(No Model.)

J. G. A. KITCHEN.

LAMP.

No. 598,490. Patented Feb. 1, 1898.

Fig. 1.

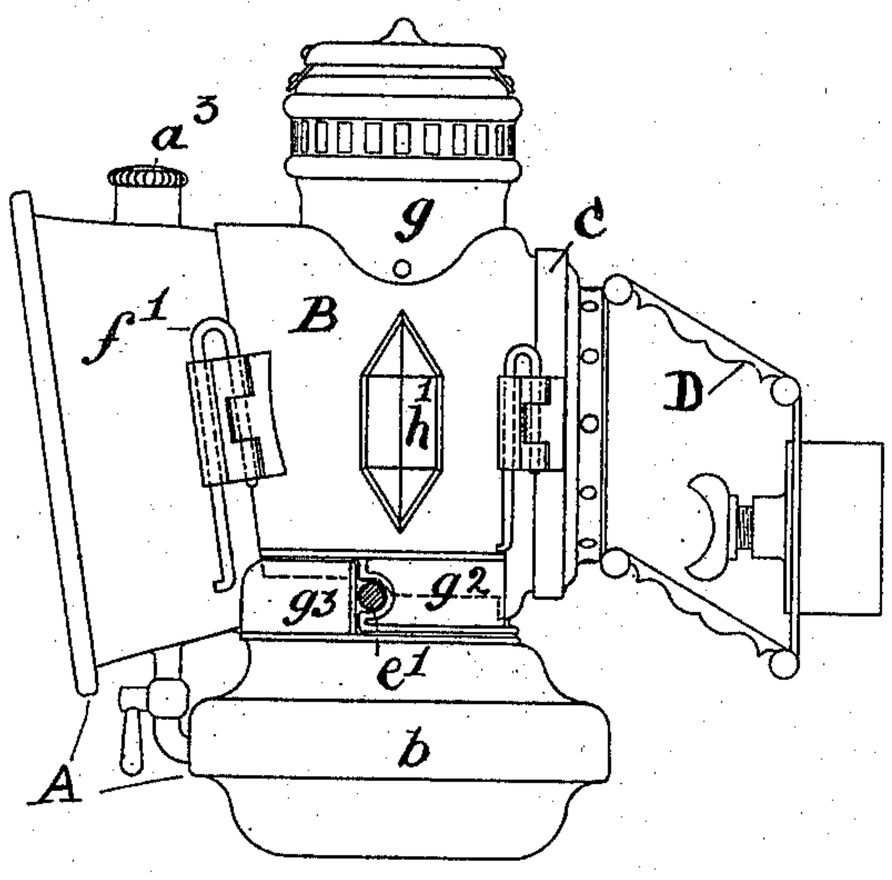


Fig. 2.

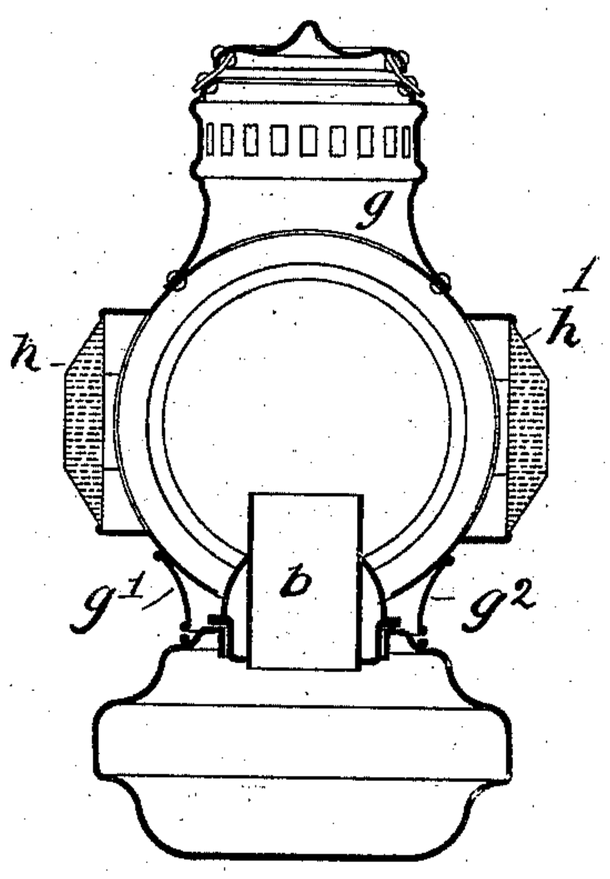


Fig. 3.

