

I. L. WADE & W. L. SMITH.  
LOCOMOTIVE HEADLIGHT.  
APPLICATION FILED NOV. 1, 1907.

936,200.

Patented Oct. 5, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

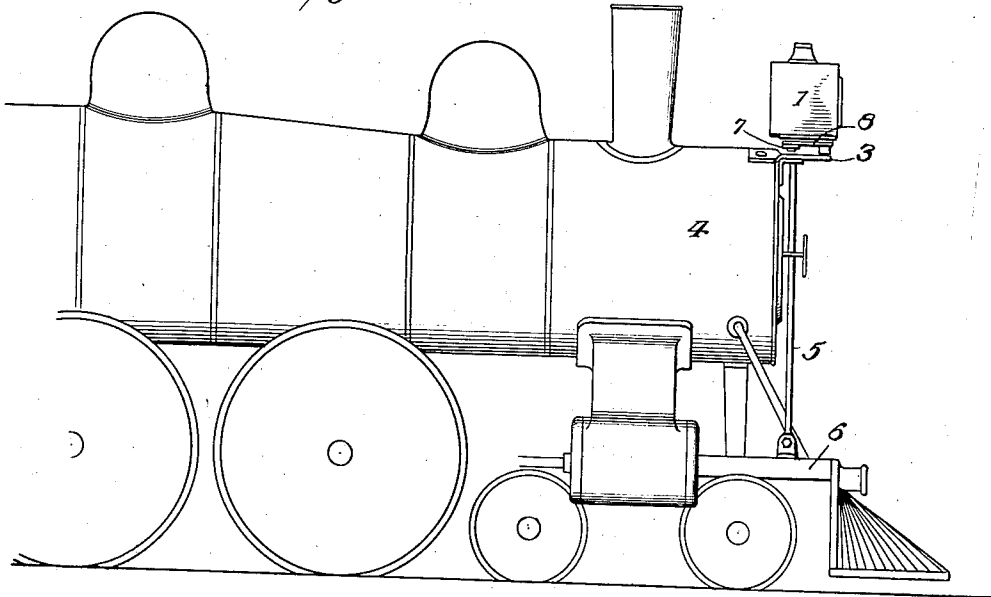
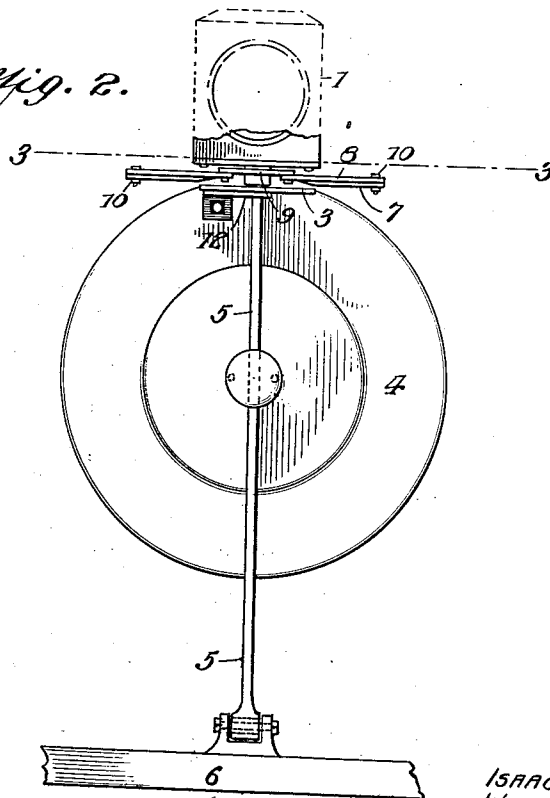


Fig. 2.



WITNESSES

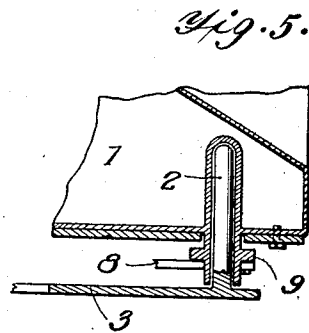
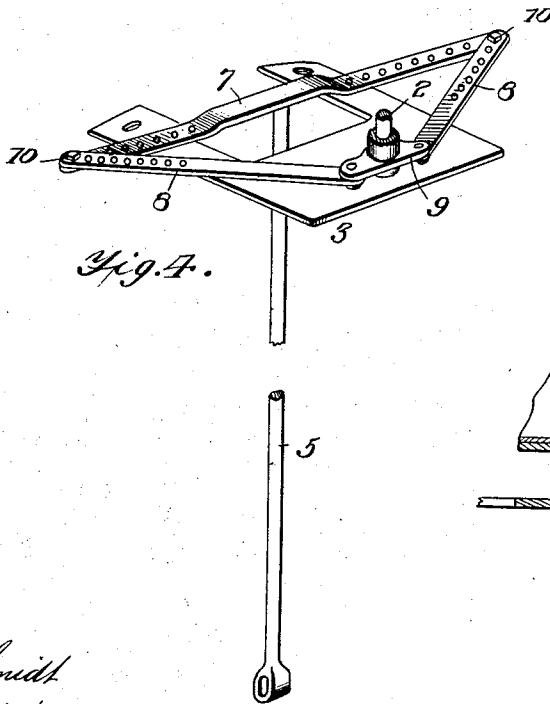
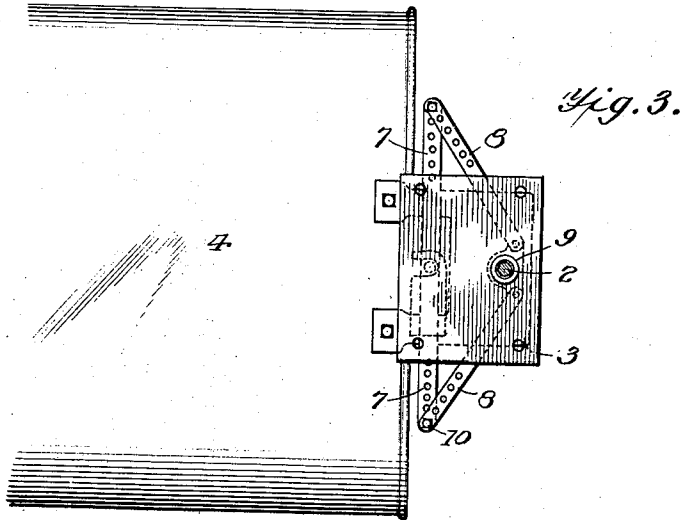
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ATTORNEYS

