

(Model.)

W. S. ROGERS.  
Lantern.

No. 233,024.

Patented Oct. 5, 1880.

Fig. 1.

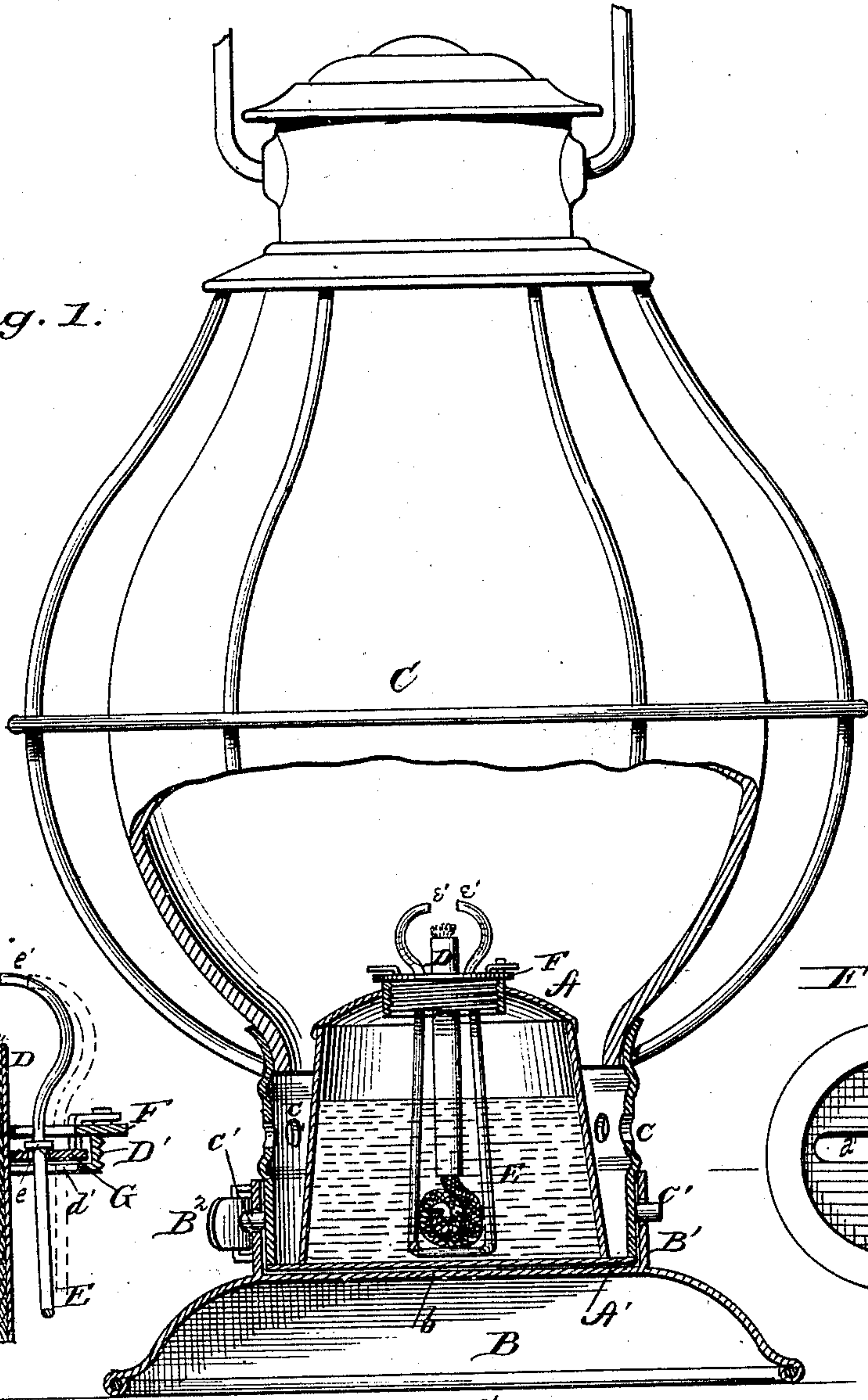


Fig. 3.

