



No. 646,617.

J. N. BARR & J. KIRBY, JR.  
HEADLIGHT.

Patented Apr. 3, 1900.

(Application filed Sept. 9, 1899.)

(No Model.)

2 Sheets—Sheet 2.

Fig 5.

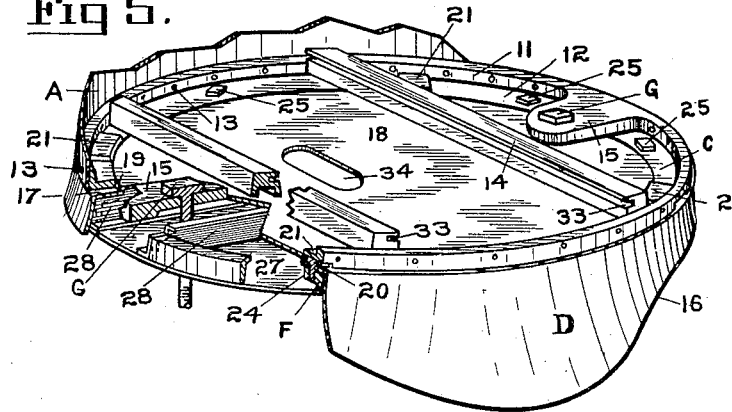


Fig 6.

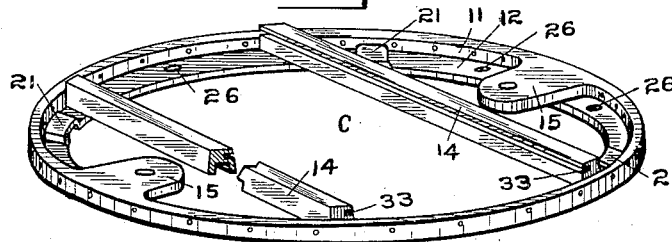


Fig 7.

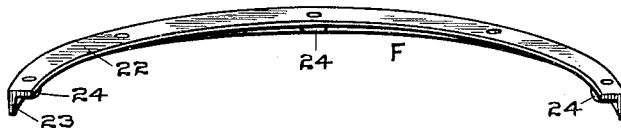


Fig 8.

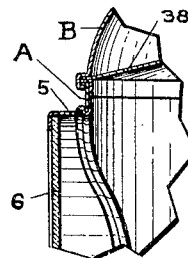
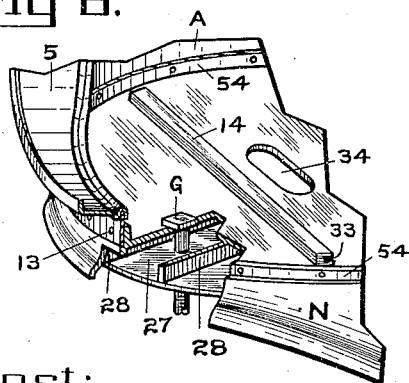


Fig 9.

Attest:  
H. C. Colson

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By *J. Kirby, Jr.* Atty.

# UNITED STATES PATENT OFFICE.

JACOB N. BARR, OF MILWAUKEE, WISCONSIN, AND JOHN KIRBY, JR., OF DAYTON, OHIO, ASSIGNORS TO THE UNITED STATES HEAD-LIGHT COMPANY, OF BUFFALO, NEW YORK.

## HEADLIGHT.

SPECIFICATION forming part of Letters Patent No. 646,617, dated April 3, 1900.

Application filed September 9, 1899. Serial No. 729,906. (No model.)

*To all whom it may concern:*

Be it known that we, JACOB N. BARR, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, and JOHN KIRBY, Jr., residing at Dayton, in the county of Montgomery and State of Ohio, citizens of the United States, have invented certain new and useful Improvements in Headlights; and we do hereby declare that the following is a full, clear, and exact description of the invention.

Our invention relates to improvements in locomotive-headlights; and its objects are, first, to improve upon the construction of locomotive-headlights; second, to lessen the cost of manufacture; third, to increase their strength and durability; fourth, to so construct them as that they will be better adapted to modern types of locomotives than those in use prior to the time of our present invention, and, fifth, to provide a headlight in which the body of its case can, for convenience and economy, be readily detached from the base thereof.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a front elevation of the headlight and a portion of the boiler extension of a locomotive; Fig. 2, a plan view of the headlight; Fig. 3, a vertical sectional view through the center of the headlight from front to back, with the lamp and reflector and a portion of the boiler extension shown in full, the reflector being broken away to show a portion of the burner therein; Fig. 4, a cross-sectional view of the headlight through the line Y Y of Fig. 1; Fig. 5, a broken perspective view of the base, showing the manner of mounting the body of the case thereon; Fig. 6, a perspective view of the ring employed for securing the body of the case to the base thereof; Fig. 7, a perspective view of one of the ring-sections employed for coupling the body of the case to the base thereof; Fig. 8, a broken perspective view showing a modified form of base and manner of securing the body thereto, and Fig. 9 a similar view showing a

modification in the manner of uniting the body of the case with the top thereof.

