April 7, 1925. 1,532,593

H. G. LEWIS

HEADLIGHT

Filed June 15, 1921

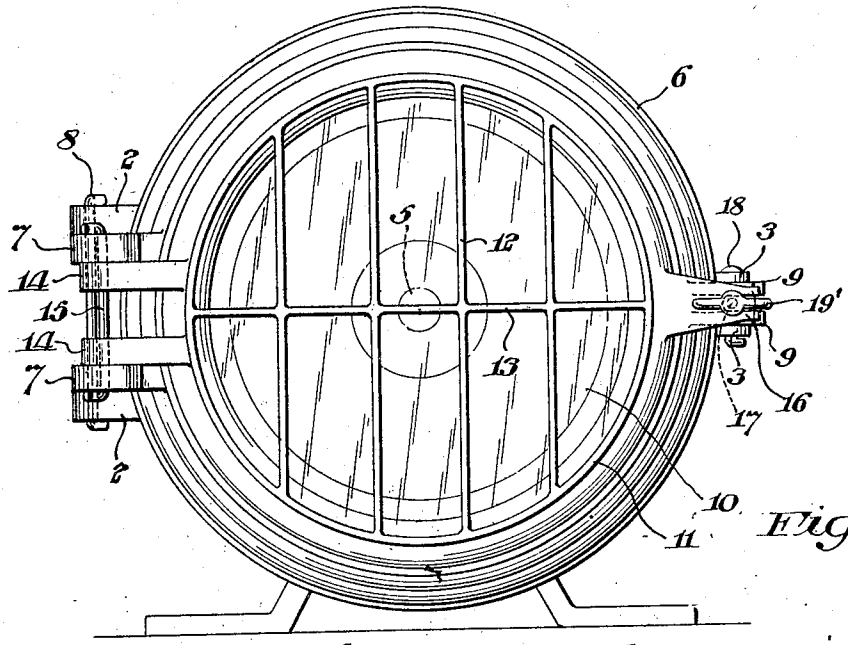


Fig. 1.

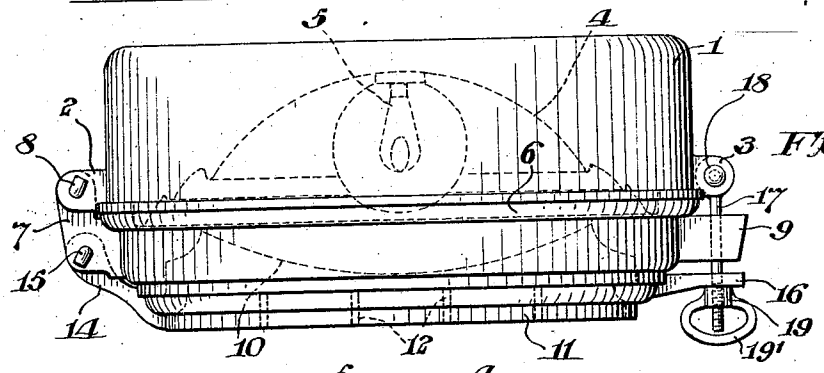


Fig. 2.

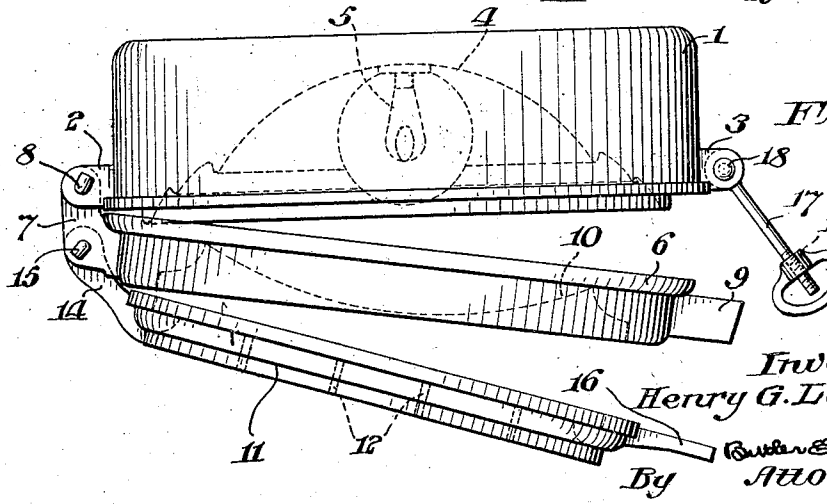


Fig. 3.

