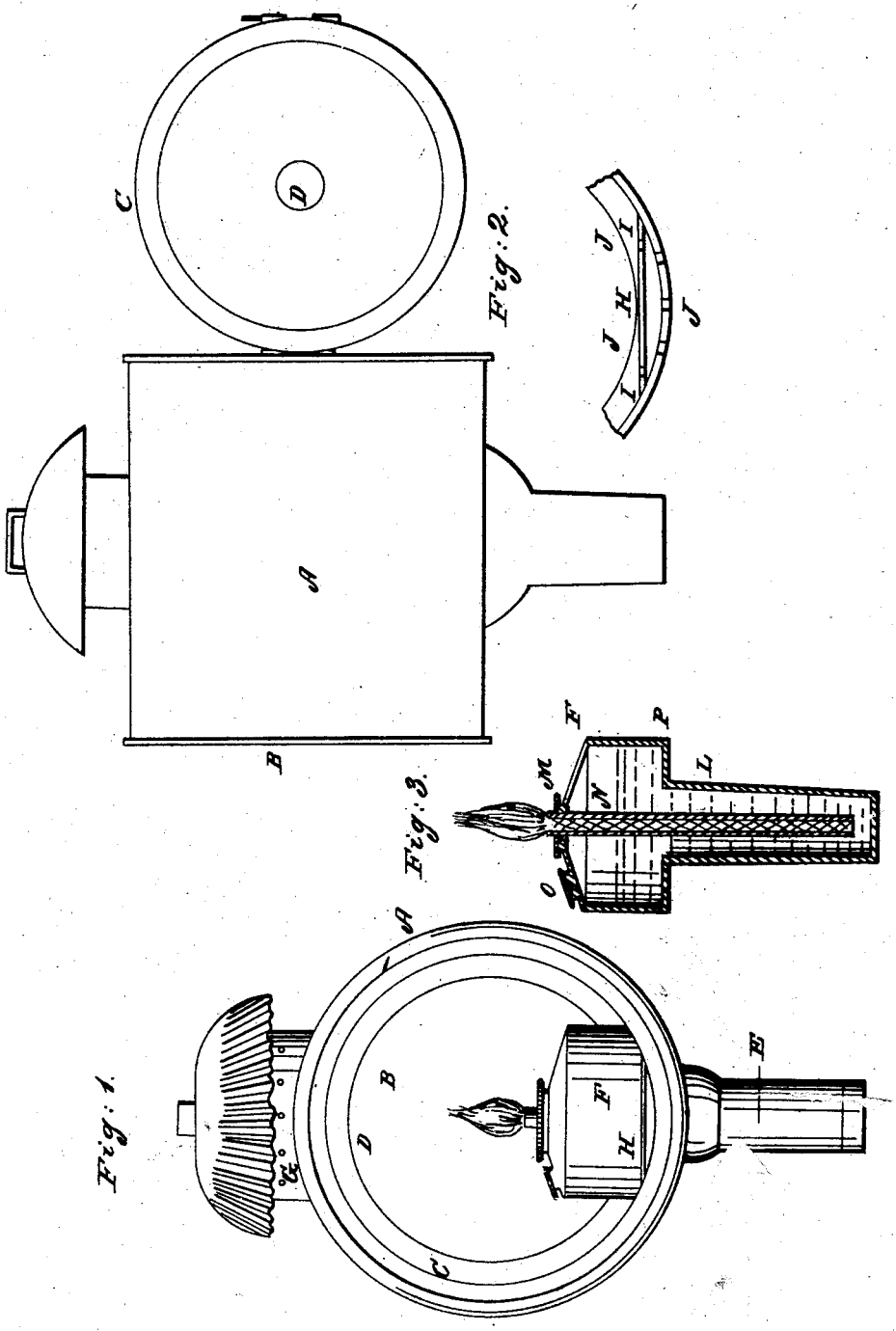
W. LAWRENCE.

Coach Lamp.

No. 683. Patented April 7, 1838.



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UNITED STATES PATENT OFFICE.