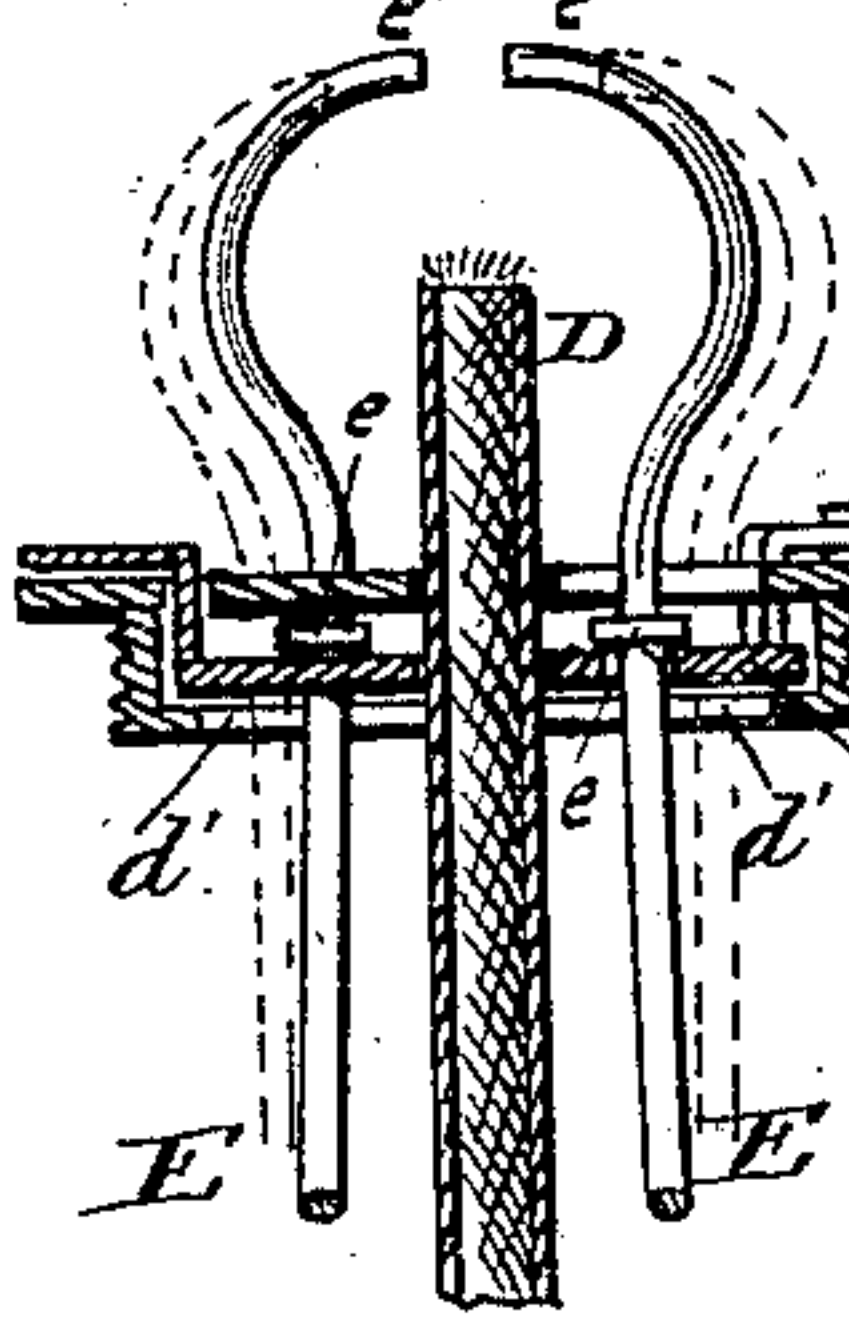


Fig. 5.

