

J. A. ROBERTS  
Carriage-Lamp.

No. 223,389.

Patented Jan. 6, 1880.

Fig. 1

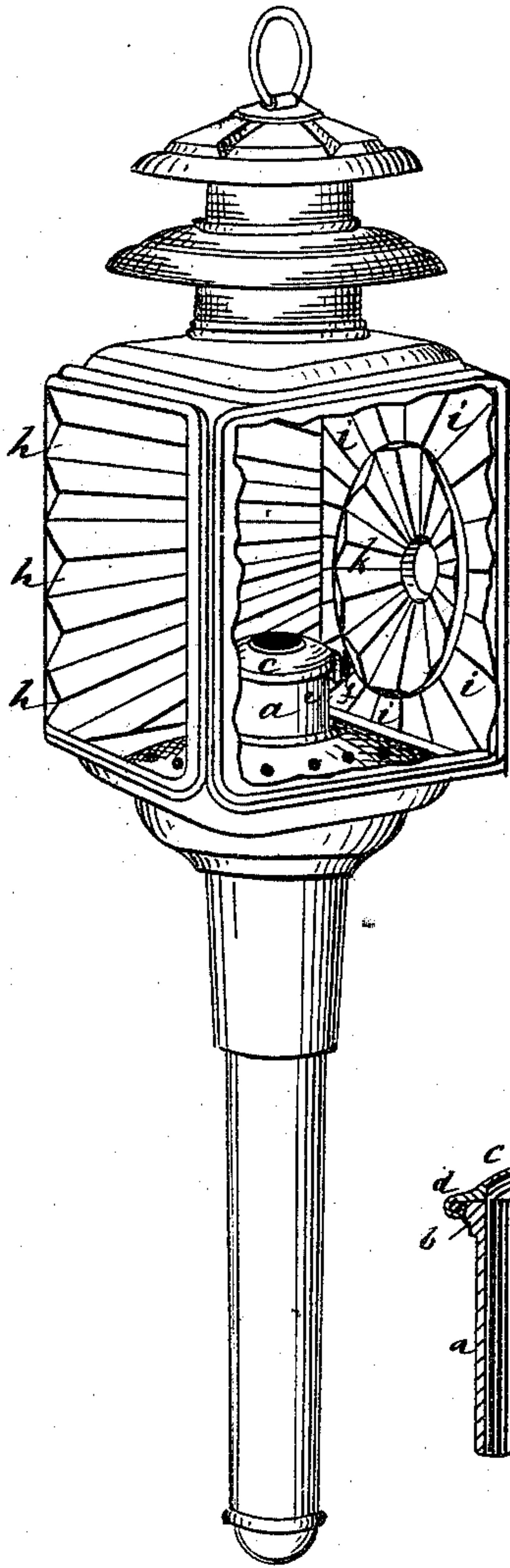


