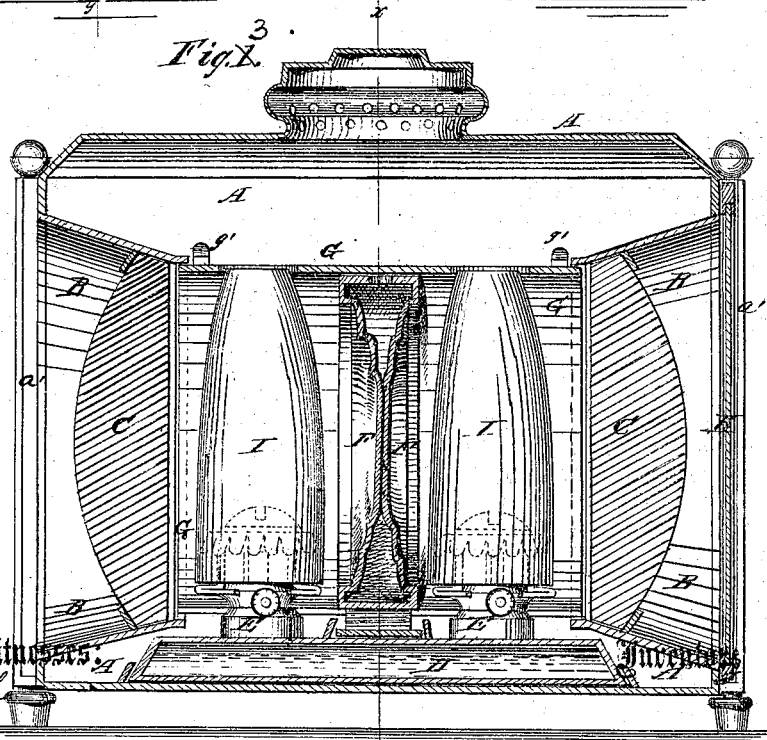
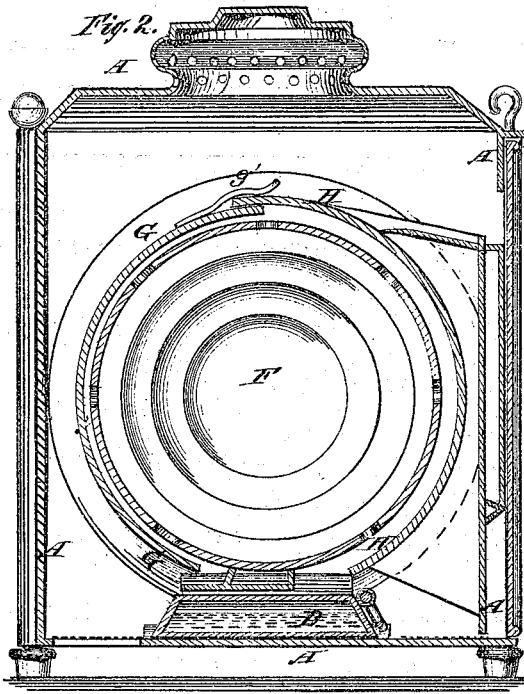
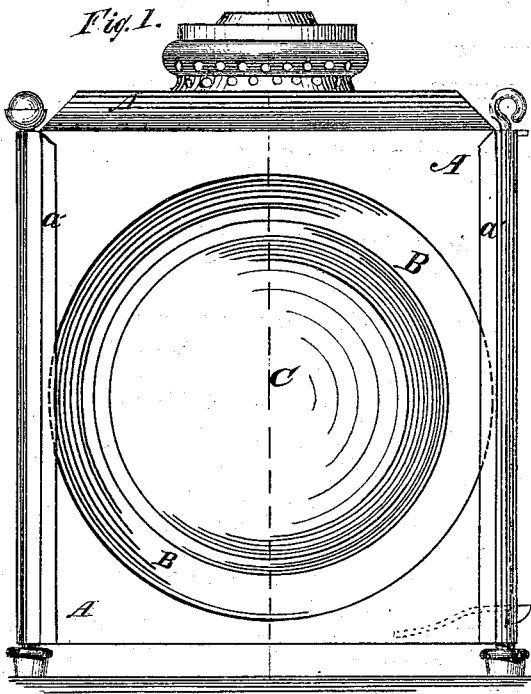


J. F. VERONEE.

Railroad and Marine Signal-Lamp.

