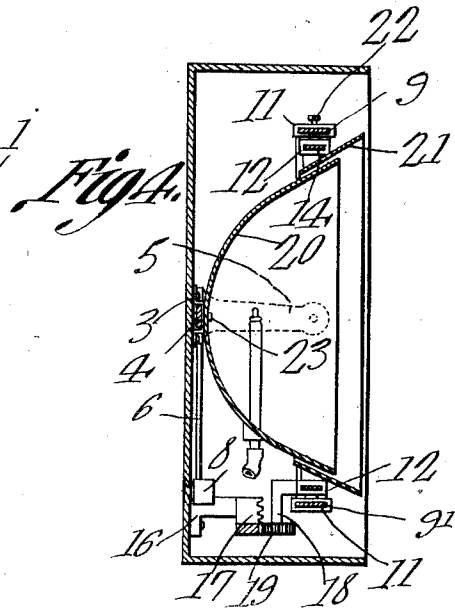
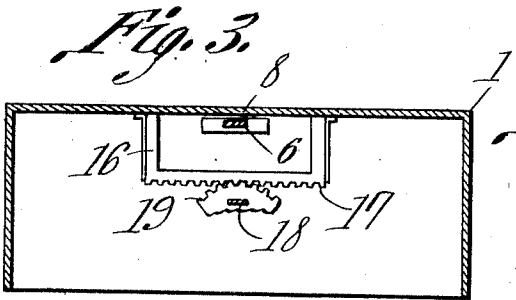
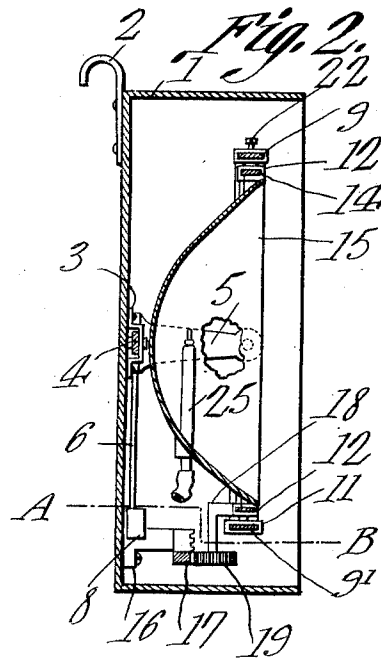
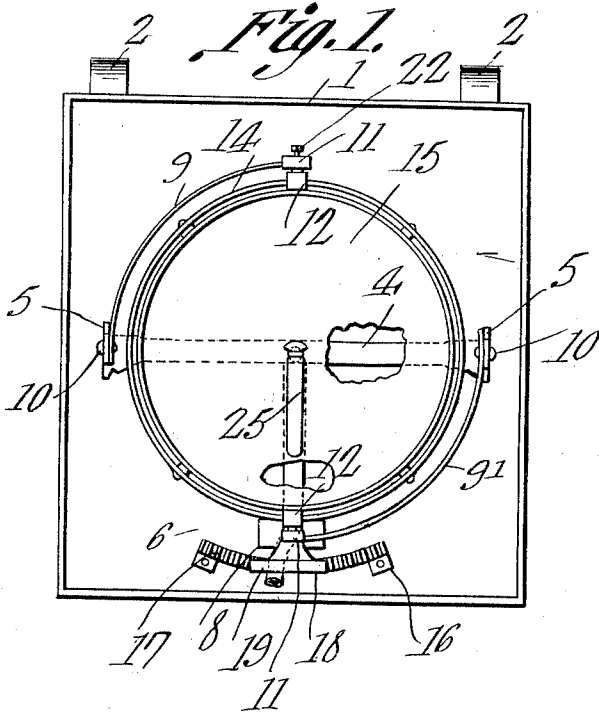


J. KAUFMAN.
HEADLIGHT OPERATING DEVICE.
APPLICATION FILED JUNE 1, 1911.

1,009,973.

Patented Nov. 28, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN KAUFMAN, OF HAZLETON, PENNSYLVANIA.

HEADLIGHT-OPERATING DEVICE.

1,009,973.

Specification of Letters Patent.

Patented Nov. 28, 1911.

Application filed June 1, 1911. Serial No. 630,716.

To all whom it may concern:

Be it known that I, JOHN KAUFMAN, a citizen of the United States, residing at Hazleton, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Headlight-Operating Device, of which the following is a specification.

The device forming the subject matter of this application, is adapted to be applied to locomotives, automobiles, aero-planes, and other structures, to effect a swinging of a light, when the structure rounds a curve, the construction being such that the light will automatically follow the curve which the structure is rounding.

It is the object of the invention to provide novel means for mounting a light-directing member upon a fixed support, so that the light-directing member will automatically follow the curve, means being provided for limiting and controlling the swinging movement of the light-directing member.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 shows one form of the invention in front elevation; Fig. 2 shows, in vertical transverse section, the structure depicted in Fig. 1; Fig. 3 is a horizontal section upon the line A—B of Fig. 2; and Fig. 4 is a vertical transverse section showing a modified form of the invention.

