

A. J. ZEHENDNER.
HEADLIGHT BLIND OR SHUTTER.
APPLICATION FILED DEC. 4, 1911.

1,037,402.

Patented Sept. 3, 1912.

2 SHEETS—SHEET 1.

Fig. 1

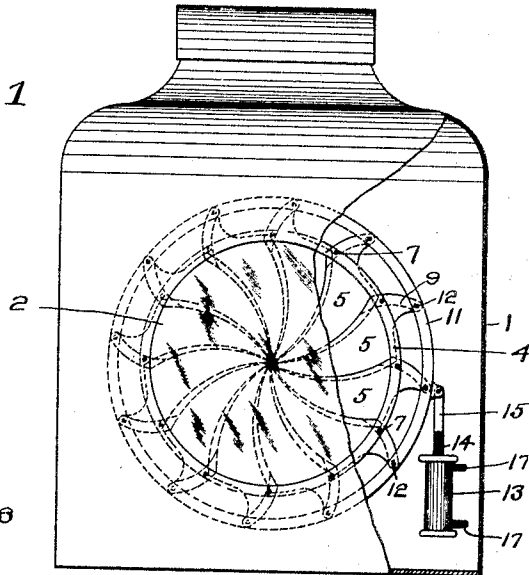


Fig. 5.

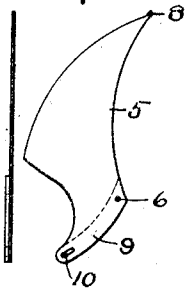
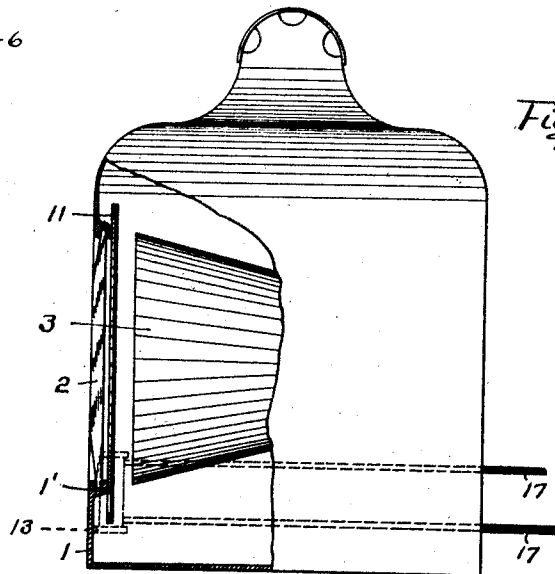