Like numerals and letters of reference designate corresponding parts in all the figures of the drawings.

A designates the body of the headlight-case, which is made vertically cylindrical in form and which is provided with a door 1, hinged at 2 and having a handle 3, with a catch 4 and a goggle 5, the latter projecting forward from the case and having a glass disk 6 secured therein, a corresponding portion of the said body being cut away to permit light to be reflected through said glass disk in a manner common to other forms of headlights.

B represents the top of the case and which is formed dome shape, with its upper portion terminating in a contracted neck 7, surmounted by a cap 8. The lower end of the dome B is, by swaging or otherwise, reduced in diameter, as shown at 9, Fig. 3, to correspond with the inner diameter of the body A, over which reduced portion the body fits and by which construction the contour of the case at this intersection is made to present a smooth appearance, the top being secured to the body by a series of rivets 10. At the lower end of the body A there is a metallic ring or frame C, preferably formed of cast metal and having vertical and horizontal portions 11 and 12, the body being secured to the said vertical portion 11 by a series of rivets or bolts 13, as more clearly shown in Fig. 3. This ring is also provided with cross-bars 14 and ears or extensions 15, the purpose of which will presently appear.

D represents the base of the headlight and is also circular in form and of substantially the same diameter at its top as the body of the case and which curves outwardly and is of larger diameter at the bottom, as shown in the drawings, or it may be of such other form as may be suitable, its lower edge 16 being cut or trimmed to fit the contour of the boiler extension 3 of the locomotive upon which the headlight is to be used. This base is preferably made of sheet metal, its top portion 17 being somewhat lower than its center 18, whereby an annular shoulder 19 is formed, around which shoulder and on the portion 17

the ring C sets. Ring-sections F (see Fig. 7) are secured to the under side of the said portion 17 by bolts 20, the ring C being provided with housings 21 to straddle the heads thereof.

5 Other means of attachment may be employed, however. These ring-sections are preferably formed of horizontal and vertical portions 22 and 23, and they are provided with a suitable number of bosses 24, bored and threaded to

10 receive bolts or screws 25, which pass through holes 26 in the horizontal portion 12 of the ring C, and by which means the said ring, together with the body of the case, is firmly secured to the base D, and the same can readily

15 be removed therefrom by removing said bolts or screws 25 and bolts G, the latter of which bolts pass through the said ears or extensions 15 of the ring C and through the base D into tapped holes in the boiler extension and by

20 which means the base is secured thereon.

The ears 15 may, if desired, be omitted, in which case the body of the case can be removed from its base by removing the bolts or screws 25 and without removing the bolts

25 G, which would then have no connection with the ring C, but would pass directly through the base, as shown in Fig. 8; but where the base is made of sheet metal, as described, a more rigid structure is obtained by passing

30 the bolts G through the ring C, of which the ears 15 form a part, and after removing the said bolts for the purpose of detaching the body of the case from its base the said bolts can be replaced and the base thereby retained

35 in its position on the boiler extension.

27 represents a disk which may bear against and be secured to the lower edge of the portion 23 of the ring-sections F, and which disk divides the base D into two horizontal compartments, the upper of which is divided by vertical partitions 28, which, in conjunction with the top of the base and the said disk, form spaces 29 and 30 and an air-passage 31 from front to back of the base, the latter being cut away at 32 and 33 for ingress and

45 egress of air for the purpose hereinafter set forth and for the further purpose of breaking the continuity of the wall of the base, whereby it may be cut to fit a diameter somewhat less

50 than that upon which it may thereafter be desired to be used, as the lower outwardly-curved portion of the wall will spring sufficiently to compensate for such difference when drawn down by the bolts G, the vertical portion of the wall and the strength contributed by the annular shoulder 19 offering

55 sufficient resistance to prevent distortion of the flat top portion of the base by reason of the strain incident to causing such spring.

