J. H. CLARK.

REVOLVING HEADLIGHT.

APPLICATION FILED APR. 30, 1910.

966,427.

Patented Aug. 9, 1910.

Fig. 1.

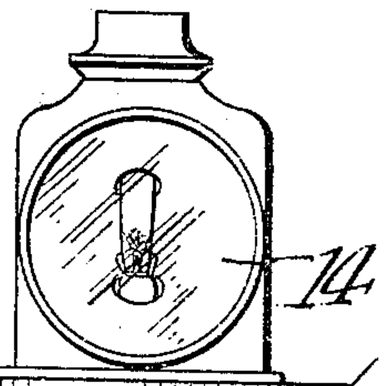


Fig. 4.

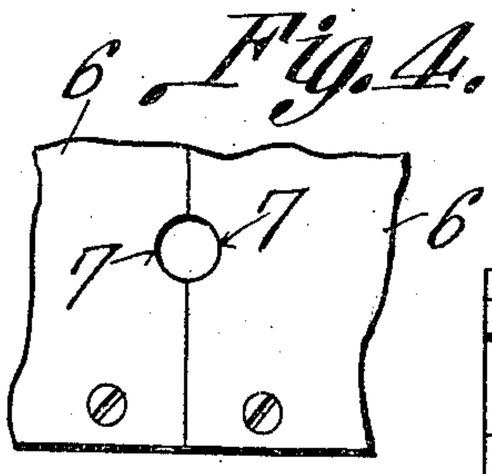


Fig. 2.