No. 129,502.

Patented July 16, 1872.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JAMES F. VERONEE, OF CHARLESTON, SOUTH CAROLINA.

## IMPROVEMENT IN RAILROAD AND MARINE SIGNAL-LAMPS.

Specification forming part of Letters Patent No. 129,502, dated July 16, 1872.

Specification describing a new and useful Improvement in Railroad and Marine Signal-Lamps, invented by JAMES F. VERONEE, of Charleston, in the county of Charleston and State of South Carolina.

In the accompanying drawing, Figure 1 is a front view of my improved signal-lamp. Fig. 2 is a detail vertical cross-section of the same taken through the line *x x*, Fig. 3. Fig. 3 is a detail longitudinal section of the same taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of railroad and marine signal-lamps so as to make them more convenient and effective in use, throwing the light stronger and thus further than the lamps constructed in the ordinary manner; and it consists in the construction and combination of the various parts of the lamp, as hereinafter more fully described.

A is the case or box of the lamp, which is made rectangular in its general form. One side of the box A is hinged at one end, and secured at its other end when closed by a spring-catch and slide-bolt or other convenient fastenings. In the bottom of the case A are formed openings, closed by wire-gauze or perforated sheet metal, to admit air to support combustion in the lamps. In the top of the box or case A is formed an opening, closed by a dome perforated in its lower part to allow the heated air and the gases from the lamps to escape freely and at the same time exclude the rain. In the opposite ends of the case A are secured flaring or conical band reflectors B, which are made of silver-plated reflecting copper, and to their inner edges are secured plano-convex lenses C to concentrate the rays of light. This arrangement of the flaring reflectors B and the lenses C concentrates the rays of light better, and thus gives a stronger light and throws it further than lamps constructed in the ordinary manner. D is the oil-reservoir of the lamp, which is made long and narrow, and to which, near each end, is attached a lamp-burner, E. To the center of the lamp D, between the burners E, is detachably attached a double reflector, F, the reflecting-plates of which are made circular, and are connected at their outer edges by a band, which should have a number of holes

formed through it to allow the air to pass in and out freely. The reflecting surfaces of the plates of the double reflector F are made concave, and said plates are corrugated or made with inclined circular or ring shoulders, as shown in Figs. 2 and 3. G H are semi-cylindrical reflectors, extending from one to the other of the inner ends of the flaring reflectors B. The lower edges of the reflectors G H meet or nearly meet upon the top of the lamp D, and are notched to receive the burners E. The upper edges of the reflectors G H meet, overlap, and are connected with each by springs *g*, which are attached to the one reflector G, and press upon the overlapping edge of the other reflector H, as shown in Fig. 2. The upper edges of the reflectors G H are notched, to allow the heated air to escape and to receive the upper ends of the lamp-chimneys I. The reflector G is stationary, and the other reflector H is made detachable to allow the lamp D E and double reflector F to be conveniently removed when desired.

The signal-lamp has been described as having a flaring reflector at each end, but it may be made with such reflectors upon three or even upon four sides, if desired.

In the case A, at the mouth or outer edges of the flaring reflectors B, are formed grooves *a'* to receive the edges of the metallic frames J, in which are set plates K of colored glass, which may thus be quickly inserted, and removed or exchanged, according to the signal to be given.

All the reflectors are made of silver-plated reflecting copper.

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

1. The cylindrical reflectors G H, in combination with the lights and with the lenses C and flaring reflectors B, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the double reflector F with the lights and with the cylindrical reflectors G H, the lenses C, and the flaring reflectors B, substantially as herein shown and described, and for the purpose set forth.

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