

(No Model.)

R. M. DIXON.  
LAMP.

No. 525,696.

Patented Sept. 11, 1894.

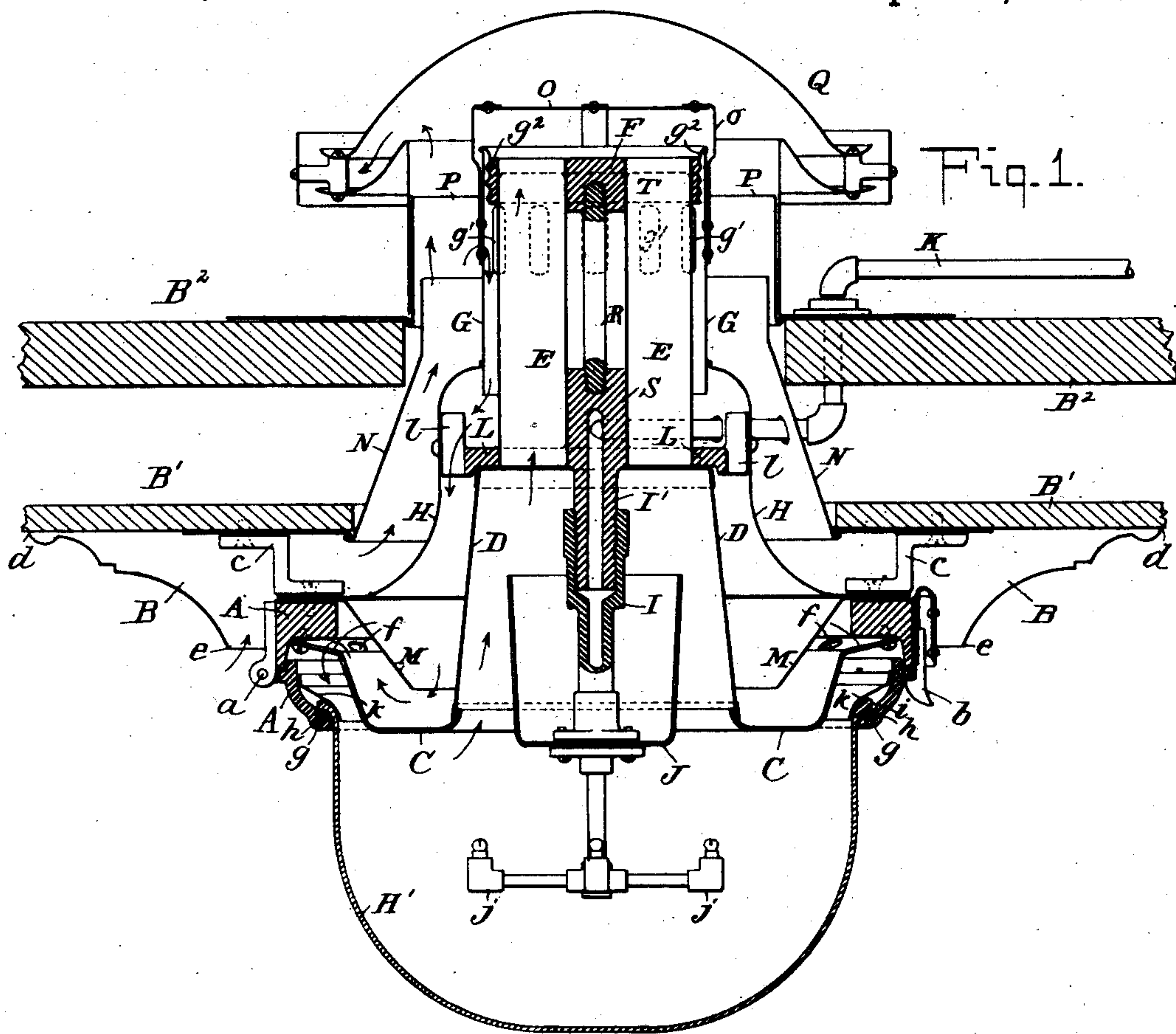
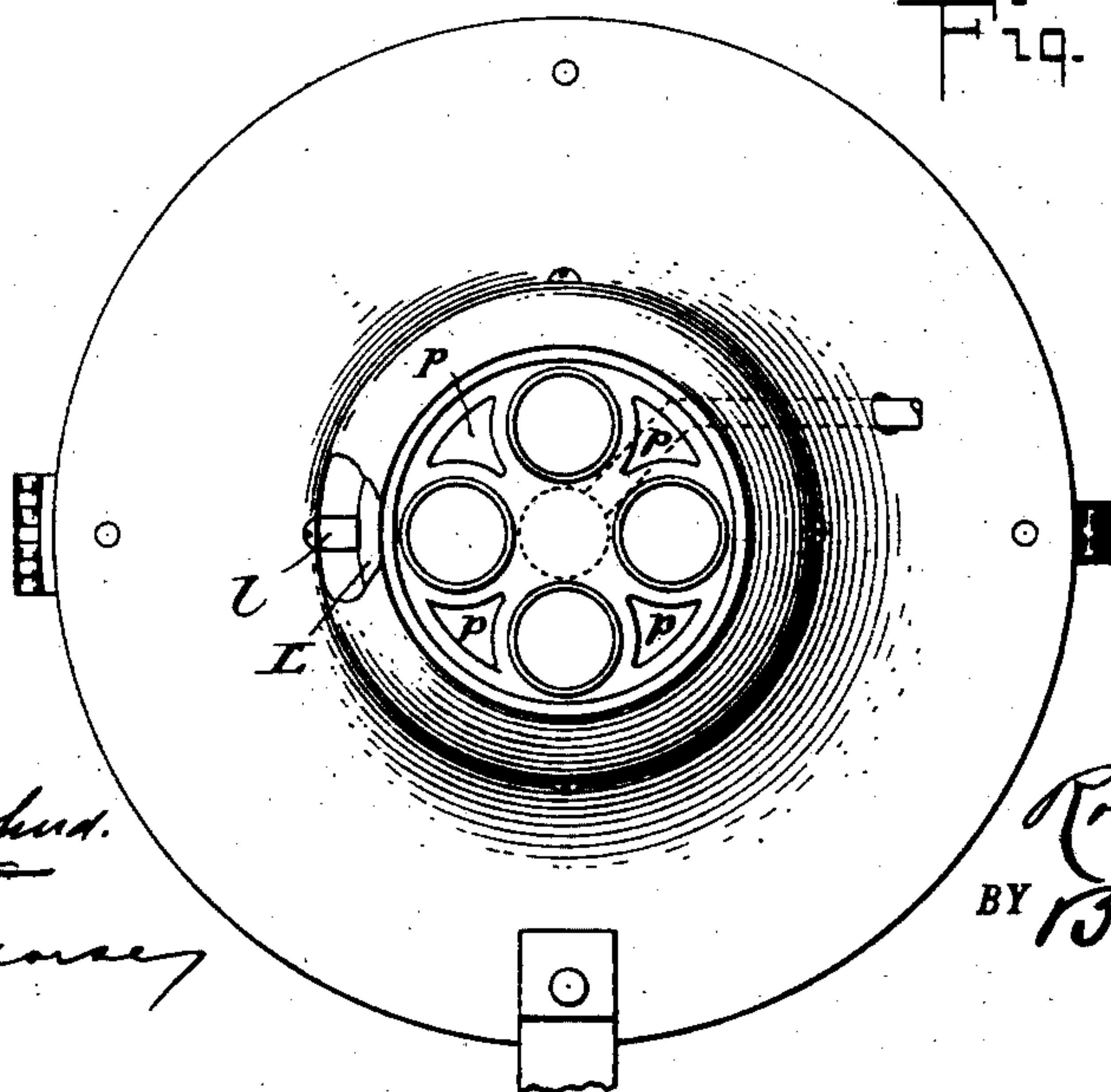