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# UNITED STATES PATENT OFFICE.

ISAAC LEWIS WADE AND WILLIAM LOFTON SMITH, OF ROANOKE, VIRGINIA.

## LOCOMOTIVE-HEADLIGHT.

936,200.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed November 1, 1907. Serial No. 400,308.

*To all whom it may concern:*

Be it known that we, ISAAC L. WADE and WILLIAM L. SMITH, citizens of the United States, residents of Roanoke and county of Roanoke, State of Virginia, have invented an Improvement in Locomotive-Headlights, of which the following is a specification.

Our invention is an improvement in that class of locomotive head-lights which are pivoted and so connected with the front truck as to be turned with the latter in passing around curves.

The details of construction, combination, and operation of parts embodying our invention are as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the front portion of the locomotive with our invention applied thereto. Fig. 2 is mainly a front view of the parts, a portion of the head-light being broken away. Fig. 3 is a horizontal section on the line 3—3, Fig. 2. Fig. 4 is a perspective view of the means which operatively connect the truck with the head-light for rotating the latter. Fig. 5 is a detail section of the pivot support of the head-light.

The head-light 1 is pivoted upon a vertical pin 2—see Fig. 5—which is supported on the front end of a horizontal plate 3, that is rigidly attached to, and projects forward from, the top of the boiler 4. A vertical rod 5 is pivotally connected with the truck 6 by a loose joint, in such manner as to turn therewith. The lower end of the rod 5 is provided with a vertical slot and a pin passes through the same. The slot is made of such size or horizontal diameter as to permit the pin to work freely therein. The upper end of said rod is attached to a transverse bar 7—see Fig. 4—and the latter is in turn connected by bars or arms 8 with a yoke 9, to which the head-light 1 is rigidly attached. The bars 7 and 8 have a certain degree of elasticity and are also connected by loose joints, which construction permits such lateral movement of the rod 5 as is incident to the turning of the truck in rounding curves. The yoke 9 is journaled on the pivot 2 so as to turn freely thereon.

It is obvious from this construction and arrangement of parts, that the horizontal bar 7 must turn with the truck 6 by reason of their connection through the medium of the vertical rod 5, and that, in consequence,

the yoke 9 will be shifted on the pivot 2 through the medium of the bars 8 which connect it with the transverse bar 7. The bars or arms 8 are arranged at an acute angle to the bar 7, and both are provided with perforations to receive pivot bolts 10—see Fig. 4. By means of such perforations, it is obvious the bolts 10 may be shifted as required for connecting the bars or arms 8 with the bar 7 at different points. It is further apparent that, by shifting the pivotal connection between the bars 7 and 8, the head-light 1 will be rotated more or less; that is to say, it will be swung through a greater or lesser arc, and that the length of the arc or the degree to which the head-light is turned by the deflection of the truck right or left will correspond to the distance of the pivotal connection at 10 from the rod 5. Thus, an adjustment may be quickly effected for causing the head-light to swing or rotate to any extent desired, or according to the sharpness of the curves on the road on which the locomotive is to run.

The head-light, together with the yoke 9 and arms 8, may be readily detached when required for any purpose.

The rear or inner end of the horizontal plate 3, constituting the pivot support of the head-light, is cut out or slotted, as shown in Fig. 4, in order to provide space for the operation of the vertical rod 5. The latter also passes through a fixed guide 12 which is secured to the front of the boiler. When the truck turns to the right or left, the rod 5 also turns on its axis to a corresponding degree, and it likewise inclines laterally more or less according to the radius of the curve described by the locomotive. This lateral movement is permitted by the loose action of the rod with the truck and with the bracket 12.

What we claim is:

1. The combination, with a swiveled truck and a head-light pivoted upon a support, of means for operatively connecting the head-light and the truck, consisting of a vertical rod which is attached to the truck, a horizontal bar secured to the upper end of said rod and extending transversely in rear of the head-light, arms which extend forward therefrom and are operatively connected with the head-light, both the said bar and arms being provided with a row of perforations adapted for reception of bolts by whose adjustment the angles of the arms to the said

bar may be changed at will, for varying the lateral swing of the head-light, substantially as described.

2. The combination with a swiveled truck  
5 and a head-light pivoted upon a support, of means for operatively connecting them, the same including a vertical rod and devices which operatively connect it with the head-light for rotating the latter, the  
10 lower end of the rod being provided with an

enlarged transverse slot, and a pivot pin passing through the same whereby the rod is loosely connected with the truck, as shown and described.

ISAAC LEWIS WADE.  
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