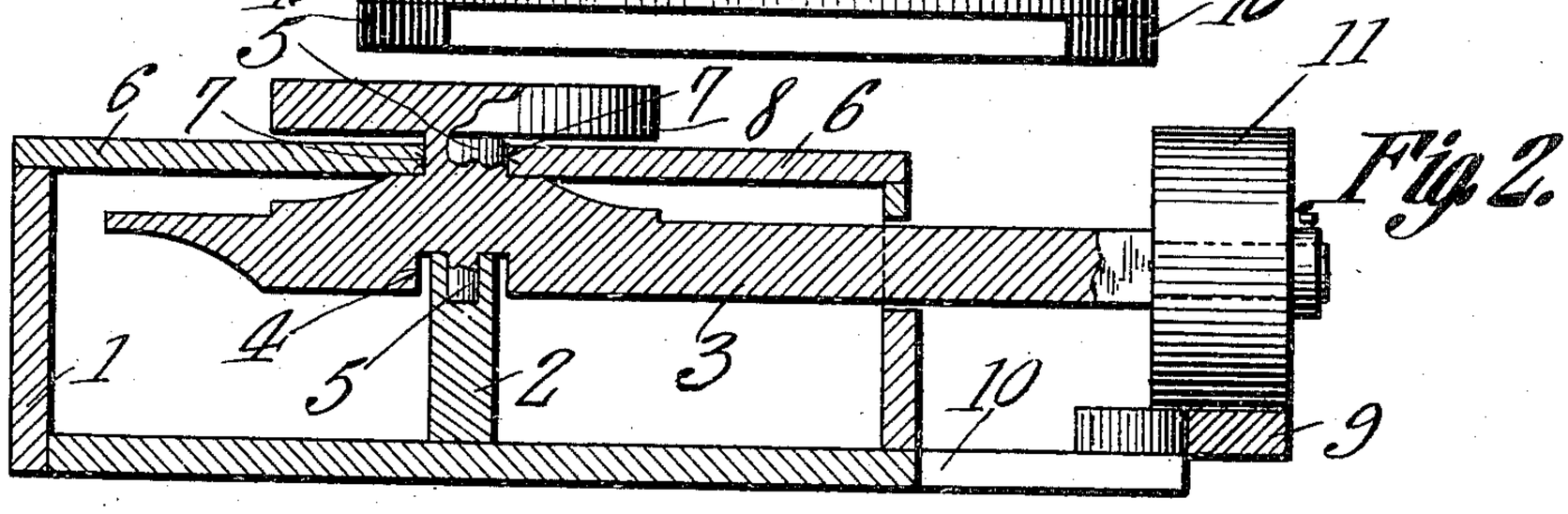
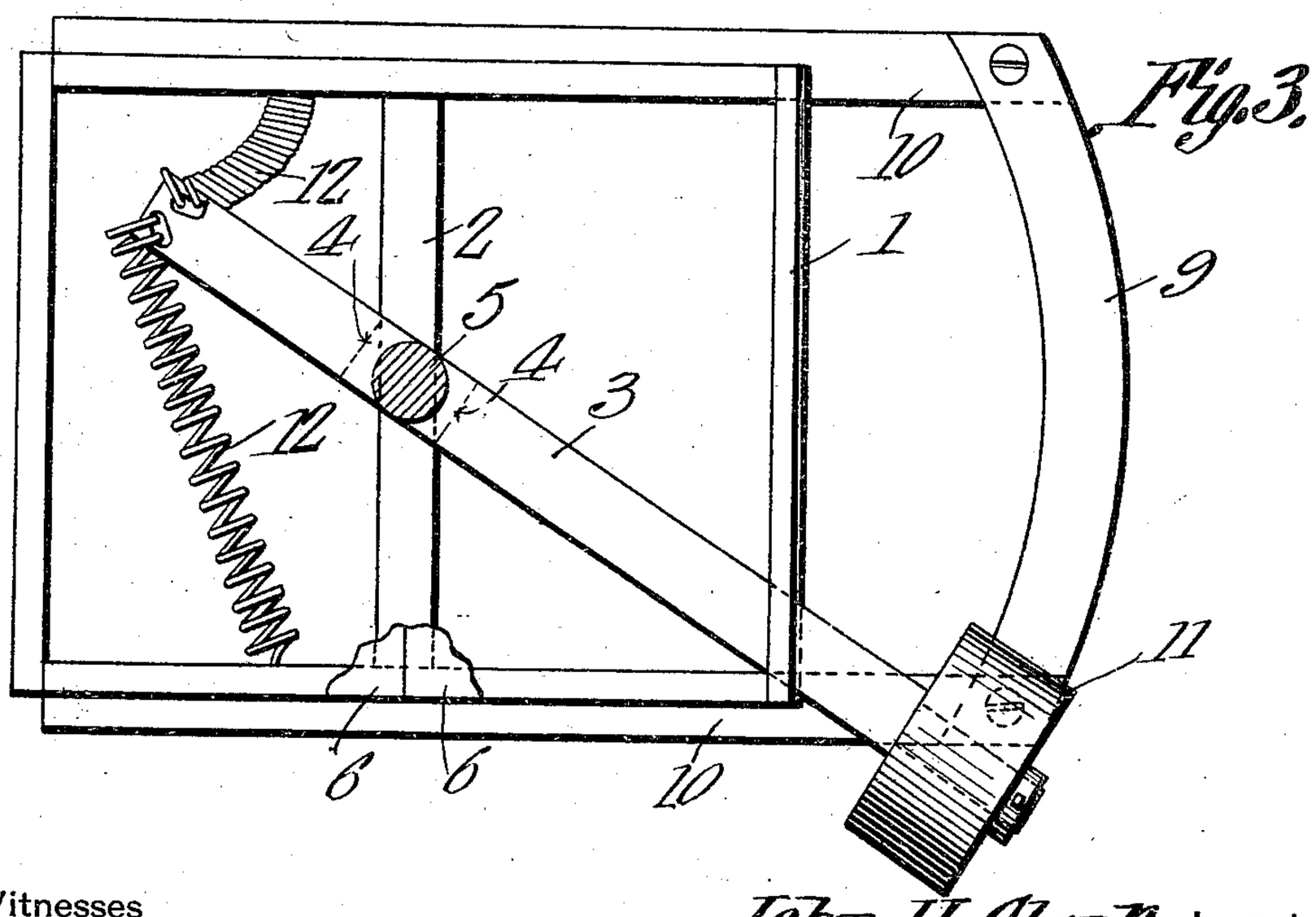


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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REVOLVING HEADLIGHT.

966,427. Specification of Letters Patent. Patented Aug. 9, 1910.

Application filed April 30, 1910. Serial No. 558,542.

To all whom it may concern:

Be it known that I, JOHN H. CLARK, a citizen of the United States, residing at Rock Camp, in the county of Monroe and State of West Virginia, have invented a new and useful Revolving Headlight, of which the following is a specification.

It is the object of this invention to provide, in a simple and inexpensive form, a device adapted to receive a head-light, and so constructed that, as the vehicle upon which the head-light is mounted rounds a curve, the head-light will be tilted to follow the curve.

Another object of the invention is to provide a device of this character so constructed that when one side of the vehicle upon which it is mounted, is elevated, as the vehicle rounds a curve, the lamp which the device is adapted to support, will follow the curve.

Another object of the invention is to provide a lamp-carrying arm having a weight adapted to secure a movement of the arm, and to provide a means for supporting the weight.

Another object of the invention is to provide a means for limiting the movement of the arm upon which the lamp is mounted, and to provide a novel means for mounting the arm in place.

Changes, properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

In the accompanying drawings,—Figure 1 is a front elevation; Fig. 2 is a longitudinal section parts being removed and parts being shown in elevation; Fig. 3 is a top plan, parts being removed; and Fig. 4 is a fragmental plan of the closure.