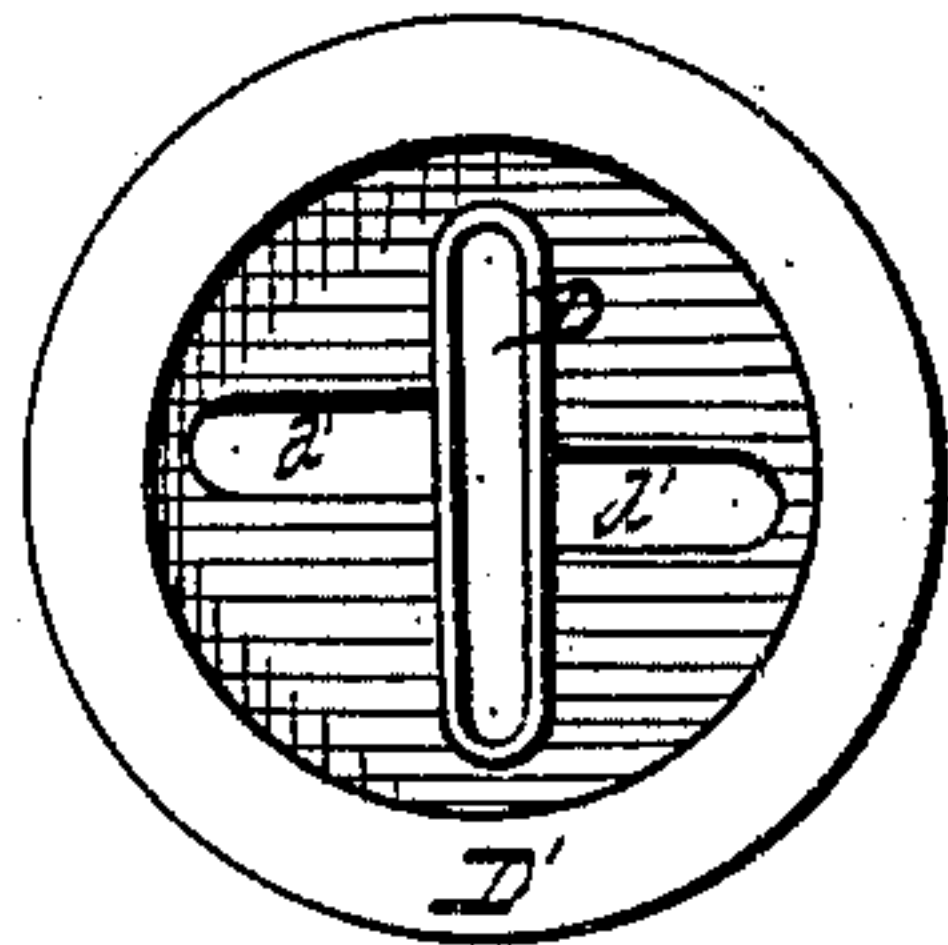


Fig. 4.

