base plate A of the head-light, and this bolt serves as a pivot on which the reflector turns and is located vertically in line with the focal axis of the reflector. On the bolts are clamping nuts 32, 33, for facilitating the vertical adjustment of the reflector.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention, what I claim is:—

1. The combination of a head-light reflector, with front and rear supports on which the reflector is movably mounted, the rear support being vertically adjustable and arranged to form a pivot on which the reflector is adjustable in a horizontal plane.

2. The combination of a head-light reflector, an adjustable support on which the front of the reflector is supported, and a second adjustable support for the rear portion of the reflector.

3. The combination of a reflector, a base plate, an adjustable front support on the base plate for the reflector, and an adjustable rear support on the base plate for the reflector.

4. The combination of a reflector, a rear support for vertically and laterally adjusting the reflector, and a front support for the reflector.

5. The combination of a reflector, a vertically adjustable member on which the reflector is adapted to swing to one side or the other, and a support adjustable in a horizontal plane about the said member as a center, and on which the reflector is adapted to rest.

6. The combination of a reflector, a supporting member disposed in alinement with the focal center of the reflector and serving as an axis therefor, means for vertically adjusting the said member, and an additional support on which the reflector rests.

7. The combination of a reflector, a base plate thereon, a bracket on the base plate, a screw adjustably mounted on the bracket and forming an axis on which the reflector is adapted to be turned to the right or left, and means for vertically adjusting the screw.

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

JAMES R. PRATT.

Witnesses:
J. J. FAIRBANKS,
WILL. WOODS.