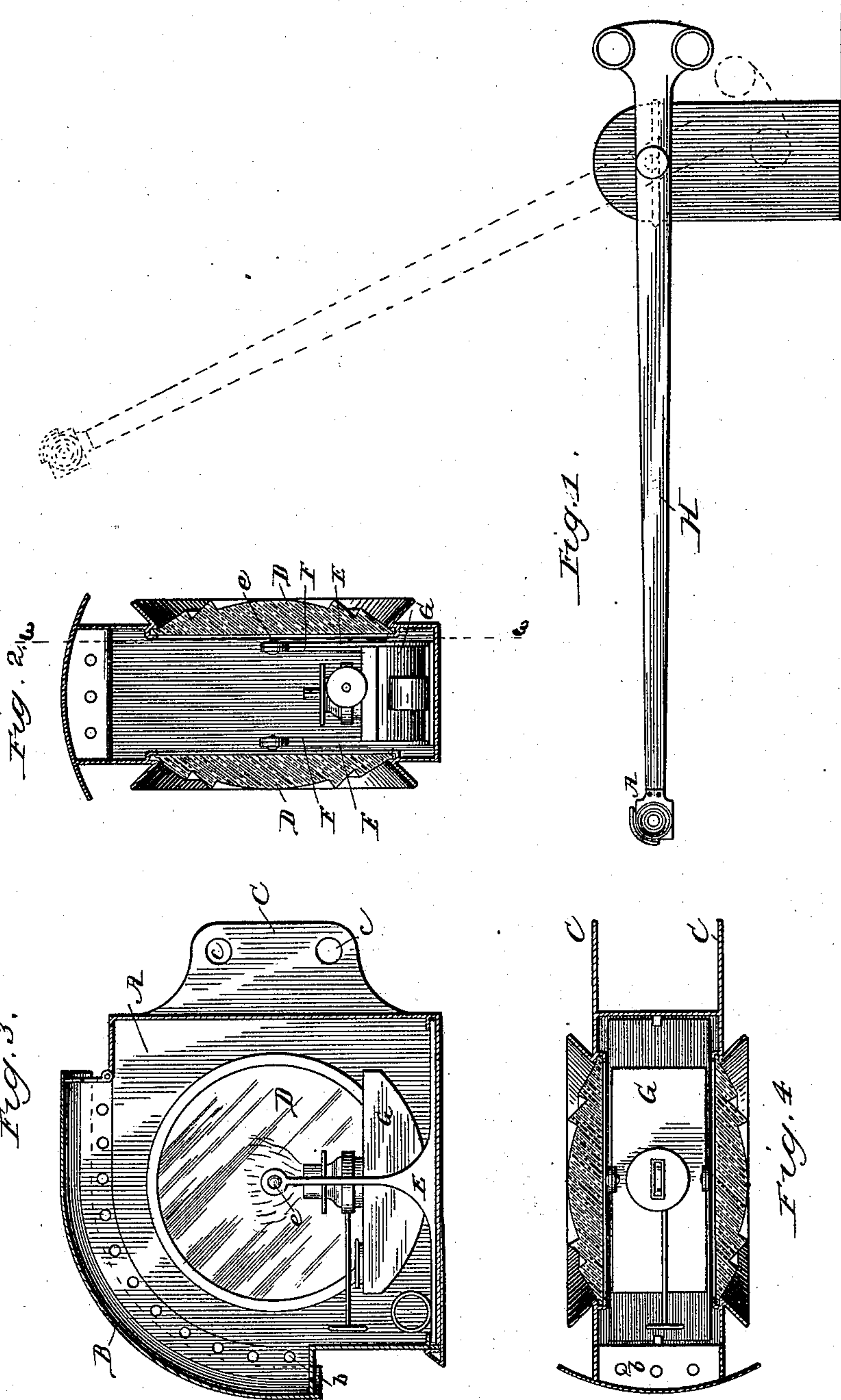


(No Model.)

A. J. McDONALD.  
RAILWAY GATE LAMP.

No. 383,968.

Patented June 5, 1888.



Witnesses:  
*W. J. Foster*  
*Wm. S. Bates*

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*Alexander C. McDonald*  
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att'y.



# UNITED STATES PATENT OFFICE.

ALEXANDER J. McDONALD, OF CHICAGO, ILLINOIS.

## RAILWAY-GATE LAMP.

SPECIFICATION forming part of Letters Patent No. 383,968, dated June 5, 1888.

Application filed December 5, 1887. Serial No. 256,982. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER J. McDONALD, of Chicago, Illinois, have invented certain new and useful Improvements in Railway-Gate Lamps, of which the following is a specification.