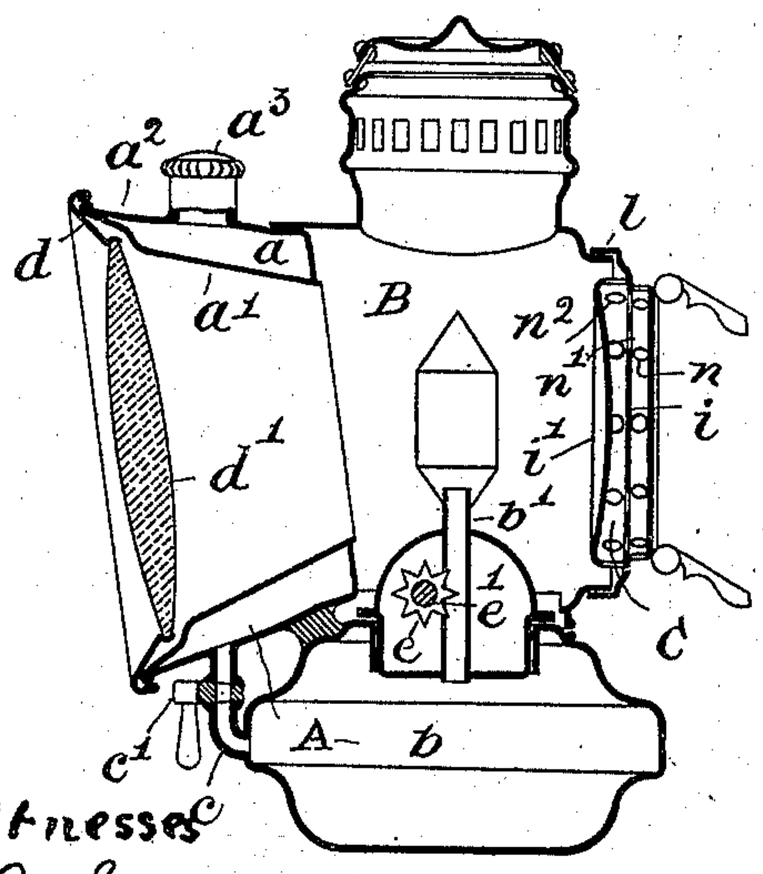
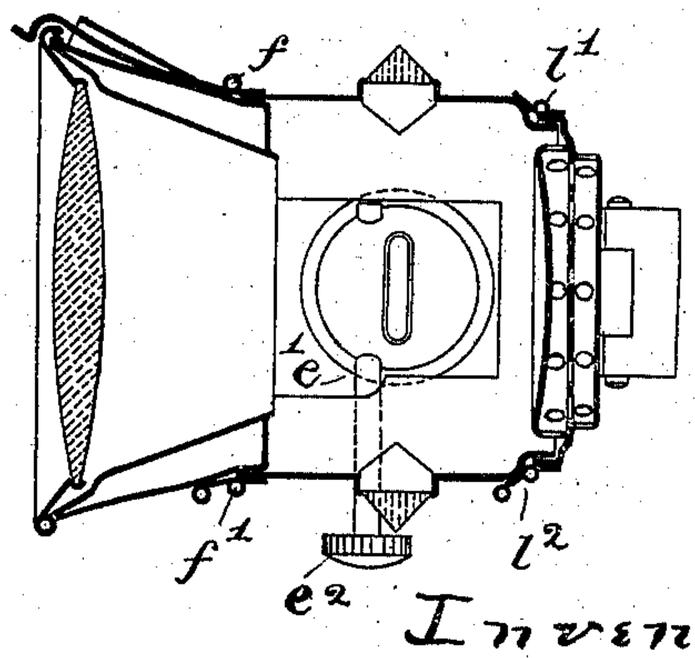


Fig. 4.



Witnesses
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By his attorney
Edward P. Thompson

UNITED STATES PATENT OFFICE.

JOHN GEORGE AULSEBROOK KITCHEN, OF MANCHESTER, ENGLAND, ASSIGNOR TO THE MANCHESTER CYCLE COMPONENTS, LIMITED, OF SAME PLACE.

LAMP.

SPECIFICATION forming part of Letters Patent No. 598,490, dated February 1, 1898.

Application filed June 14, 1897. Serial No. 640,625. (No model.)

To all whom it may concern:

Be it known that I, JOHN GEORGE AULSEBROOK KITCHEN, a subject of the Queen of Great Britain, residing at Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

This invention relates to lamps for cycles and other vehicles; and it consists in an improved construction of the lamp and parts thereof, having for its object chiefly to increase the quantity of the oil the lamp is capable of holding. This object is attained by making the frame surrounding the lens or glass tubular in section, with a filling-opening at the top, so as to form a reserve oil-reservoir, and connecting this with a lower reservoir carrying the burner by a pipe fitted with a stop-cock, so that the lower reservoir can be filled through and refilled from the tubular reservoir.

On the drawings annexed hereunto a lamp made in accordance with my invention is shown to illustrate the carrying out of the same, Figure 1 showing a side view of the lamp; Fig. 2, a vertical cross-section; Fig. 3, a longitudinal section, and Fig. 4 a horizontal section.