Fig. 2

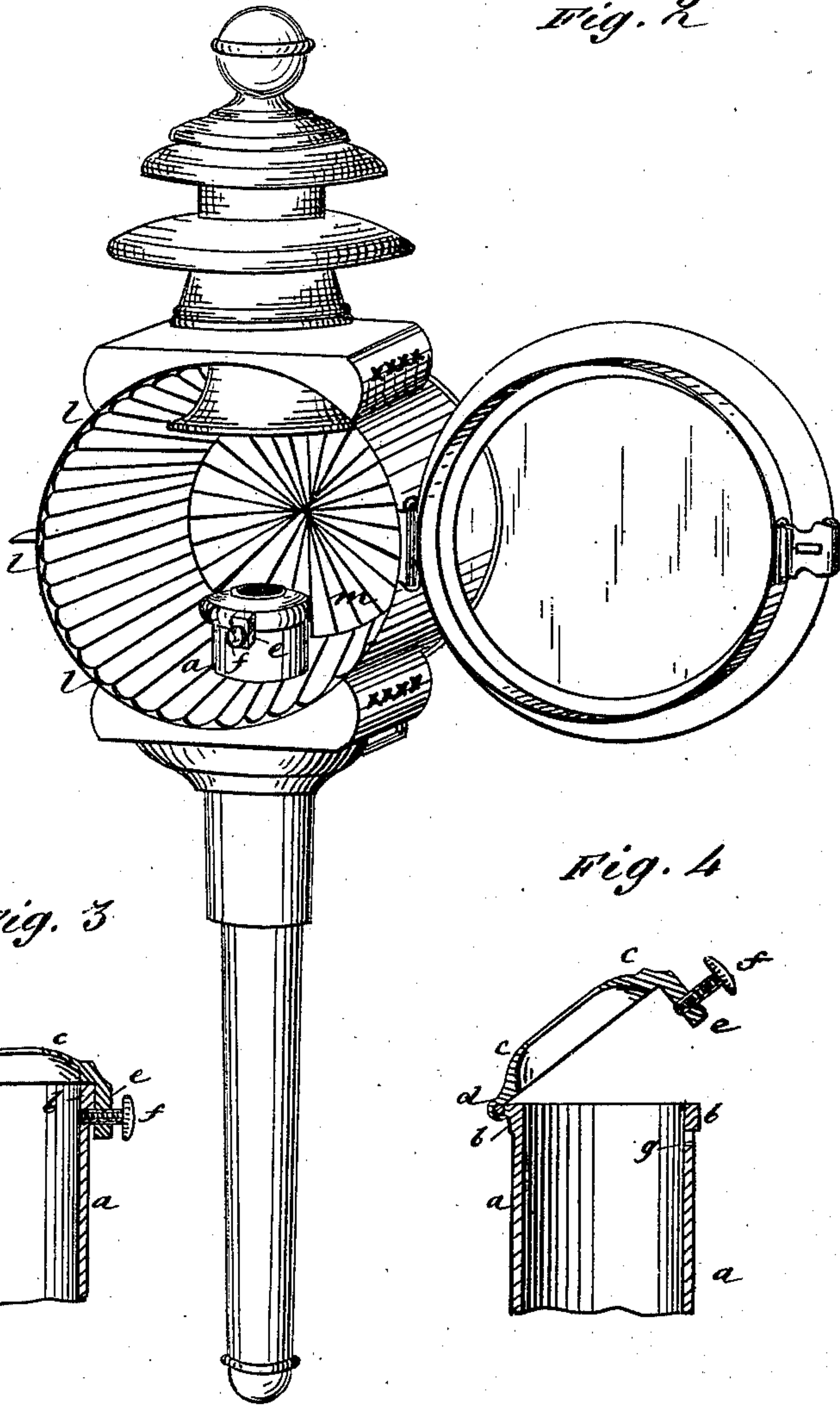


Fig. 3

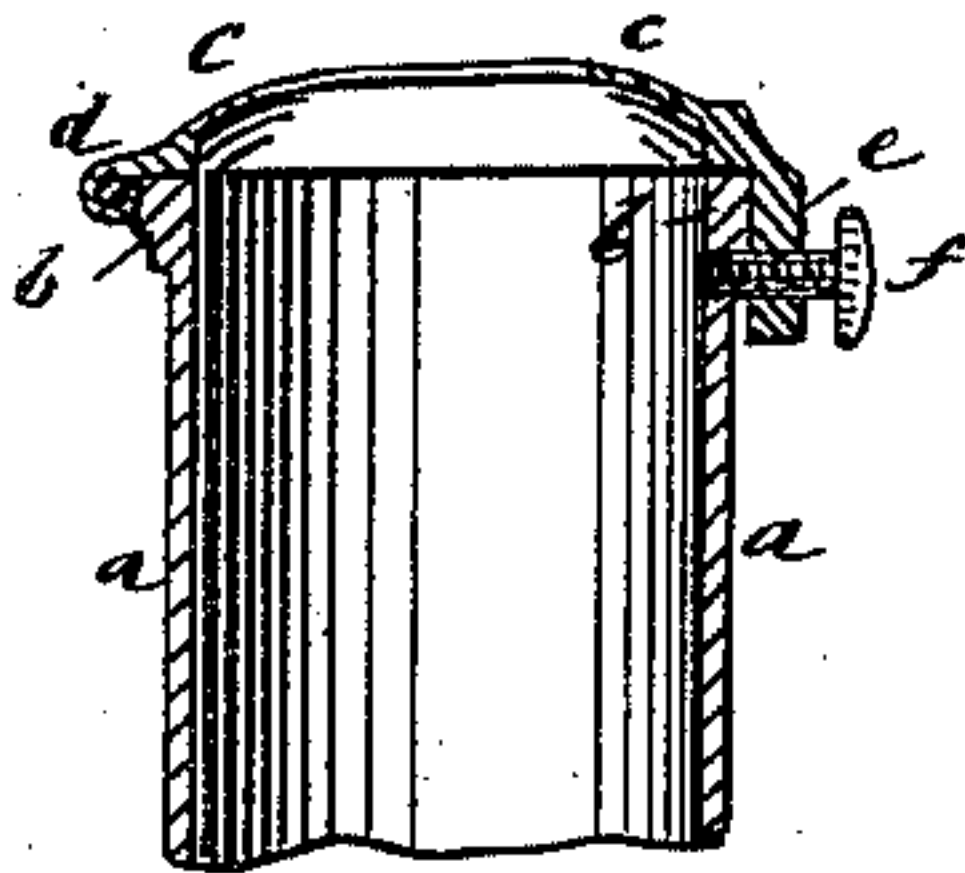


