J. R. PRATT.

HEADLIGHT REFLECTOR.

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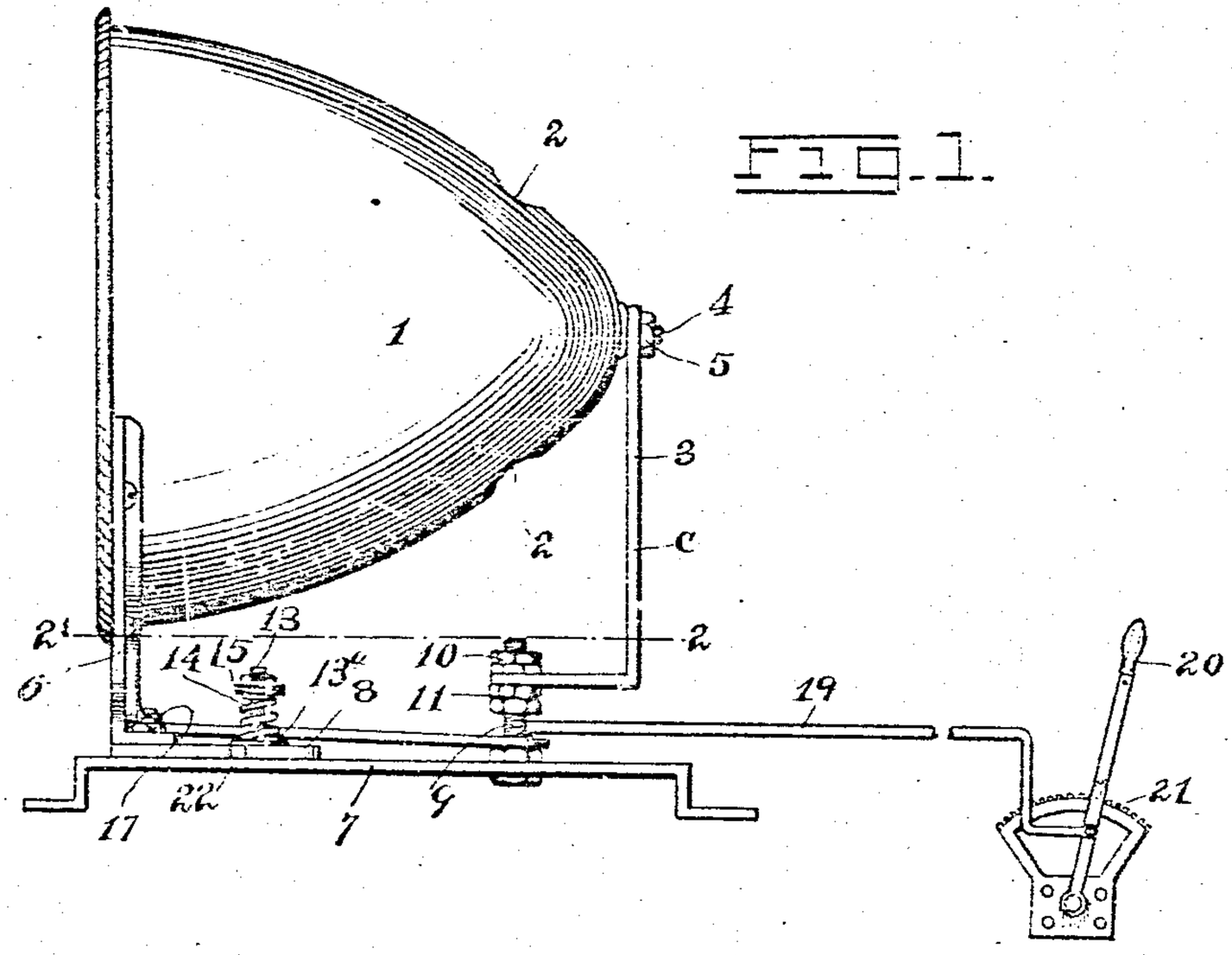
979,334.

Patented Dec. 20, 1910.

FIG. 1.