Fig. 2



WITNESSES:
Helen F. Glenn.
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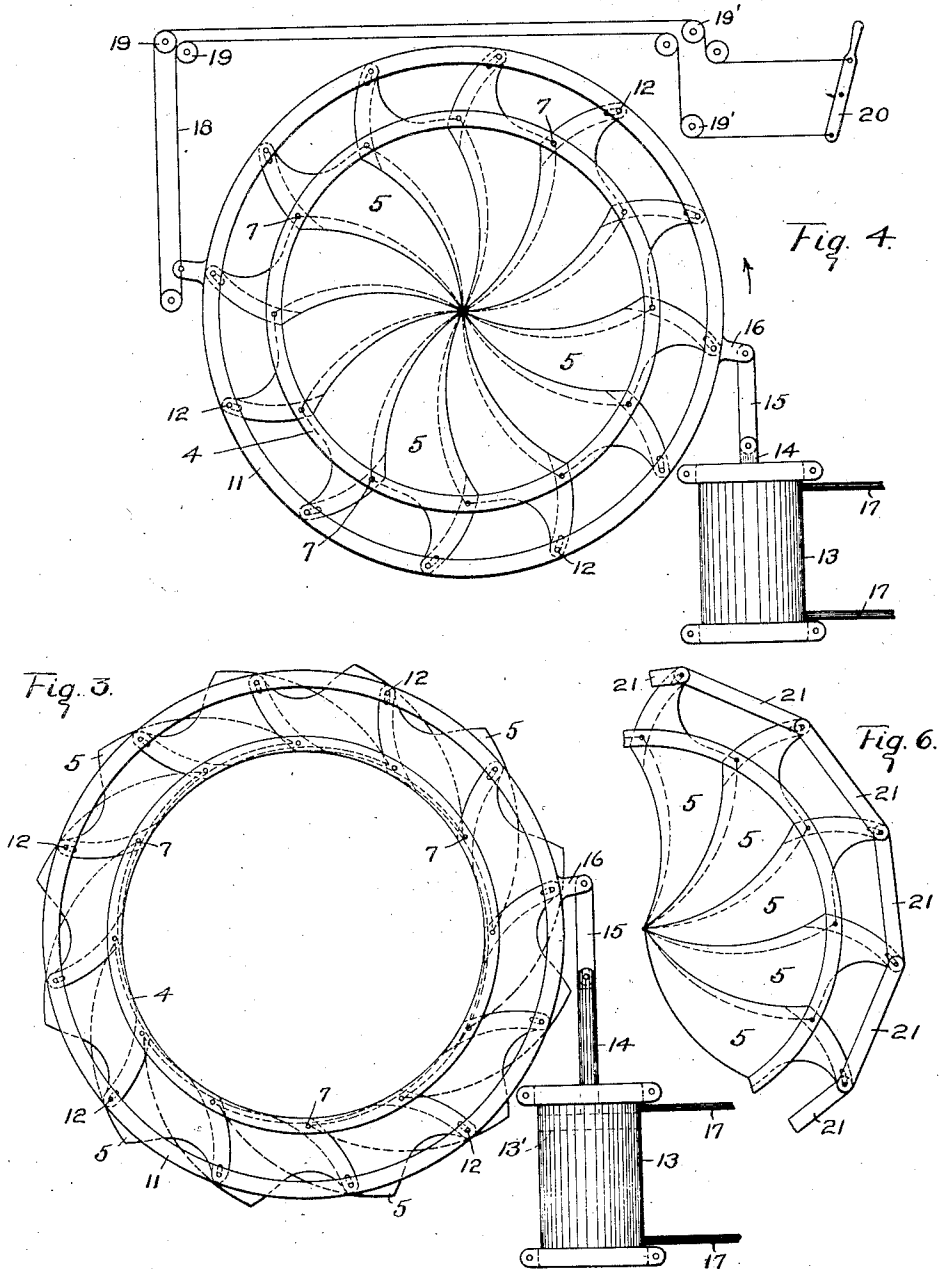
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UNITED STATES PATENT OFFICE.

AUGUST J. ZEHENDNER, OF HUNTINGTON, INDIANA.

HEADLIGHT BLIND OR SHUTTER.

1,037,402.

Specification of Letters Patent.

Patented Sept. 3, 1912.

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To all whom it may concern:

Be it known that I, AUGUST J. ZEHENDNER, a citizen of the United States, residing at Huntington, in the county of Huntington and State of Indiana, have invented new and useful Improvements in Headlight Blinds or Shutters, of which the following is a specification.

My invention relates to improvements in headlight blinds or shutters for obscuring the light at will without extinguishing the same. Its object is to provide a simple, economical and efficient blind or shutter for headlights which may be closed and opened from the cab or other part of the locomotive or car.

It consists in a novel form of shutter or blind mounted wholly within the headlight, which is operative to completely obscure the light, and which when open is free from interference with the light rays.

In the drawings I illustrate how my invention may be carried out in practice, in which—

Figure 1 is a front elevational view of a headlight provided with my invention; Fig. 2, a side view of the same; Fig. 3, a front elevational view of the shutter and actuating device, the shutter being open; Fig. 4, an elevational view of the shutter in the closed position, and showing two means for actuating the same; Fig. 5, a plan view of one of the shutter blades, and Fig. 6, a modified form of means to connect the several blades for simultaneous operation.

In the drawings 1 is the casing of a headlight, having in its front the usual glass or other transparency 2. 3 is any usual reflector in the interior of which is any light (not shown) as an oil, gas, or electric lamp. Adjacent the rear face of glass 2 I provide a frame 4, which is preferably a ring, and which is secured in a suitable manner to the casing 1' about the glass, no portion of the ring projecting into the field of the glass.