The improved lamp represented on the drawings consists of a combined front and bottom part A, containing the oil-reservoirs, a middle part B, and a back part C.

The improvement consists, chiefly, in forming the part A of an annular tube or chamber a and a lower oil-reservoir b, connected by a pipe c with a cock c'. The inner side a' of the annular tube a preferably forms a frustumed-cone or similar surface, while the outer side a^2 may be a frustumed cone with a smaller angle at the apex, as shown. The inner and outer sides a' and a^2 meet at the front and carry the ring d, in which the lens d' is fixed. Through an opening closed by a screw-stopper a^3 the annular chamber a can be filled with oil and from it the lower oil-reservoir b through the pipe c when the cock c' is opened. The reservoir b carries the usual burner, with a wick-tube b' and the adjusting-wheel e on a spindle e', fitted with a knob e^2, Fig. 4. The reservoir b is filled through the chamber a and pipe c, after which the cock is turned so as to close the communication, and the chamber a is then filled. When the oil in the reservoir b is consumed during the ride, the reservoir b can be filled again from the chamber a by opening the cock c', so that the lamp can be kept lighted during a longer ride than is possible with the ordinary lamps having only a lower reservoir.

The middle part B is preferably of cylindrical or other round shape and connected to the front part A by a hinge f at one side and a sliding wire bolt f' and catch at the other. It carries at the top a chimney g of usual construction for the outlet of the combustion-gases and may have side lights h and h'. At the bottom it is cut out for the wick-tube, as shown on Fig. 4.

As in the construction shown in the drawings the wick-tube b' swings outward with the reservoirs b and a when the front part of the lamp is opened, the opening cut out in the bottom of B must be wider than the wick-tube, which would leave an open space through which wind would blow into the lamp unless it were incased. For this purpose and for generally closing the angular recess between the cylindrical case B and the top of the reservoir b, which is preferably made square in horizontal section, a frame of plates g' g^2 g^3 is arranged to close this angular space, said frame corresponding in sectional plan to the shape of the top of the reservoir. As the spindle d swings out with the wick-tube, the plate g^3, containing the bearing for the spindle, is soldered to the reservoir at its bottom edge, this plate extending also to meet the curved outer surface of the annular chamber a and soldered to the same, but bearing loosely, with a slight pressure, upon the side of the part B. On the other hand, the plate g^2, which extends around and meets the plate g', and this plate, which extends along the same distance, on the side opposite to that shown in Fig. 1, as the two plates g^2 and g^3 in front, and around the back to meet plate g^2, are both soldered to the side of part B and fit loosely with their beaded bottom and edges upon a bead or wire on the top of the reservoir b, as shown in Fig. 2. This arrangement allows the front part to be opened

after the short end of the wire bolt f' is withdrawn from its sockets.

The back part C consists of a circular chamber divided by a partition-plate i into two compartments and formed with an external annular rim I, fitting over the contracted back opening of the middle part. It is connected to the middle part B by a hinge l' at one side and a catch-bolt l^2 at the other. The front plate i' of the back part C is dished to form a reflector. Air-inlet holes n admit air into the back compartment, whence it passes through holes n' in the partition i into the front compartment and thence through holes n^2 in the periphery of the same into the middle part B to the flame. The air-inlet to the flame is thus effectively baffled, and the flame will burn steadily. To the back part C is connected the usual spring-carrier D for attaching the lamp to a lamp-bracket.

When the three parts are opened out, the inside of the lamp can be very easily cleaned in consequence of the circular form of all the parts. The middle and back parts B and C or the front and middle parts A and B may be formed into one piece instead of being connected by a hinge and catch, the ring d, carrying the lens, being in the latter case hinged to the front part to form the door.

Obviously the shapes and proportions of the parts may be varied without departing from the essential points of the invention. For instance, the section or the outline of the tubular reservoir a may be rectangular instead of the forms shown.

I claim as my invention—

1. In a lamp for vehicles the combination of a substantially horizontal tubular frame surrounding a lens and having a filling-in orifice and stopper for closing the same, a lower oil-reservoir carrying a burner, a pipe connecting said tubular frame and lower reservoir and a shutting-off organ in said pipe substantially as and for the purpose described.

2. In a lamp for vehicles the combination of a substantially horizontal tubular frame surrounding lens and forming an oil-reservoir, a lower oil-reservoir carrying a burner and rigidly attached to the tubular frame and a pipe with a stop-cock connecting said reservoirs substantially as and for the purpose described.

3. A lamp consisting of three parts connected together by hinges and catches, the front part being composed of a tubular frame forming an oil-reservoir and a lower oil-reservoir carrying a burner and connected with the former reservoir by a pipe fitted with a shutting-off organ, the middle part surrounding the burner and carrying a chimney, and the back part being formed with a reflector and air-inlet openings.

In testimony whereof I have hereunto set my signature in the presence of two witnesses.

JOHN GEORGE AULSEBROOK KITCHEN.

Witnesses:
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