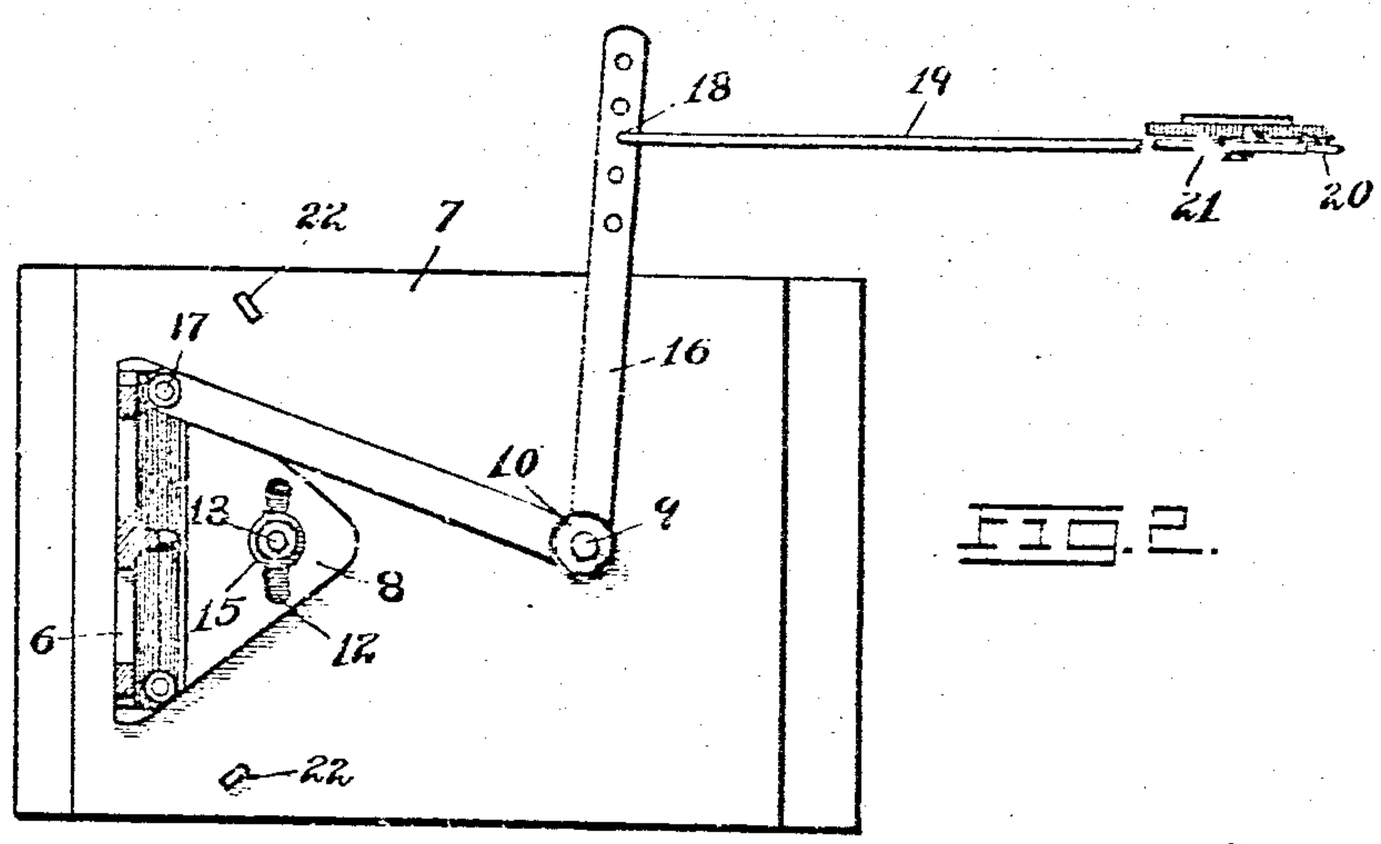


FIG. 2.

Witnesses

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HEADLIGHT-REFLECTOR.

979,334. Specification of Letters Patent. Patented Dec. 20, 1910.

Application filed August 26, 1910. Serial No. 579,009.

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 Headlight-Reflectors, of which the following is a specification.

This invention relates to headlight reflectors, more particularly of the dirigible type whereby the engineer can direct the rays of light to the right or left or directly ahead, according to the nature of the track over which the locomotive is passing.

The invention has for one of its objects to provide an extremely simple, durable and practical device of this character which can be readily manipulated at the will of the engineer.

Another object of the invention is the provision of a reflector having novel means for mounting the same so that the movement will take place around an axis coincident with 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 drawing, which illustrates one embodiment of the invention, Figure 1 is a side view of the reflector and its operating means. Fig. 2 is a horizontal section on line 2—2, Fig. 1.

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

Referring to the drawing, 1 designates an ordinary parabolic reflector which is intended to be mounted in a casing of an ordinary headlight, the casing and light-producing means being omitted from the drawing. This reflector has openings 2 for the carbons or electrodes of the electric light, although any other suitable light-producing means may be employed. The rear end of the reflector is mounted on a bracket 3 that is of L-shaped construction, the upper end of the bracket being connected with the reflector by a threaded stud or screw 4 on the reflector passing through the bracket 3, there being a clamping nut 5 on the screw for securely holding the reflector on the bracket. The front of the reflector rests on and may be secured to a front bracket 6 which is movably mounted on a base plate 7 or other suitable support. The bracket 6 is fastened to a horizontal plate 8 that bears directly on the top surface of the base plate 7, and this plate 8 together with the bracket 6 and reflector 1, are adapted to move in a horizontal plane about a vertical axis passing through the focal center of the reflector.