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## LAMP.

SPECIFICATION forming part of Letters Patent No. 525,696, dated September 11, 1894.

Application filed December 27, 1893. Serial No. 494,832. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT M. DIXON, a resident of East Orange, Essex county, and State of New Jersey, have invented certain  
5 new and useful Improvements in Lamps, of which the following is a specification.

My invention relates to lamps for use in railway cars, and in like situations, and has for its object to utilize the ascending air current from the lamp to remove the foul air from the car and to discharge the same into the outside air.

A further object of my invention is to insulate the heated lamp from the roof of a car  
15 by producing a circulation of air through the space between the lamp and the roof of the car which will maintain the roof cool and obviate danger of combustion.

To this end my invention consists in the  
20 construction set forth herein, illustrated in the accompanying drawings, forming part hereof and more particularly pointed out in the claims.

In the drawings,—Figure 1 is a vertical longitudinal section of a lamp embodying one form of my invention, and Fig. 2 is a plan view of the lamp proper with certain parts removed for clearer illustration as will be more fully described.

30 In the drawings A indicates a two-part ring hinged together at *a* and secured by the catch *b*. This ring is suitably suspended from the roof of a car as by brackets *c c* and serves to support the principal parts of the lamp, as will be more fully described hereinafter.  
35 Surrounding this two part ring is a ring B, one edge *d* of which is placed against the roof of the car, the other edge *e* extending down into proximity with the ring A and leaving  
40 an annular air space between the ring A and the edge *e*.

Supported by the ring A is a reflector C having perforations *f* therein. This reflector in turn serves to support the lower section D of the chimney. Above this lower section is a group of draft tubes E which are supported in a framework composed of heads F and L united by a rigid connection such as the rod R, entered into nipples S and T integral with  
50 the heads. One of these heads as F may be provided with apertures *p* and the other as L

may be provided with lugs *l* leaving a succession of air spaces forming what is substantially an annular passage between the edge of head L and the casing H. This frame-  
55 work is supported by the casing H, as shown, which in turn is supported by the brackets *c*, or if desired, the casing may be otherwise supported. Surrounding the framework and tubes E, is a second casing G having perforations *g'* and having a turned over edge *g''* screw-threaded or otherwise secured to the head F, which serves to support the casing G. The chimneys E are surmounted by a deflector plate O mounted on ribs *o* secured to the  
65 casing G.

The lower section of the two part ring A has a circumferential groove *g* within which is seated an elastic packing *h*. Upon this packing rests the lip *i* of the lamp globe H'.  
70 Resting upon the lip *i* and forming an additional packing for the joint is the ring *k*.

The gas-pipe I is preferably attached to a nipple I' made integral with the head L and which carries the reflector J and the jets *j*.  
75 The gas is supplied to the pipe I through the nipple by the pipe K connected therewith, as shown. Surrounding the chimney D is a downwardly extending deflector plate or ring M which may be supported in any suitable  
80 manner, as by the brackets *c c*.

Surrounding the casing H is a funnel N which is supported by the brackets *c c* and extends through the space between the decks B' B<sup>2</sup> of the car roof. Mounted upon the upper deck B<sup>2</sup> of the car roof is a collar P which surrounds the upper end of the funnel N and the tubes E. The whole is surrounded by a cowl or ventilator Q fitting over the collar P.

During operation of the lamp, the air enters the lamp through the annular space between the ring A and the edge *e* passing upward as shown by the arrows between the funnels N and the casing H into the collar P. Part of the air passes out through the cowl Q  
95 and part enters the second casing G through the apertures *g'*, thence it passes downward into the space between the casing H and chimney D, thence under the deflector plate M through the apertures *f* in the reflector C',  
100 into the globe or combustion chamber H'. The products of combustion travel up through



the chimney D and tubes E into the cowl Q and out to the open air.

Owing to the construction and arrangement of the several parts, the lamp will burn with a steady flame and at the same time will serve to rid the car of the impure air therein, it being well known that such impure air is present in the upper strata of the car in greatest proportion. The circulation of air between the lamp and the roof of the car will also serve to keep the roof cool and prevent danger of combustion.

Having described my invention, what I claim is—

1. In a car lamp the combination with a combustion chamber or globe and burner of the rings A and B, casing H, funnel N, open communication from the interior of the car to the combustion chamber through the chamber formed between the casing H and funnel N, and an open exit for the products of combustion, substantially as described.

2. In a car lamp the combination with a burner and combustion chamber therefor, of a casing G, a casing H, extending below said casing G, a downwardly extending deflector plate M, openings below said deflector plate which communicate with said combustion chamber and an open exit for the products of combustion, substantially as described.

3. The combination in a car lamp of a funnel N extending between the decks of a car roof and exit passages for the products of combustion arranged within the funnel, substantially as described.

4. The combination in a car lamp of a suitably supported head F, casing G supported

by said head, a plate surmounting the casing G and secured thereto by ribs o, as specified.

5. The combination in a car lamp of draft tubes, a casing H, a perforated casing G connecting with said casing H and surrounding said tubes, a downwardly extending deflector plate M, a globe or combustion chamber H', the inlet to said combustion chamber being through the perforations in the casing G, and exit passages for the products of combustion arranged within the funnel H, and casing G, as specified.

6. A car lamp having its combustion chamber located within the car, exit passages therefrom extending through the roof of the car, a casing surrounding said exit passages and extending from within the car through the roof thereof, and means for supplying air to the combustion chamber from the interior of the car around the top of said casing, as specified.

7. The combination in a car lamp, of a funnel N extending between the decks of a car roof, a casing H within said funnel N, a combustion chamber, draft tubes communicating with said combustion chamber and located within the casing H, whereby air may be conveyed from the interior of the car to the outside between the casing H and funnel N and to the combustion chamber around said casing H, substantially as and for the purposes specified.

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Witnesses:

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