WILLIAM LAWRENCE, OF WALLINGFORD, CONNECTICUT.

COACH-LAMP.

Specification of Letters Patent No. 683, dated April 7, 1838.

To all whom it may concern:

Be it known that I, WILLIAM LAWRENCE, of Wallingford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in the Construction of Coach-Lamps; and that the following is a full and exact description thereof, reference being had to the annexed drawings of the same, making part of this specification.

To enable others skilled in the art to make and use my invention I will more particularly describe its construction and operation.

Instead of the square or oblong shape of coach lamps in common use, I make the frame or body A, Figure 1, cylindrical and for stage coaches about 7 inches in diameter and about 6 inches long; for other carriages it may be proportionately less. It may be made of tin, or any other suitable metallic plates, and painted or japanned. This cylinder is supported horizontally, the front end is closed by a pane or plate of clear glass B, the rear is closed by a door C hung on a hinge, and on the inside of that door I attach a highly polished reflector D the full size of the cylinder curving in the shape of a tea saucer. For this reflector I prefer a highly polished silver plate.

On the bottom of this cylinder is a socket E about 4 inches long and 1½ inches in diameter, closed at the bottom, but opening into the body of the cylinder. This socket is for the double purpose of attaching it to the coach and also to receive and hold in place the oil lamp F, and directly over the socket is a chimney G in common form; and for the purpose of giving air to the lamp uninfluenced by the motion of the carriage or the current without, I raise a floor H Figs. 1 and 2 about half an inch high, around the mouth of the socket at the bottom of the cylinder. This floor is pierced with air holes I around the edges and the air chamber below this floor is supplied by air holes J in the outward shell of the cylinder in front and in rear of the socket, these holes in the floor and in the shell are not opposite each other and of course the light is not sensibly affected by the outward current.

These lamps may be made larger or smaller than the size herein specified as occasion may require. They may also be made with suitable alterations, to stand perpendicularly, or on one end, but I prefer the horizontal position. In either case they are attached to the coach in the usual manner.

The inner lamp F for oil consists of a circular hollow vessel F about 2½ inches diameter and one inch and a quarter deep closed at the bottom and top excepting an aperture in the center of the bottom for a long hollow shank L Fig. 3 closed at its lower end for containing oil and an aperture in the center of the top for a screw M through which passes a conical or cylindrical tube N Fig. 3 for the wick and an orifice through which the oil is admitted closed by a stopper O. The bottom of the lamp where it unites with the shank forms a shoulder P which rests upon the perforated plate of the body. The exterior of the shank of the oil lamp is shaped to fit the socket of the case into which it is inserted. The conical tube N for the wick extends nearly to the bottom of the oil shank L.

The advantages of this improvement are that the light of this lamp is more brilliant than any now in use for a similar purpose, and is not liable to be extinguished from the agitation of the oil in the lamp (caused by the motion of the carriage) drawing down the wick from the tube, or at other times quenching the flame by the motion of the oil from the same cause the small wick tube in the center of the lamp protecting the wick from the motion of the oil (however violent) and preventing the extinguishment of the light and causing it to burn much longer than any other lamp on account of the depth of the shank of the lamp into which the wick tube extends—the oil continuing to rise in this tube until nearly exhausted in the shank, not only from the draft of the lamp, but from capillary attraction—or the attraction of the periphery of the concave surface of the small tube to which the upper surface of the oil is contiguous and adheres; besides the light is not liable to be influenced from external cur-

rents of air, owing to the before described arrangement of the apertures in the bottom of the case and in the segment floor above it.

The invention claimed and desired to be secured by Letters Patent consists in—

1. The shank at the bottom of the lamp into which descends a small tube containing the wick immersed in the oil as before described and for the purpose therein set forth—said hollow shank being made to fit a socket in the shank of the outer case.

2. Also the raised floor above the bottom of the outer case and the manner in which they are perforated as before described.

WILLIAM LAWRENCE.

Witnesses:
WM. P. ELLIOT,
J. B. WOOD.