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UNITED STATES PATENT OFFICE.

HENRY G. LEWIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ELECTRIC SERVICE SUPPLIES COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

HEADLIGHT.

Application filed June 15, 1921. Serial No. 477,636.

To all whom it may concern:

Be it known that I. HENRY G. LEWIS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Headlights, of which the following is a specification.

This invention relates to improvements in head lights, particularly of the type used in mines, whereby the lens enclosing lamp and reflector is protected. In its preferred form, the invention comprises a head light having a hinged door frame provided with a lens or glass and a separately movable grated door or hinged grid for protecting the lens or glass while giving ready access to its surfaces, in combination with fastening means adapted for clamping the grid and glass door together in closed position so as to seal the lamp and reflector, the clamping means being inoperative to fasten the door in closed position without fastening the protecting grid thereon.

In head lights heretofore used in mines, the doors have been provided with integral means for protecting the lenses, of such character that it has been difficult or impossible to clean such lenses without removing them. This has involved an objectionable expenditure of time, breakage and defective lighting, due to the difficulty of cleaning the lens.

The primary objects of my invention are to effectually protect the lenses by means that can be withdrawn therefrom readily so as to permit them to be cleaned, and to require that the doors shall be secured by the protecting means so as to insure the desired protection.

The characteristic features of my invention are embodied in the head light specified in the following description and the accompanying drawings in illustration thereof.

In the drawings, Fig. 1 is a front elevation of a head light made in accordance with my improvements; Fig. 2 is a top plan view of the same, and Fig. 3 is a plan view of the head light with the glass door and grid or grated door partially opened.

The invention, as illustrated in the drawings, comprises the head light case 1 provided on opposite sides thereof with the lugs or bearings 2 and 3 and containing the reflector 4 and the lamp 5. A door frame 6, adapted to fit the opening of the case 1, has thereon the bearings 2 or lugs 7 connected in hinged relation to the bearings on the case by a pintle 8, the frame having thereon the bifurcations 9 opposite the bearings 7. A lens 10 is set in the door frame 6 and provides therewith a door adapted for sealing or completely enclosing and protecting the reflector 4 and the lamp 5 within the case.

A frame 11, provided with the transverse bars 12 and 13, forms a grid or grated door adapted to fit against the door frame 6 and over the lens 10 to protect the latter from breakage or injury by falling or flying objects. This grid is provided with the bearings or lugs 14 pivotally connected with the bearings 7 by the pintle 15 whereby the grid is hinged upon the door, bifurcations 16 being placed on the frame 11 opposite the bearings 14.

A bolt 17, hinged to the bearings 3 by the pintle 18, is adapted to be moved into and out of position between the bifurcations 9 and 16 on the two doors when closed, and a nut 19 provided with a loop 19′ has a limited movement on the bolt, so that it is adapted to engage the bifurcations 16 but not the bifurcations 9, the locking means thus provided being inoperative to hold the glass door closed excepting through the grated door and the closure of the grated door to protect the lens being insured thereby.

Having described my invention, I claim:—

1. In a head light, the combination with the case, of a door comprising a frame with a lens therein, movable relatively to said case, a grated door movable relatively to said case and door first named so as to cover and uncover said lens, a bolt hinged on said frame, and a nut having a limited movement on said bolt whereby it is adapted to engage said door second named and prevented from engaging said door first named.

2. A headlight having a hinged door

frame provided with a lens and a separately movable grated door for protecting the lens while permitting transmission of light, in combination with fastening means adapted for clamping the grated door and lens containing door together in closed position, the clamping means being inoperative to fasten the lens containing door in closed position without fastening the protecting grid thereon.

In testimony whereof I have hereunto set my name this 10th day of June, 1921.

HENRY G. LEWIS.