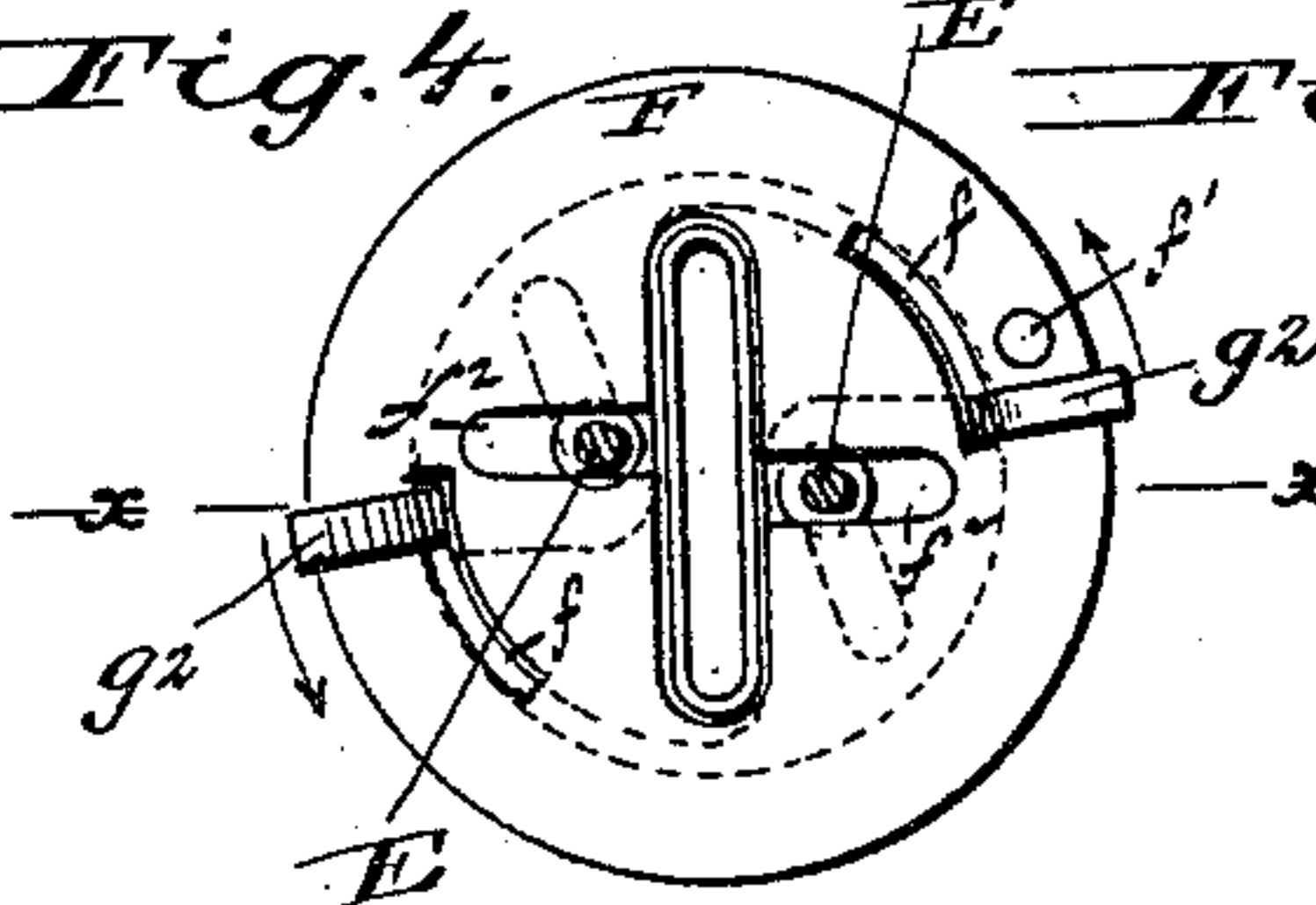


Fig. 2.