The object of my invention is to provide a lamp adapted to be permanently secured to railway-gate arms in such manner that it shall at all times maintain a vertical position.

Prior to my invention it has been common to hang a lantern upon the arms of railway-gates during the night and to remove it each morning. These gate-arms are usually pivoted near one end to a stationary post at the side of the crossing street and are balanced on their pivot—that is, the short ends of the arms are weighted to counterbalance the long ends, which project over the street sometimes as much as forty feet. It is desirable to place the lantern, lamp, or other danger-signal as near the center of the street as possible, and hence it has been usual to hang the lantern to the end of the arm nearest the street-center. When so placed, the weight of the lantern destroys the equilibrium of the arm previously established, and hence it has been necessary heretofore to counterbalance the weight of lantern by weighting the other end of the arm every time the lantern was replaced, removing the weights, of course, when the lantern was removed. Besides this, the lantern is often broken in operating the gate-arms, no adequate provision having been heretofore made for preventing it from striking the arm while the latter is being raised. The lanterns heretofore used have been of the ordinary form—that is, having a curved glass globe usually colored—and hence they gave out but little light, not sufficient to show unaided the nature of the danger which they were intended to indicate.

In carrying out my invention I provide a case or cover for a lamp, preferably formed of tin or other light sheet metal and of square or box-like form, adapted to be permanently attached to the gate-arm and having a ventilator, which may be hinged to permit access to the lamp, and in the sides of this casing facing the street I place suitable lenses, whereby to concentrate the light upon the points of danger. The lenses may be colored or not, as

preferred. Inside this case or cover I suspend a lamp consisting of an oil-reservoir, the usual wick-raisers, burners, &c., in such manner that it may swing freely on its pivot and maintain its vertical position independent of the movements of the gate-arm and case or cover.

In the accompanying drawings, Figure 1 shows a gate-arm in its two positions—open and closed—and provided with my improved lamp. Fig. 2 is a transverse vertical sectional view through the case or cover, the lamp and its supports and one of the attaching flanges or brackets of the case being shown in elevation. Fig. 3 is a section on line 3 3 of Fig. 2, the lamp parts being in side elevation; and Fig. 4 is a longitudinal transverse section through the case, the lamp parts in plan.

The case A may be made of tin or other light sheet metal. It is box-like in form, with one rounded edge or corner, and a part of the top and front walls is formed by a hinged cap or cover, B, which can be swung back to permit access to the lamp. This cap is provided with perforations *b*, which serve as means of ventilation, and the cap or cover is of such length and curvature and is so located that some portion of it is always above the flame. The case may have a hinged bottom, and it is provided with projecting flanges or brackets, as C, having bolt-holes *c*, through which and the arm bolts are passed to secure the case to the arm. As shown, these attaching-brackets project rearwardly from the case, so as to embrace the end of the arm; but they may be so made as to secure the lamp to the bottom or top of the arm, or screws may be passed through the case itself into the arm. This case also has lenses in its sides, D D, which, as shown, will concentrate the rays of light from the lamp and cast them to a considerable distance along the street in each direction. I prefer to use a brilliant light instead of the usual dull light, and the lamp may have reflectors such as are common in locomotive head-lights, which, together with the lenses D D, can be made to cast the light upon the points of danger. The case also has two vertical standards, E E, which rise from its bottom, each carrying a short stud, *e e*, from which depend two swinging arms, F F, made fast at their lower ends to the reservoir G of the lamp. The



studs *ee* may turn in the standards, or the arms *F* may turn on the studs; but in either case the lamp is pivotally suspended, so that it may swing freely and always maintain a vertical position. When so pivoted, the weight of the oil-reservoir and oil will serve to keep the lamp in position; but to insure this condition the bottom of the reservoir may be weighted.

Of course modifications of the parts above described may be made within wide limits without departing from the spirit of my invention, particularly as to the described means for suspending the lamp within its case.

By the use of my improved lamp the equilibrium of the bar is at all times maintained, the lamp is kept at all times in proper posi-

tion, and its fragile parts protected. This lamp is readily adapted to all forms of railway-gate bars.

I claim—

In a railway-gate lamp, the combination, with an inclosing-case, *A*, provided with an attaching bracket or brackets, *C*, and having transparent side portions, *D*, and a ventilator, *B*, of a lamp suspended within said case by means of the standards *EE*, carrying the studs *ee* and the swinging arms *F F*, substantially as described.

ALEXANDER J. McDONALD.

Witnesses:

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