60 The spaces 29 30 are packed with asbestos or other non-conducting material, as shown at a in Fig. 1, to prevent overheating, and the lower of said compartments 32 may also be likewise packed when found advisable to do so; but

65 the above-described packing, together with the circulation of air through the passage 31 and beneath the disk 27, will ordinarily be

found sufficient to protect the interior of the case against excessive heat from the boiler extension.

The cross-bars 14, hereinbefore referred to, may be formed integral with ring C or may be secured thereto in any desirable and convenient manner, and they are provided with grooves or ways 33, adapted to receive a sliding base H, upon which the lamp and reflector are mounted, as hereinafter described.

We prefer that the ring-sections F should be continuous from each end of each of the partitions 28, although it is not essential that

80 they should be, as it is obvious that their function may be performed by a number of separate sections.

In the top portion of the base D there is an opening 34, through which air can enter the

85 case from the passage 31 for supporting combustion, and which opening may be provided with any suitable device for regulating the quantity of air to be admitted.

I is the reflector, J the oil-holder, and K

90 the burner, the latter being surmounted by a chimney L, which is steadied at the top by a chimney-holder 35, all of which are of the usual construction and arrangement and which are mounted directly on a base M, ar-

95 ranged to revolve on the sliding base H and held from undue movement by a catch 36, which may be of any suitable construction, to hold the base M in a fixed position on the sliding base H and adapted to be released

100 when it is desired to turn the reflector, as hereinafter described, and to which sliding base the base M is pivoted at 37, whereby the reflector can be turned to face the door when it is desired to clean the same and for other

105 purposes.

In the top or dome portion B of the case there is a partition 38, which separates the body of the case therefrom, the edge of said partition being flanged, as shown at 39, and

110 by which flange the partition is secured to the case by means of said series of rivets 10, as shown in Fig. 3. This partition is provided with an opening 40, having a downwardly-extending collar 41, through which

115 collar and opening the products of combustion and heat from within the case escape into a conical or funnel shaped chamber 42, thence through a collar 43 into a space 44, and through a series of openings 45 in the

120 contracted neck 7 to the outer atmosphere, as indicated by arrows. A cap 46 is mounted above the collar 43 and held in place by connecting-strips 47, and whereby an open space 48 is formed between the upper end of said

125 collar 43 and the lower end of said cap 46. Above the cap 46 and opposite the said series of openings 45 there is mounted a conically-formed wind break or guard 49, open at both ends and held in place by connecting-strips 50, secured thereto and to said cap

130 46, and above the same is a cap 51, held in place by connecting-strips 52 and leaving an open space 53 between the lower edge of the

said cap and the upper end of said wind-break, the function of which is to prevent currents of air blowing through the openings 45, directly across the cap 46, and thereby causing too rapid exhaustion of air from within the case.

The above-described arrangement of ventilation is particularly well adapted to the headlight of our present invention and will be fully understood by those familiar with the art to which it appertains.

In Fig. 8 of the drawings we have shown a modification of the base hereinbefore referred to by the letter D, and in which figure parts corresponding with those which have already been described are lettered and numbered the same. In said figure, N represents the base, which is cast in a single piece. It is provided with a flange 54, to which the body A of the case is bolted or riveted, the partitions 28, hereinbefore referred to, being formed integral with the base and the disk 27 being secured to the lower edges of said partitions and to the wall of the base at suitable points around the edges of said disk.

Fig. 9 represents a modification of the manner hereinbefore described of uniting the dome or top of the case to the body thereof and which may be substituted for the construction shown in Fig. 3, if desired, although we prefer said latter construction.

It will be observed from the foregoing description that the form of our improved headlight is such as to contribute strength and durability over those heretofore in use; that the mounting of the body of the case on the base thereof in a detachable manner, as more clearly shown in Fig. 8, permits of its removal without removing the base from the locomotive, which is a decided advantage in making repairs and which also permits of the changing of the headlight-case from one locomotive to another regardless of the diameter of boiler extensions, as the parts can all be made interchangeable and the body of the case be readily taken from one base and attached to another. Therefore when a number of locomotives are provided with bases of the type hereinbefore described cases therefor can be interchanged at will and that when any part of the headlight-case becomes damaged and repairs are necessary a new part can be substituted more readily and with less expense than can be done in the present types of headlights and without destroying other parts which are not damaged. It will also be observed that various modifications other than shown in the drawings can be made in details of construction without departing from the spirit of our invention, to which exact detail construction we do not limit our invention.