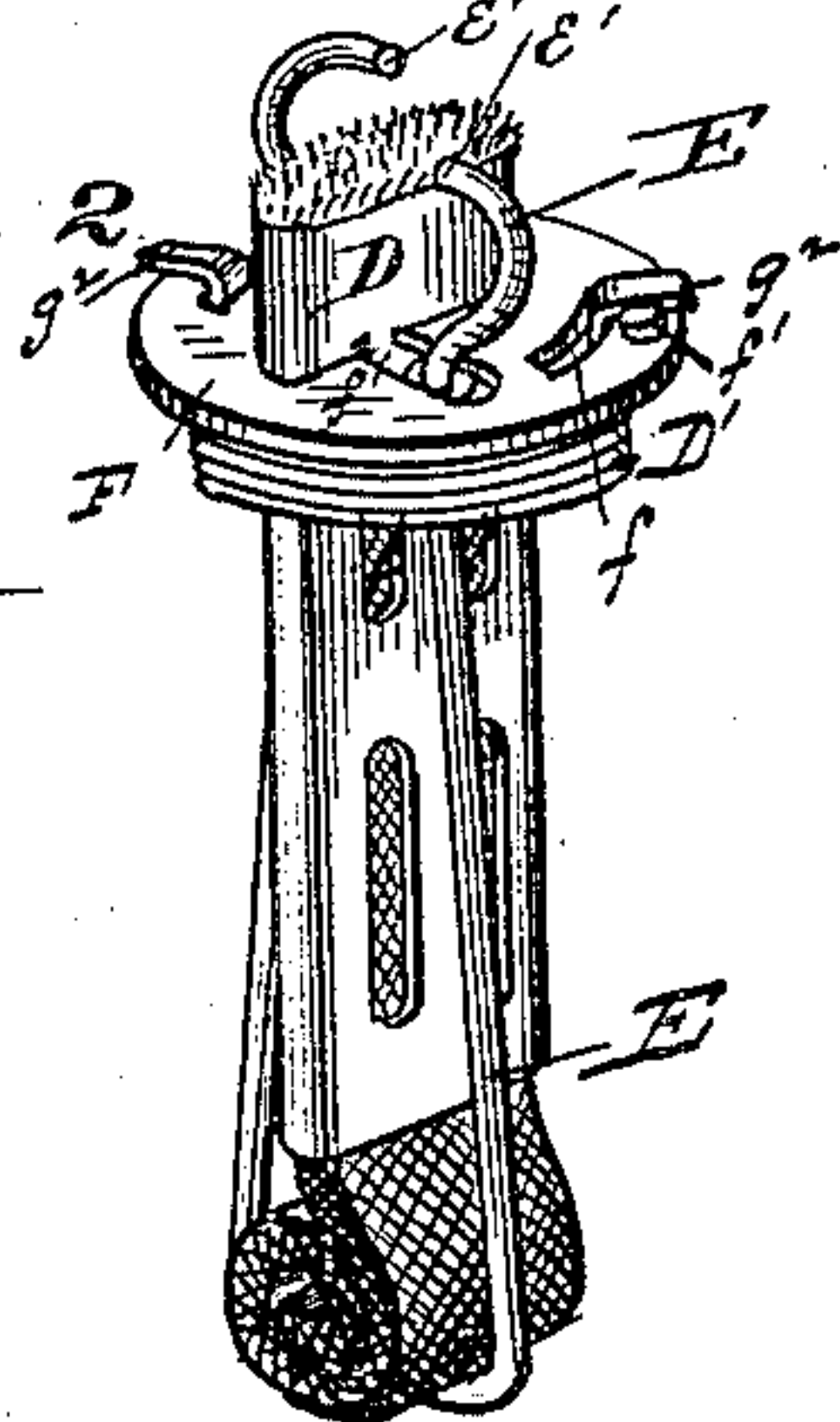
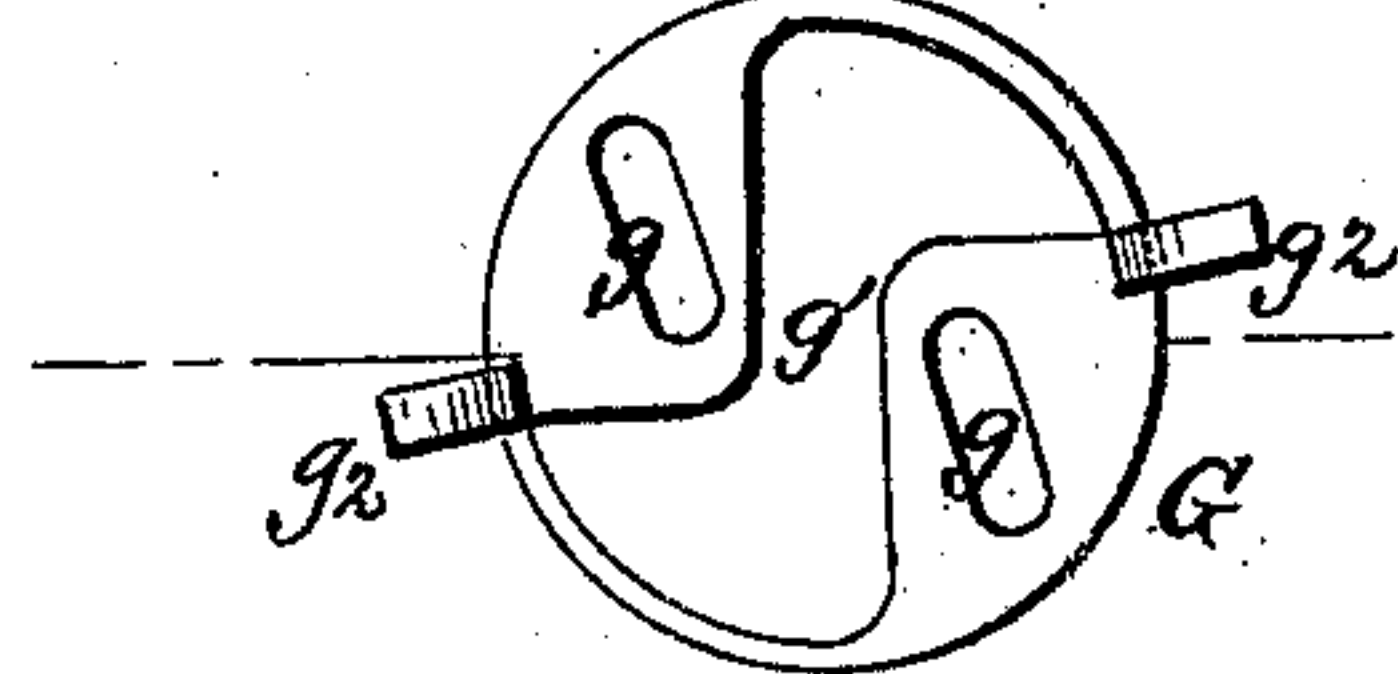


Fig. 6.