Fig. 4

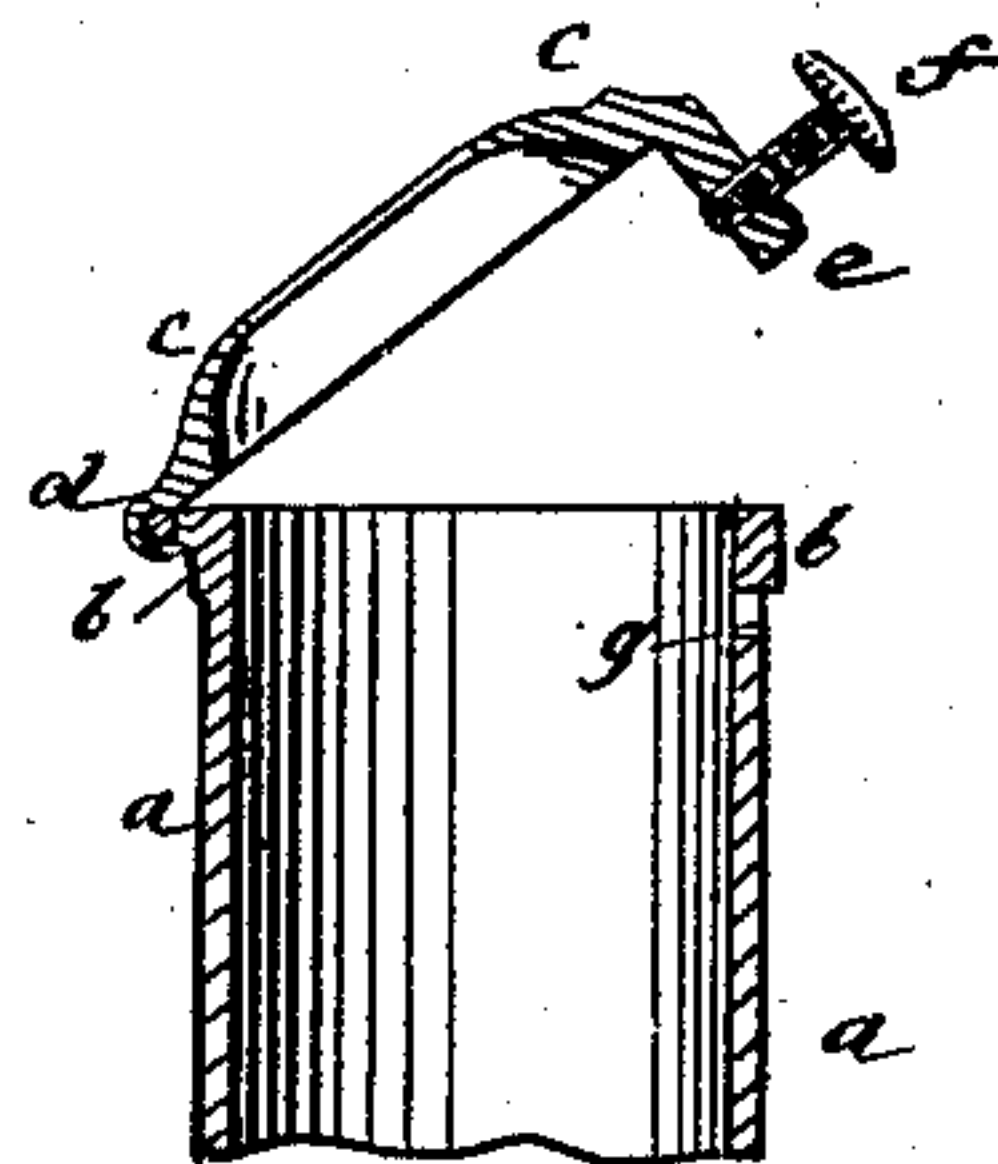
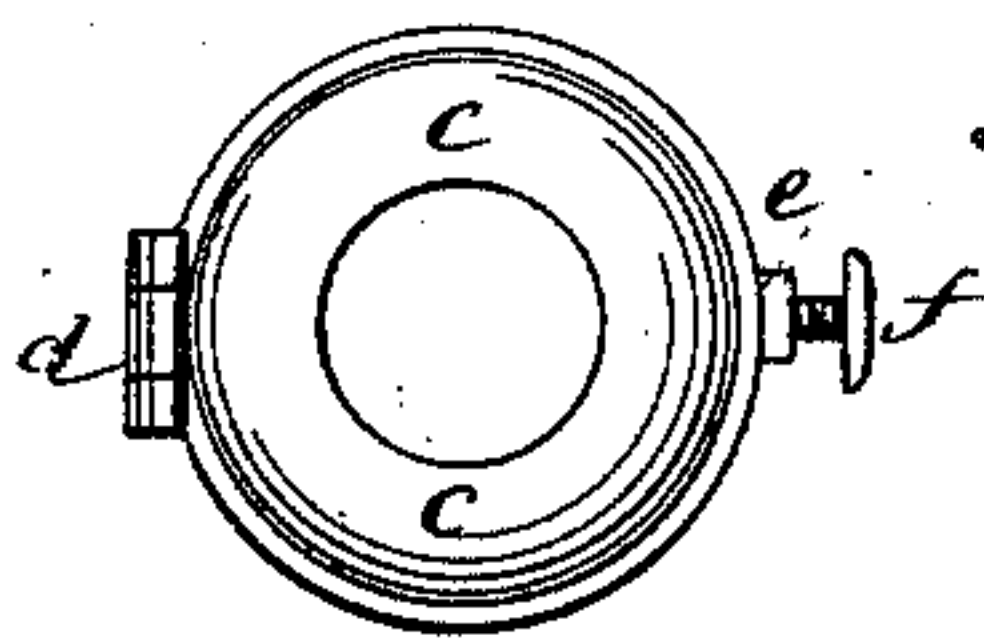