To frame 4 are pivoted a plurality of peculiarly shaped blades 5 (Fig. 5). The opening 6 in said blade is adapted to engage a suitable pivot 7 on the frame 4 and on which pivot the blade is free to move in a vertical plane across the face of glass 2 to the center thereof, the inner extremity of each blade being preferably pointed and one of them having a stop 8 at said point against which all the other blades contact in the closed position of the shutter. Each blade

5 is provided with a reinforced extension 9, in the outer end of which is a slot 10. The several blades overlap each other in the closed position of the shutter so that there is complete closure of the glass 2 from within the case.

Concentric with frame or ring 4 is a frame or ring 11 which is provided with a plurality of pins 12 which the slots 10 in the extensions 9 of the blades are adapted to engage respectively. Ring 11 is revoluble to rock blades 5 to and fro on their pivots 7, slots 10 serving to accommodate the change in the distance between the pivotal points 7 and 12 as the parts are rotated. It is apparent that by rotating ring 11 in the direction of the arrow (Fig. 4), the blades will be rotated on their pivots to carry the inner pointed ends of the same beyond the inner periphery of frame 4, as shown in Fig. 3.

Ring 11 may be actuated in any convenient manner from the cab of a locomotive or other convenient point on the vehicle or conveyance having a headlight. In the drawings I illustrate one such means consisting of a cylinder 13 having therein a piston 13', the rod 14 of which is connected by link 15 to a lug 16 on ring 11. Air or steam pipes 17 are connected to opposite ends of the cylinder and lead into the cab or other point convenient to the operator, where they will be connected to the boiler or air brake system of the locomotive or other device. A suitable valve connected to the pipe 17 will suffice to control the flow of the steam or air to the cylinder at either end thereof. It follows that the operator of the locomotive or other device may cause the piston in cylinder 13 to drive ring 11 in the proper direction to open or close the shutter, the movement of the piston in one direction causing the shutter to close and remain closed until the piston is moved in the opposite direction to cause the shutter to open, whereupon the shutter remains in the open position until again actuated by the piston. I may also secure to one or opposite sides of ring 11 wires or cords 18 which will pass over suitable pulleys 19 arranged in case 1 and extending into the cab or other structure where they may be suitably connected to a lever 20 by which lever the operator may rotate ring 11 in either direction and thereby open or close the shutter.

In Fig. 6 I illustrate a modification in which I substitute a series of links 21 which

are pivoted to the extensions 9 of blades 5 in place of ring 11, the other features above described remaining the same.

It is now apparent that the operator may close or open the shutter without leaving his post and that the shutter is entirely within the case and when in the open position does not obstruct the free passage of the light from the headlight.

10 What I claim is:

1. The combination with a case having a transparency in its front side, of a fixed frame within the case which does not project into the field of the transparency, a revoluble frame encircling the fixed frame and in the vertical plane thereof, a plurality of pointed blades overlapping each other, each blade being pivoted to the fixed frame and adapted to oscillate in a vertical plane on said pivot to cause the pivoted ends of the blades to meet in the transverse axis of the transparency, and an outwardly projecting integral extension on each blade having a slot in the outer end thereof for pivotally connecting the extension to the revoluble frame.

2. The combination with a casing having a circular transparency in one of its sides, of a fixed ring within the casing and adjacent the transparency, a revoluble ring concentric with the fixed ring and in the vertical plane thereof, a plurality of blades pivotally mounted on the fixed ring and adapted to oscillate in a vertical plane to cause the pointed ends of the blades to meet in the axis of both said rings, said blades having their longitudinal edges overlapping in the closed position, a reinforced outwardly projecting extension on each blade having a slot in its outer end, a pin in the revoluble ring engaged in said slot, and means to rotate the revoluble ring to cause the blades to rock on their fixed frame pivots to open or close the same.

In witness whereof I have hereunto signed my name this 24th day of November, 1911.

AUGUST J. ZEHENDNER.

Witnesses:

P. J. MURPHY, Jr.,
E. M. HULSE.