Mounted on the base plate 7 is a vertical pivot 9 which is disposed under the rear portion of the reflector and in line with the focal center thereof. This pivot 9 passes through the lower member of the L-shaped bracket 3 and this bracket is held in place by nuts 10 and 11 screwed on the pivot and disposed respectively above and below the horizontal member of the bracket 3. The nuts are not screwed tight enough against the bracket 3 to prevent the latter from turning about the pivot as an axis as the reflector is turned for directing the rays of light upon the track in passing around curves.

The plate 8 has an arcuate slot 12 which is concentric with the pivot 9, and through this slot projects a vertical stud or screw 13 fastened to the base plate 7. On this stud or screw 13 is a spring 14 which has its lower end bearing against a washer 13ª resting on the plate 8 of the bracket 6 and its upper end bearing against a wheel or nut 15 threaded on the stud 13, whereby the tension of the spring can be adjusted. This spring presses the plate 8 into frictional engagement with the base plate 7, but the engagement is such that the reflector can be readily moved in directing the rays of light where they are needed.

To turn the reflector to the right or left, any suitable operating means may be employed under the control of the engineer. In the present instance, a bell crank lever 16 is fulcrumed on the pivot and one arm of the lever extends forwardly from the pivot and is rigidly connected at 17 with the bracket 6. The other arm of the bell crank lever is connected at 18 with a rod 19 that extends rearwardly from the headlight to the cab of the locomotive, where the rod is connected with a lever or handle 20 which moves back and forth over a sector 21 fastened in the cab. A latch mechanism may be provided for holding the handle 20 in any desired position of adjustment, and the movement of the reflector can be limited

by stops 22 provided on the base plate 7 at such points as to be struck by the plate 8 of the bracket 6.

From the foregoing description, taken in connection with the accompanying drawing, 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 as new, is:—

1. The combination of a base plate, a reflector disposed over the same, separate brackets for supporting the reflector on the base plate and permitting the latter to be adjusted about a vertical axis, means for frictionally holding one of the brackets against the base plate, and means for turning the reflector about said axis.

2. The combination of a reflector, of means for movably supporting the front of the reflector, means for movably supporting the rear portion of the reflector, a lever under the reflector and having its fulcrum disposed in a line passing vertically through the focal center of the reflector, and means connecting the lever with the first-mentioned means for shifting the reflector.

3. The combination of a base plate, a reflector disposed above the same, front and rear brackets, a pivot connecting the rear bracket with the base plate, means for yieldingly holding the front bracket against the base plate, an operating lever mounted on the pivot and connected with the front bracket for shifting the reflector to throw the rays of light in different directions.

4. The combination of a support, a reflector, separate brackets on which the reflector is mounted, separate means for movably mounting the brackets on the support, means for frictionally holding one of the brackets against the support, and an operating means connected with that bracket frictionally held against the support and arranged to adjust the reflector about a vertical axis passing through the focal center thereof.

5. The combination of a base plate, a reflector disposed above the same, a bracket connected with the rear portion of the reflector, a pivot on the base plate on which the reflector is mounted, a bell crank lever fulcrumed on the pivot, a bracket supporting the front of the reflector and having a horizontal plate bearing on the base plate, means for yieldingly pressing the plate of the bracket against the base plate and permitting the said bracket to move with the reflector, and means for connecting the lever with the front bracket.

6. The combination of a base plate, a reflector disposed over the same, a pivot disposed on the base plate and arranged in a vertical line passing through the focal center of the reflector, a support movably mounted on the base plate and disposed under the front portion of the reflector, said support having an arcuate slot concentric with the pivot, a stud on the base plate passing through the slot, a spring on the stud pressing the said support against the base plate, a support mounted on the said pivot and connected with the rear portion of the reflector, and means for shifting the reflector about the said pivot as an axis.

7. The combination of a base plate, a reflector disposed over the same, a pivot disposed on the base plate and arranged in a vertical line passing through the focal center of the reflector, a support movably mounted on the base plate and disposed under the front portion of the reflector, said support having an arcuate slot concentric with the pivot, a stud on the base plate passing through the slot, a spring on the stud pressing the said support against the base plate, a support mounted on the said pivot and connected with the rear portion of the reflector, and a bell crank lever fulcrumed on the pivot and connected with the front support for shifting the reflector about the axis of the pivot.

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

JAMES R. PRATT.

Witnesses:
THOMAS E. REORDON,
T. E. FOLEY.