Fig. 5



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# UNITED STATES PATENT OFFICE.

JAMES A. ROBERTS, OF SYDNEY, NEW SOUTH WALES, AUSTRALIA.

## CARRIAGE-LAMP.

SPECIFICATION forming part of Letters Patent No. 223,389, dated January 6, 1880.

Application filed June 11, 1879. Patented in England, October 12, 1878.

To all whom it may concern:

Be it known that I, JAMES ALFRED ROBERTS, of Sydney, New South Wales, Australia, have invented a new and useful Improvement in Carriage-Lamps, of which the following is a specification.

My improvement relates to the candle-tubes of carriage-lamps, and the object is to facilitate the insertion of the candle into, and its removal from, the candle-tube.

The invention will be more particularly described with reference to the accompanying drawings, wherein—

Figures 1 and 2 are perspective views of carriage-lamps with candle-tubes. Figs. 3 and 4 are vertical sections of the candle-tubes with the cap shut in Fig. 3 and raised in Fig. 4. Fig. 5 is a plan view of Fig. 4.

Similar letters of reference indicate corresponding parts.

*a* is the candle-tube, on the head of which is a collar or flange *b*, to which the nozzle or cone *c* is hinged at *d*. The said hinged nozzle or cone *c* is perforated at its center for the passage through it of the candle-wick.

*e* is a lip or flange on the front of the nozzle or cone *c*, which lip, when the nozzle is shut down, projects beyond the collar or flange *b*. The said lip is formed with a hole that is threaded to receive the binding-screw *f*.

In the candle-tube is recess *g*, for receiving the end of the binding-screw *f*, which screw may be entered when the nozzle or cap is closed, and in place of a recess a projection or lip may be formed on the candle-tube, beneath which the screw will take.

When it is wished to introduce a candle or withdraw it, the screw *f* is to be turned to free its end from the hole *g*, thereby releasing the cone, which may then be turned on its hinge *d* to open the candle-tube, as represented in Fig. 4.

After a candle has been introduced it is only necessary to shut down the hinged nozzle *c* upon the collar or flange *b*, and screw home the binding-screw, as illustrated in Fig. 3, and the hinged nozzle will be fixed and the candle secured.

A spring-snap fastening or other analogous device may be used for fastening down the nozzle *c* in place of the screw *f*.

The reflecting-surface of the interior sides of the lamp represented in Fig. 1 consists of a series of tapering angular corrugations, (marked *h h*,) the surface of the reflector having the figure produced by a series of tapering triangular prisms placed edge to edge, as shown clearly by the front end of the side reflecting-surface. (Shown in Fig. 1.) The tapering angular corrugations *h* increase gradually in width from the back to the front of the lamp, as shown.

The back reflecting-surface *i* and the reflector *k* at the back of the lamp are also made with angular tapering corrugations, which are arranged radially, as represented.

Instead of making the corrugated reflecting-surface of the lamp of the angular or prism-like form represented in Fig. 1, it may be made as a series of curved concaved flutes or corrugations with like effect. This construction is represented in Fig. 2 applied to a lamp having a cylindrical body and an open front, the curved, concaved, corrugated, or fluted reflecting-surfaces being marked *l l* and *m m*.

The reflecting surface *l* of the cylindrical body is conical, and the flutes or corrugations taper from front to back. The reflecting-surface *m* at the back is formed with similar tapering flutes arranged radially, as represented.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of candle-tube *a*, having recess *g* and flange *b*, the centrally-perforated cone *c*, hinged to said flange at *d* and having lip *e*, and the binding-screw *f*, working in threaded hole of said lip, as shown and described.

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