Having thus fully described our invention, we claim—

1. In combination with the boiler extension of a locomotive, a headlight having a case with a base consisting of a hollow shell with

the lower edge of one of its walls conforming substantially to the contour of and being adapted to be mounted on said extension, and means for securing the same thereon, substantially as set forth.

2. In combination with the boiler extension of a locomotive, a headlight having a case the body of which is detachably joined to the base thereof, the said base consisting of a hollow shell with the lower edge of one of its walls conforming substantially to the contour of and being adapted to be mounted on said extension, and means for securing said base thereon, substantially as set forth.

3. In combination with the boiler extension of a locomotive, a headlight provided with a case consisting chiefly of a vertical cylindrical body having a dome-shaped top and a base whose top conforms substantially to the size and form of said body, the said base being in the form of a hollow shell the lower edge of one of the walls of which conforms substantially to the contour of and is adapted to be mounted on said extension, and means for securing said base thereon, substantially as set forth.

4. In combination with the boiler extension of a locomotive, a headlight provided with a case consisting chiefly of a vertical cylindrical body having a dome-shaped top and a base whose top conforms substantially to the size and form of said body, the said base being in the form of a hollow shell the lower edge of one of the walls of which conforms to the contour of and is adapted to be mounted on said extension, the said body being detachably secured to said base, and means for securing the headlight to said extension, substantially as set forth.

5. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base with a curved and vertically-disposed wall extending from the bottom of the body of the case and with its lower edge conforming substantially to the contour of and being adapted to be mounted on said extension, non-conducting material packed within the hollow of said base, and means for securing the headlight to said extension, substantially as set forth.

6. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base with a curved and vertically-disposed wall extending from the bottom of the body of the case and with its lower edge conforming substantially to the contour of and being adapted to be mounted on said extension, an air-passage extending horizontally through said base and being in open communication with the interior of the case, and means for securing the headlight to said extension, substantially as set forth.

7. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming substantially to the contour of and which is adapted to be mounted on said extension, a horizontal

disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, openings in the wall of said base for ingress and egress of air to and from said air-passage, and means for securing the headlight to said extension, substantially as set forth.

8. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base with a vertically-disposed wall extending from the bottom of the body of the case to and conforming substantially with the contour of and being adapted to be mounted on said extension, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, openings in the wall of said base for ingress and egress of air to and from said compartments, and means of securing the headlight to said extension substantially as set forth.

9. In a locomotive-headlight case, the combination of a vertical cylindrically-formed body having an opening therein and an extension containing a glass disk through which light may be reflected, a door-opening, a door of the same contour as said body; said door being hinged to said body and adapted to close said door-opening, a dome-shaped top terminating above in a contracted neck, a cup mounted above the same, and a base having a vertically-disposed wall extending from the bottom of the body of the case and with its bottom shaped to substantially conform to the contour of and being adapted to be mounted on the boiler extension of a locomotive, substantially as set forth.

10. In combination with the boiler extension of a locomotive, a headlight having a case with its base provided with a vertically-disposed wall whose lower edge conforms substantially to the contour of and is adapted to be mounted on said extension and having provision for adjustment thereto, and means for securing the same thereon, substantially as set forth.

11. In combination with the boiler extension of a locomotive, a headlight having a case the body of which is detachably joined to the base thereof, the said base having a vertically-disposed wall whose lower edge conforms substantially to the contour of and is adapted to be mounted on said extension and having provision for adjustment thereto, and means for securing said base thereon, substantially as set forth.

12. In combination with the boiler extension of a locomotive, a headlight provided with a case consisting chiefly of a vertical cylindrical body having a dome-shaped top and a hollow base provided with a vertically-disposed wall with its lower edge trimmed substantially to the contour of said boiler extension and whose top conforms substantially to

the size and form of said body; the said base having provision for adjustment to said extension, and means for securing said base thereon, substantially set forth.

13. In combination with the boiler extension of a locomotive, a headlight provided with the case consisting chiefly of a vertical cylindrical body having a dome-shaped top and a hollow base provided with a vertically-disposed wall with its lower edge trimmed substantially to the contour of said boiler extension and whose top conforms substantially to the size and form of said body and the said body being detachably secured to said base, and means for securing the headlight to said extension, substantially as set forth.

14. In combination with the boiler extension of a locomotive, a headlight-case having a hollow base conforming substantially to the contour of and being adapted to be mounted on said extension; the said base having provision for adjustment to said extension, insulating material contained within the hollow of said base, and means for securing the headlight to said extension, substantially as set forth.

