

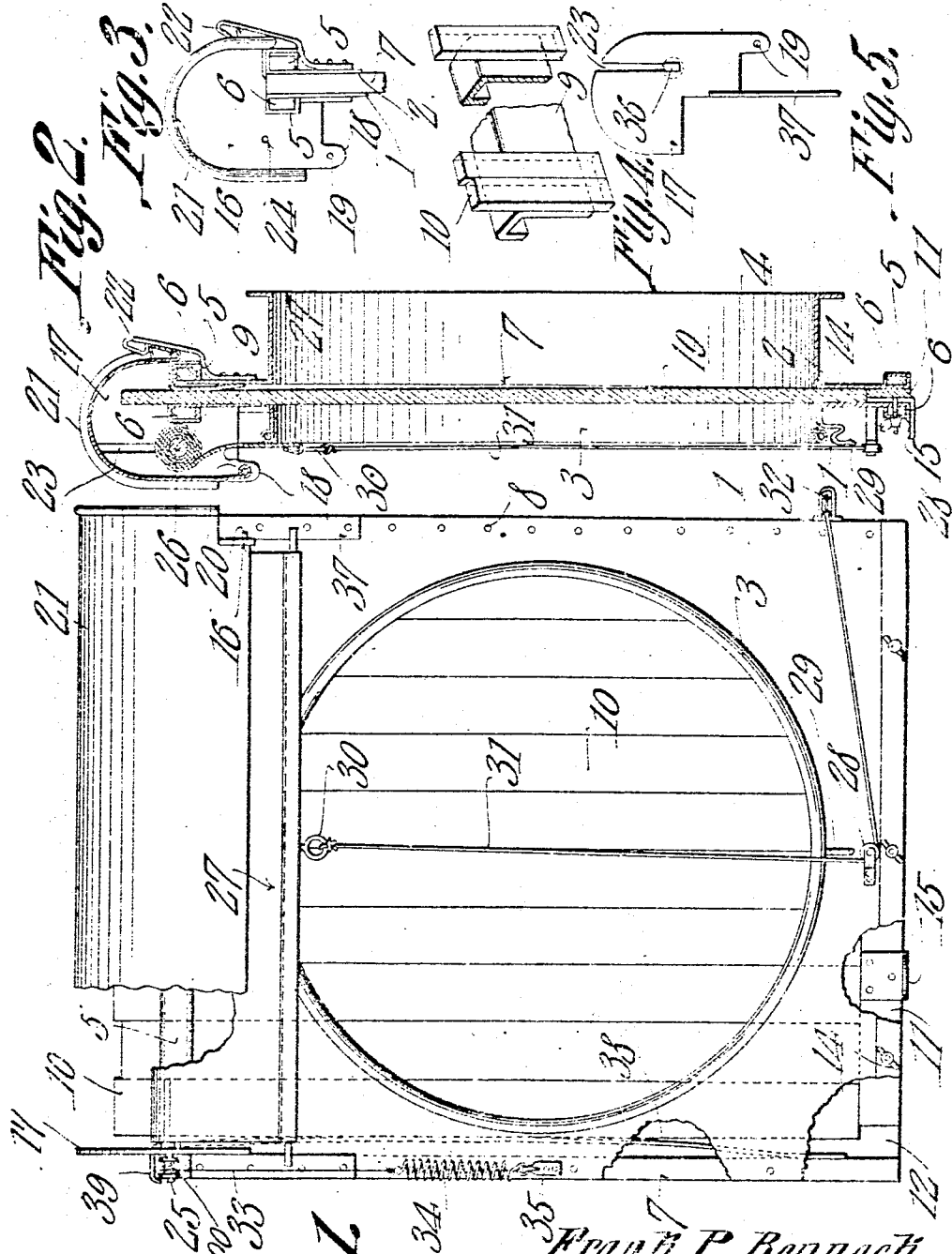
F. P. BENNACK.

HEADLIGHT.

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964,481.

Patented July 19, 1910.



Witnesses

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Fig. 1

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UNITED STATES PATENT OFFICE.

FRANK P. BENNACK, OF SAN ANTONIO, TEXAS.

HEADLIGHT.

964,481.

Specification of Letters Patent.

Patented July 19, 1910.

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To all whom it may concern:

Be it known that I, FRANK P. BENNACK, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Headlight, of which the following is a specification.

It is the object of this invention to provide a structure adapted to serve as the front wall of a headlight, to house the lens portion of the headlight and to serve as a mounting for a curtain, adapted to be drawn downwardly in front of the lens portion of the headlight.

Another object of the invention is to provide a novel means for mounting and protecting a curtain adapted to be drawn in front of a headlight.

Another object of the invention is to provide a novel means for retaining the lens portion of the headlight in place.