In carrying out the invention there is provided a supporting structure, preferably taking the form of a case 1, provided with suitable suspension means 2. The form of the case 1 may be varied, to meet the requirements of the user. Secured to the rear portion of the case 1, is a bracket 3 in which a movable, oscillating frame is supported. This frame is a composite structure, and includes a flat pendulum member, the pendulum member consisting of a cross bar 4, pivoted intermediate its ends in the bracket 3, and provided between its ends with a bar 6, downwardly extended and carrying a weight 8. Outstanding from the ends of the cross bar 4, are arms 5. The

final members of the oscillating, movably supported frame, are represented by curved suspension elements 9 and 9', extended from the arms 5, in opposite directions, toward the longitudinal center of the structure, these elements 9 and 9' being secured to the ends of the arms 5, as shown at 10, or, if desired, the elements 9 and 9' may be fashioned integrally with the arms 5.

Upon the ends of the suspension elements 9 and 9', lugs 11 are formed, the lugs 11 being adapted to receive pivot elements 12, upon a holder, preferably taking the form of a ring 14. In order to limit the swinging movement of the ring 14, a set screw 22 may be threaded into the upper lug 11, to engage the upper pivot member 12. The pressure with which the set screw 22 bears against the pivot member 12, may be adjusted by rotating the set screw. Therefore, the set screw constitutes a means for limiting the movement of the holder. The ring 14 carries a light-directing member, the same, in the present instance, taking the form of a reflector 15.

Secured to the case 1, below the weight 8, is a bracket 16, carrying upon its forward edge, a rack 17, vertically curved. The lower pivot element 12 of the ring 14 is provided with a rearwardly extended angular bracket 18, to the lower end of which is secured a transversely disposed rack 19, horizontally curved, and adapted to mesh into the rack 17.

The lamp is denoted conventionally by the numeral 25. Since the form of this lamp may vary, depending on the nature of the illuminant, the lamp 25 will be described but briefly, it being understood that the reflector 15 may be altered in form, depending upon the nature of the illuminant used. I bind myself to no specific form of lamp 25, and reserve the right to alter the reflector, to accommodate such lamp, within the scope of what is claimed.

Recalling that the outer rail of the curve upon a railroad, is ordinarily elevated, the same construction being carried out upon a well constructed highway, it will be seen that when the vehicle upon which the case 1 is mounted, rounds such a curve, the movable frame carrying the weight 8, will move upon the pivotal connection with the bracket 4. Under such circumstances, the rack 19, meshing into the rack 17, will serve to swing the ring 14 horizontally, thereby turning

the reflector 15 laterally, in the direction in which the vehicle is turning. When the vehicle is again upon a tangent, the weight 8 will dispose the parts in original positions, the reflector 15 pointing directly ahead.

If desired, the structure hereinbefore described may be altered, to the extent indicated in Fig. 4. Under such circumstances, the reflector 20 is secured directly to the bracket 4, as shown at 23, the ring 14 carrying a hood 21. Under this construction, the hood 21 constitutes the light-directing member, the reflector 15 being rigidly mounted.

The operation of the structure shown in Fig. 4 does not differ materially, from the operation of the structure shown in Fig. 1, with the exception that, in Fig. 4, the reflector 20 remains rigid, while the hood 21 is turned laterally, to deflect the light.

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

1. A device of the class described comprising a fixed support; a frame comprising a pendulum member pivoted adjacent its upper edge to the support, arms outstanding from the pendulum member, and suspension elements extended from the arms in opposite directions toward the vertical center of the device; a holder pivotally connected with the suspension elements; a light-directing member fixed to the holder; a rack upon the support; and an intermeshing rack upon the holder.

2. A device of the class described com-

prising a fixed support; a frame comprising a cross bar pivoted to the support, an arm depending from the cross bar, a weight upon the lower end of the arm; arms outstanding from the ends of the cross bar, and suspension elements extended from the last named arms, in opposite directions, toward the vertical center of the device; a light-directing member pivotally carried by the suspension elements; a fixed rack, and a movable rack meshing into the fixed rack, and connected with the light-directing member.

3. A device of the class described comprising a fixed support; a movable frame comprising a cross bar pivoted to the support, an arm depending from the cross bar, a weight upon the arm, arms outstanding from the ends of the cross bar, and suspension elements extended from the last named arms, in opposite directions, toward the vertical center of the device; a ring pivoted in the suspension elements; a light-directing member carried by the ring; a rack upon the support; a bracket depending from the ring; and a rack upon the bracket, meshing into the first named rack.

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

JOHN KAUFMAN.

Witnesses:

EUGENE E. SPIGELMYER,
FRANK E. WEAR.