15. In combination with the boiler extension of a locomotive, a headlight having a case provided with a base having a vertically-disposed wall whose lower edge is trimmed to conform substantially to the contour of and which is adapted to be mounted on said extension and which is provided with means for adjustment thereto, an air-passage extending horizontally through said base, an opening in the top of said base through which opening air is admitted from said air-passage into said case, and means for securing the headlight to said extension, substantially as set forth.

16. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming substantially to the contour of and which is adapted to be mounted on said extension and having provision for adjustment thereto, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, openings in the wall of said base for ingress and egress of air to and from said air-passage, and means for securing the headlight to said extension, substantially as set forth.

17. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming substantially to the contour of and which is adapted to be mounted on said extension and having provision for adjustment thereto, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, open-

ings in the wall of said base for ingress and egress of air to and from said air-passage; the said case being detachably mounted on said base, and means for securing the headlight to said extension, substantially as set forth.

18. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming to the contour of and which is adapted to be mounted on said extension, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, openings in the wall of said base for ingress and egress of air to and from said air-passage; the said case being detachably mounted on said base, and means for securing the headlight to said extension, substantially as set forth.

19. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base with a vertically-disposed wall conforming to the contour of and being adapted to be mounted on said extension and having provision for adjustment thereto, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, openings in said wall for ingress and egress of air to and from said compartments, and means for securing the headlight to said extension substantially as set forth.

20. In a locomotive-headlight case, the combination of a vertical cylindrically-formed body having an opening therein and an extension containing a glass disk through which light may be reflected, a door-opening, a door of the same contour as said body; said door being hinged to said body and adapted to close said door-opening, a dome-shaped top terminating above in a contracted neck, a cap mounted above the same, and a base having a vertically-disposed wall with its bottom shaped to substantially fit and being adapted to be mounted on the boiler extension of a locomotive and having provision for adjustment thereto, and means for securing the case on said extension, substantially as set forth.

21. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base with a curved and vertically-disposed wall extending from the bottom of the body of the case and with its lower edge conforming substantially to the contour of and being adapted to be mounted on said extension, a ring or frame secured to and within the body of the case at the bottom thereof, and means for securing said ring or frame to said base, substantially as set forth.

22. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base with a curved and vertically-disposed wall extending from the bottom of the body of the case and with

its lower edge conforming substantially to the contour of and being adapted to be mounted on said extension, a ring or frame secured to and within the body of the case at the bottom thereof, and means for detachably securing said ring or frame to said base, substantially as set forth.

23. In combination with the boiler extension of a locomotive, a headlight having a case with a vertical cylindrical body and a hollow base with a curved and vertically-disposed wall extending from the bottom of the body of the case and with its lower edge conforming substantially to the contour of and being adapted to be mounted on said extension, a ring or frame secured to and within said body at the bottom thereof, and means for securing said ring or frame to said base, substantially as set forth.

24. In combination with the boiler extension of a locomotive, a headlight having a case with a vertical cylindrical body and a hollow base with a curved and vertically-disposed wall extending from the bottom of the body of the case and with its lower edge conforming substantially to the contour of and being adapted to be mounted on said extension, a ring or frame secured to and within said body at the bottom thereof, and means for detachably securing said ring or frame to said base, substantially as set forth.

25. In combination with the boiler extension of a locomotive, a headlight having a case with a vertical cylindrically-formed body and a base conforming substantially to the contour of and being adapted to be mounted on said extension and having provision for adjustment thereto, a ring or frame secured to said base and to which ring or frame said body is secured on the outside thereof, and means for securing the base to said boiler extension, substantially as set forth.

26. In combination with the boiler extension of a locomotive, a headlight having a case with a vertical cylindrically-formed body and a base; the said base conforming substantially to the contour of and being adapted to be mounted on said extension and having provision for adjustment thereto, a ring or frame detachably secured to said base and to which ring or frame said body is secured on the outside thereof, and means for securing said base to said boiler extension, substantially as set forth.

27. In combination with the boiler extension of a locomotive, a headlight having a hollow base conforming substantially to the contour of and being adapted to be mounted on said extension; the said base having provision for adjustment to said extension, a ring or frame secured to said base and to which ring or frame said body is secured on the outside thereof, and means for securing said base to said boiler extension, substantially as set forth.

28. In combination with the boiler extension of a locomotive, a headlight having a hol-



low base conforming substantially to the contour of and being adapted to be mounted on said extension; the said base having provision for adjustment to said extension, a ring or frame detachably secured to said base and to which ring or frame said body is secured on the outside thereof, and means for detachably securing said base to said boiler extension, substantially as set forth.