Another object of the invention is to provide a casing adapted to house the lens portion of a headlight in such a way that the lens may readily be removed, a closure for the casing being adapted to serve as a means for retaining the lens portion of the headlight in place, and as a means for shielding a curtain adapted to be drawn in front of the lens, and for maintaining the mounting of the curtain in place.

Another object of the invention is to improve generally and to increase the efficiency of devices of the class hereinafter described.

The drawings delineate preferred embodiments merely, and it is to be understood that changes, properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

In the drawings,—Figure 1 is a front elevation, parts being broken away in order better to reveal the internal construction of the device; Fig. 2 is a transverse section; Fig. 3 is a fragmental end elevation; Fig. 4 is a detail perspective of a spring which is employed for holding the lens portion of the structure in place; and Fig. 5 is a side elevation of a bracket which enters into the construction, the figure being designed to show a modified means for mounting the curtain.

The invention includes, as a primary and fundamental element, a casing. This casing is shown in the drawings detached from the headlight of which it is designed to become a part. It is therefore to be under-

stood that the casing may be assembled in any desired manner, with a headlight of any construction.

The casing includes a front wall 1 and a rear wall 2, spaced slightly apart. Protruding from the wall 1 is the front lens hood 3, and protruding from the rear wall 2, is the rear lens hood 4. At their upper and lower ends, the walls 1 and 2 are rolled outwardly, as denoted by the numeral 5, and filling strips 6 are inserted into these rolled portions. The walls 1 and 2 are maintained apart by means of spacing pieces 7 which are introduced between the walls adjacent their edges. These spacing pieces 7, as seen most clearly in Fig. 2, diverge as they extend upwardly, so that, while the lower edges of the walls 1 and 2 are relatively near together, the said walls, at their upper edges, are spaced apart at considerable distance; say, twice the distance at which they are spaced apart at their lower edges. The walls 1 and 2 may be connected with the spacing pieces 7 in any desired manner; the rivets 8 will be sufficient to this end.

Secured to the upper portion 5 of the rear wall 2 is a rectangular spring strip 9, seen most clearly in Fig. 4 of the drawings, and of sufficient length to extend entirely across the casing. One arm of this spring strip 9 depends between the walls 1 and 2 at their upper edges, the spring strip 9 being adapted to press against the rear faces of a plurality of transparent plates 10, inclosed between the front wall 1 and the rear wall 2, these plates constituting what for convenience may be denominated the lens portion of the device. Owing to the diverging relation of the walls 1 and 2, space is provided between them, at their upper ends, for the insertion of the spring strip 9 which bears against the plates 10.

The lower ends of the plates 10 rest upon a supporting bar 11. This supporting bar 11 is mounted in place between the lower ends of the walls 1 and 2, the length of the supporting bar 11 being somewhat less than the width of the casing between the spacing pieces 7. By this construction, openings exist at the ends of the supporting bar 11, whereby dirt, and pieces of broken glass, will readily sift out of the casing. The supporting bar 11 may be held in place between the walls 1 and 2 by means of bolts and thumb nuts 14, extended through the rolled portions 5 located at the lower ends of the

walls 1 and 2. A rectangular finger strip 15 is secured to the supporting bar 11, one arm of this finger strip outstanding beyond the face of the casing, so that the supporting bar may readily be removed from the position in which it is normally mounted.

Secured to the front wall 1 of the casing are brackets 16 and 17. These brackets may be provided with depending legs 37, the same being riveted or otherwise secured to the front wall 1. Located between the walls 1 and 2, at one side of the casing, is an arcuate spring strip 38, the upper end 39 of which is secured between the bracket 17 and the upper end of the casing. This spring 38 bears against the edge of one of the plates 10, and serves to maintain the adjacent edges of the several plates 10 in contact with each other. Thus, through the instrumentality of the springs 38 and 9, the several plates 10 will be held yieldably in place, so that, under the heat of the lamp, these plates may expand both transversely and longitudinally, without danger of breaking.

The brackets 16 and 17 are provided at their forward edges, with the depending lugs 13 in which are openings 19, adapted to receive the ends of a rod 20, connected with one edge of a trough shaped lid or closure 21; thus, the lid 21 is pivotally mounted, the same being adapted to extend over the top of the casing to serve as a closure therefor, the lid being held in closed position by means of a lug and spring catch device 22, connected with the upper portion of the rear wall 2.

In the upper edge of the bracket 17 there is a notch 23, while in the bracket 16 there is a circular opening 24. These elements 23 and 24 are adapted to receive rotatably, the spindles 25 in the ends of a shaft 26, upon which is wound a curtain 27. At this point it may profitably be stated that the lid 21 serves to shield the shaft 26 and a portion of the curtain 27 which is rolled thereon, and likewise to prevent the spindle 25 which is mounted in the notch 23, from being disengaged from the bracket 17. Moreover, the lid, extending over the upper ends of the several plates 10, serves to maintain the said plates in place, preventing them from being displaced, upwardly.