In carying out the invention there is provided, as a primary and fundamental element a case 1, which may be of any form, a simple structure being selected for the purpose of illustration. This case 1 is provided, in its interior, with a transverse partition 2, forming a support for an arm 3, the arm 3 being notched, as at 4, to receive the upper edge of the partition 2. By thus notching the arm 3, the arm and the partition 2 are provided with interlocking elements adapted, as will be pointed out hereinafter, to limit the swinging movement of the arm. Formed integrally with the intermediate portion of the arm 3 is a pivot element 5, carrying upon its upper end a head 8, to which the lamp 14 is secured.

The closure for the case consists of separable parts denoted by the numerals 6. In the meeting edges of these parts 6 are notches 7, coöperating to form a bearing in which the pivot element 5 is held for rotation. These closure parts 6 are separately secured to the case 1, and they may be easily removed in order to free the pivot element 5 from its mounting.

Supported upon outstanding arms 10, extended forwardly from the case 1, or in any other suitable manner, is an arcuate track 9, upon which a weight 11, secured for rotation to the forward end of the arm 3, is adapted to roll. A counterpoise means, adapted to offset the action of the weight 11, is provided, and this means consists, preferably, of a pair of oppositely disposed helical springs 12, the remote ends of which are secured to the case 1, the adjacent ends thereof being secured to the rear end of the arm 3.

The outer rail of a curved track is commonly elevated above the inner rail thereof, and as the locomotive engine upon which the device is adapted to be mounted, rounds the curve, the case 1 will be tilted out of the horizontal, the weight 11 rolling upon the track 9 toward the center of curvature of the track, thus tilting the arm 3, and causing the lamp 14 to follow the curvature of the track. The springs 12 serve to offset the action of the weight 11, and to prevent an irregular or jarring movement of the lamp, as the same is swung about.

By reason of the fact that the arm 3 is notched, as denoted by the numeral 4, to fit over the upper edge of the supporting partition 2, the arm 3 cannot be tilted laterally to such an extent that the weight 11 will roll off the end of the track 9, the notch 4 in the arm 3 engaging the partition 2 when the arm is tilted, to limit the movement of the forward end of the arm 3 to such a position that the weight will at all times be held between the ends of the track 9.

It may be noted that the centrifugal force will tend to roll the weight 11 outwardly when the train rounds a curve, while the elevation of the outside rail will tend to roll the weight inwardly, toward the center of curvature of the track. It is to be recalled, however, that the elevation of the outside rail is not confined to the curve alone, the elevation of the outside rail being carried upon the tangent, at both ends of the curve, and being gradually increased as the curve

is approached. Thus, as the locomotive approaches the curve, and while the locomotive is still upon the tangent, the locomotive will be tilted, causing the weight 11 to roll toward the center of curvature of the track. Thus, the lamp 14 will be moved before the centrifugal force can operate to roll the weight 11 outwardly; and when the track 9 is inclined, transversely of the locomotive, with the weight 11 disposed at the lowermost portion of the said track 9, the centrifugal force tending to roll the weight outwardly, will be insufficient to overcome the inertia of the weight, and to roll the same upwardly, along the inclined track 9.

What is claimed is:—

1. A device of the class described comprising a lamp-carrying arm pivoted for horizontal movement; a weight rotatable upon one end of the arm; and a fixed track upon which the weight is adapted to roll.

2. A device of the class described comprising a lamp-carrying arm pivoted for horizontal movement; a weight rotatable upon one end of the arm; a fixed track upon which the weight is adapted to roll; and counterpoise means for limiting the movement of the arm.

3. A device of the class described comprising a lamp-carrying arm pivoted intermediate its ends for horizontal movement; a weight rotatable upon one end of the arm; a fixed track upon which the weight is adapted to roll; and oppositely positioned, opposed springs fixed at their remote ends and at their adjacent ends secured to the other end of the arm.

4. A device of the class described comprising a case; a support therein; a lamp-carrying arm resting upon the support for horizontal movement and provided with an upstanding pivot element; a removable multipart closure for the case having coöperating elements to hold the pivot element for rotation; and a weight at the end of the arm.

5. A device of the class described comprising a case; a support therein; a lamp-carrying arm resting upon the support for horizontal pivotal movement; a weight rotatable upon the arm; and a fixed track upon which the weight is adapted to roll; the arm and the support being provided with interlocking elements to prevent the weight from rolling off the ends of the track.

6. A device of the class described comprising a transverse support and a lamp-carrying arm pivotally held thereon for horizontal swinging movement, in one of which there is a notch to receive the other, thereby to limit the swinging movement of the arm; a weight rotatable upon the arm; and a fixed track upon which the weight is adapted to roll.

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

JOHN H. CLARK.

Witnesses:

Mrs. J. M. Swope,

Elsie Shanklin.