29. In combination with the boiler extension of a locomotive, a headlight having a case provided with a base which conforms substantially to the contour of and is adapted to be mounted on said extension and which is provided with means for adjustment thereto, a ring or frame secured to said base and to which ring or frame said body is also secured, an air-passage extending horizontally through said base, an opening in the top of said base through which opening air is admitted from said air-passage into said case, and means for securing the headlight to said extension, substantially as set forth.

30. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming substantially to the contour of and which is adapted to be mounted on said extension and having provision for adjustment thereto, a ring or frame secured to said base and to which ring or frame said body is also secured, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, openings in the wall of said base for ingress and egress of air to and from said air-passage, and means for securing the headlight to said extension, substantially as set forth.

31. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming substantially to the contour of and which is adapted to be mounted on said extension and having provision for adjustment thereto, a ring or frame secured to said base and to which ring or frame said body is also secured, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, openings in the wall of said base for ingress and egress of air to and from said air-passage; the said case being detachably mounted on said base, and means for securing the headlight to said extension, substantially as set forth.

32. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming to the contour of and which is adapted to be mounted on said extension, a ring or frame secured to said base and to which ring or frame said body is also secured, a horizontal

disk or partition in said base and whereby the base is divided into upper and lower compartments, vertical partitions connecting the top of said base with said horizontal disk or partition and whereby an air-passage is formed through said base, openings in the wall of said base for ingress and egress of air to and from said air-passage; the said case being detachably mounted on said base, and means for securing the headlight to said extension, substantially as set forth.

33. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base conforming to the contour of and being adapted to be mounted on said extension and having provision for adjustment thereto, a ring or frame secured to said base and to which ring or frame said body is also secured, a horizontal disk or partition in said base and whereby the base is divided into upper and lower compartments, openings in the wall of said base for ingress and egress of air to and from said compartments, and means for securing the headlight to said extension substantially as set forth.

34. In a locomotive-headlight case, the combination of a vertical cylindrically-formed body having an opening therein and an extension containing a glass disk through which light may be reflected, a door-opening, a door of the same contour as said body; said door being hinged to said body and adapted to close said door-opening, a dome-shaped top terminating above in a contracted neck, a cap mounted above the same, and a base having a vertically-disposed wall with its bottom shaped to substantially fit and being adapted to be mounted on the boiler extension of a locomotive, and having provision for adjustment thereto, a ring or frame secured to said base and to which ring or frame said body is secured on the outside thereof, and means for securing the case on said extension, substantially as set forth.

35. In combination with the boiler extension of a locomotive, a headlight having a case provided with a base having a curved and vertically-disposed wall with its lower edge conforming to the contour of and being adapted to be mounted on said extension, a sliding base having a lamp and reflector mounted thereon, ways fixed to said base and adapted to receive said sliding base, and means for securing said base to said boiler extension, substantially as set forth.

36. In combination with the boiler extension of a locomotive, a headlight having a case provided with a hollow base having a curved and vertically-disposed wall with its lower edge conforming to the contour of and being adapted to be mounted on said extension, a sliding base having a lamp and reflector mounted thereon, ways fixed to said base and adapted to receive said sliding base, and means for securing said base to said boiler extension, substantially as set forth.

37. In a locomotive-headlight, the combina-



tion of a case having a vertical cylindrically-formed body and a hollow base; the said base being provided with a curved and vertically-disposed wall with an air-passage there-through communicating with the interior of the case, a sliding base having a lamp and reflector mounted thereon, and ways fixed to said base and adapted to receive said sliding base, substantially as set forth.

38. As a new article of manufacture, a base for a headlight consisting of a hollow shell having the lower edge of one of its walls shaped or formed to substantially the contour of the boiler extension of a locomotive upon which the same is adapted to be mounted, an air-passage through said base and an opening through the top of the base; the said opening communicating with said air-passage, substantially as set forth.

39. As a new article of manufacture, a base for a headlight consisting of a hollow shell having the lower edge of one of its walls shaped or formed to substantially the contour of the boiler extension of a locomotive upon which the same is adapted to be mounted, a disk dividing the hollow of said base into upper and lower compartments, an air-passage through the upper of said compartments, and an opening through the top of said base; said opening communicating with said air-passage, substantially as set forth.

In testimony whereof we hereunto affix our signatures this 5th day of September, 1899.

JACOB N. BARR. [L. S.]

JOHN KIRBY, JR.

In presence of—

GEORGE G. MASON,  
N. EMMONS, Jr.