Located upon the front wall 1 below the front lens hood 3, is a pulley 28 of any desired construction. Suitably disposed upon the front wall 1 adjacent the pulley 28, is a hook 29. Upon the lower end of the curtain 27 there is a ring 30, to which is secured one end of a cord 31, the intermediate portion of the cord 31 being carried anti-frictionally in the pulley 28, the ring 30 being adapted to be engaged by the hook 29, to hold the curtain 27 in front of the lens portion of the device, the curtain being normally held in rolled up position by means of

certain mechanisms to be described hereinafter. Located adjacent one side of the casing is a pulley 32, and the extremity of the cord 31 is carried about this pulley 32 and extended rearwardly for convenient manipulation; the cord at its end, when the device is used upon a locomotive engine, being extended into the cab thereof, when desired.

For the actuation of the curtain 27, a variety of devices may be employed. If desired, one end of a flexible element 33 may be wound about a spool 100 upon one of the spindles 25, the other end of the flexible element being connected with the upper end of a retractile spring 34, the lower end of which is secured by a hook and eye connection as at 35, or in any desired manner, to the front wall 1 of the casing. When this expedient is resorted to, both of the spindles 25 are rotatably mounted in the brackets 16 and 17. Sometimes, however, the spring 34 is dispensed with, and a common, spring actuated roller of the Hartshorne type is used. In such instance, the squared end 36 of the spring actuated curtain roller is held against rotation in the notch 23 of the bracket 17, as shown in Fig. 5.

The operation of the device will probably be clear from the foregoing description, but it may be stated briefly at this place that by manipulating the cord 31, the curtain 27 may readily be drawn downwardly in front of the lens portion of the device, the curtain being maintained in position, either by securing the extremity of the cord 31, or by hooking the ring 30 over the member 29. Owing to the presence of the resilient members 38 and 9, the several plates 10 will be yieldably held, so that they may expand and contract without danger of breakage. By removing the supporting bar 11 one or more of the plates 10 may be replaced; or by swinging the lid 21 forwardly, the plates 10 may be removed from the top of the device. Owing to the fact that there are openings at the ends of the supporting bar the dust and dirt within the casing may readily find its way out of the same.

The lid 21 serves to protect the interior of the casing, to protect the rolled up portion of the curtain 27, to protect the upper ends of the plates 10 and to limit the upward movement, both of the plates 10 and of the spindle 25 which is mounted in the slot 23 of the bracket 17.

Although but one of the spindles 25 is shown in Fig. 1, the other spindle 25 need not be specifically shown, since it is simply a projecting element upon the end of the shaft 26, rotatably mounted in the opening 24 in the bracket 16; the construction being common and well known. The lower ends of the plates 10 are retained between the lower ends of the walls 1 and 2, while the spring 9 serves, as hereinbefore pointed out, to press

against and to hold the upper ends of the plates.

Having thus described the invention, what is claimed is:—

5 1. In a device of the class described, an open top casing; brackets carried by the casing adjacent its top; a shaft carried by the brackets and removable through the upper edge of one of the brackets; a curtain wound
10 upon the shaft; a transparent plate mounted in the casing; and a closure for the top of the casing, the closure constituting at once a shield for the curtain and a means for holding both the plate and the shaft against dis-
15 placement.

2. In a device of the class described, a casing comprising spaced walls; a transparent plate insertible between the walls; a spring connected with one of the walls adjacent its
20 top and bearing against one side of the plate; a spring mounted between the walls and bearing against one edge of the plate; and a member removably held between the walls adjacent their lower ends to constitute
25 a support for the plate.

3. A device of the class described comprising spaced walls diverging from each other from their lower toward their upper ends; a transparent plate held against trans-
30 verse movement between the lower ends of the walls; a spring secured to one wall adjacent its upper end and depending between

the walls to bear against the plate; and a member removably held between the lower ends of the walls and engageable by the
35 lower end of the plate to hold the upper portion thereof within the grasp of the spring.

4. In a device of the class described, an open top casing; a transparent plate inclosed
40 within the casing; brackets carried by the casing adjacent its top; a shaft terminally supported in the brackets; a curtain wound about the shaft and arranged to depend in front of the transparent plate; a closure for
45 the top of the casing, pivotally mounted in the brackets and arranged to house the shaft and the plate; resilient means for normally maintaining the curtain in rolled up position; a flexible element connected with the curtain
50 and anti-frictionally held at the lower portion of the casing; and cooperating elements upon the casing and the curtain for maintaining the curtain in front of the trans-
55 parent plate, against the action of the resilient means.

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

FRANK P. BENNACK.

Witnesses:

JOHN J. CAVANAUGH,
H. K. CATHER.