Attest:  
H. L. Perrin  
Notary Public

Inventor:  
W. S. Rogers  
by his attorney  
R. B. Bick



# UNITED STATES PATENT OFFICE.

WINFIELD S. ROGERS, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-HALF OF  
HIS RIGHT TO SMITH FRANCES, OF SAME PLACE.

## LANTERN.

SPECIFICATION forming part of Letters Patent No. 233,024, dated October 5, 1880.

Application filed July 7, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, WINFIELD S. ROGERS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Lanterns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains, to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

15 This invention relates to hand-lanterns, and more especially to that class of hand-lanterns used by railway-employés, and known as "railway" or "signal" lanterns.

20 One object of my invention is to construct an oil-cup for such a lantern so that it will be independent of the lantern, but adapted to be securely clamped between the lantern frame and base when these parts are in position for use.

25 Another object of the invention is to provide a cheaply-constructed and efficacious means of warming or heating the oil in the oil-cup during cold weather, so that the wick may be kept well saturated with oil.

30 To these ends my invention consists in providing the independent oil-cup with a flange, which is clamped between the base and frame of the lantern when these parts are connected for use.

35 It further consists in securing to the wick-tube or burner of the oil-cup a wire, the middle bent portion of which passes around the lower end of the wick-tube and dips into the oil in the cup, while the free ends terminate a little above the top of said wick-tube or burner.

40 It further consists of means by which the free ends of the wire may be shifted laterally to bring them nearer to or move them farther from the flame of the lamp, as occasion may require.

45 In the annexed drawings, Figure 1 is an elevation of a railway-lantern, drawn partly in section, to show my improved construction. Fig. 2 is a perspective of a lamp-burner having my improved oil-heater attached. Figs. 3

to 6 are detail views showing one method of adjusting the ends of the heater nearer to or farther from the flame of the lamp.

The same letters of reference are used in all the figures in the indication of identical parts. 55

The oil-cup A, preferably of the form shown, is provided at the bottom with a rigid flange, A', which fits within a ring-flange, B', projecting upwardly from the lantern-base B. The lower ring, c, of the lantern-frame C is of a size to fit snugly within the ring-flange B', and is secured therein by the studs c', projecting outwardly from the lower ring, c, of the lantern-frame, which studs enter angular slots formed at opposite sides of the ring-flange B', and thus form a bayonet-joint. One of the studs c' may be locked at the inner end of its slot by a spring, B<sup>2</sup>, to prevent the accidental separation of the lantern-frame C and its base B. The lower ring, c, of the lantern-frame is of such size as to rest upon the flange A' of the oil-cup or lamp A, which, being seated upon the web b of the base B, will be securely held in place when the lantern frame and base are attached, as shown in Fig. 1. The wick-tube D is provided with the ordinary screw-cap D', for securing it in the neck of the oil-cup. 65 70 75

The bifurcated heater adapted to warm the oil consists of a loop of wire, E, the loop of which depends into the oil-cup some distance below the lower end of the wick-tube, with respect to which the loop occupies an angular position, so that the lower end of the wick may be coiled up in the loop. 80 85

The screw-cap D' of the wick-tube is provided on each side with slots d', running at right angles to the width of the wick-tube, and are offset with relation to each other, as shown in Fig. 6. Seated loosely within the screw-cap D' is a cam-plate, G, having cam-slots g and a large opening, g', for the accommodation of the wick-tube. To the top of the screw-cap is fixed a slotted plate, F. This plate has slots f<sup>2</sup>, arranged similarly to the slots d' in the bottom of the screw-cap. It has in addition two segmental slots, f f, to provide for the movement of the lugs g<sup>2</sup> g<sup>2</sup>, fixed to the cam-plate G, and intended for operating the cam-plate. 90 95 100



A stud,  $f'$ , projects upwardly from the plate F at a point about midway of one of the segmental slots  $f$ , the purpose of the stud being to lock one of the lugs  $g^2$  at either end of its range of motion in the slot.

Through the slots  $d'$ ,  $g$ , and  $f^2$  are passed the free ends of the wire E, collars  $e$  being fixed thereto between the plates G and F to prevent said wire from slipping up or down. The free ends of the wire E are bent in the manner shown, so that the points  $e'$  will face and be directly acted on by the radiated heat of the flame. This curved construction of the ends of the loop of wire is of practical importance, because it avoids interference with the flame when brought close up to it.

To further provide against such interference of the heater-wire with the flame the ends of the wire stand askew, as shown best in Fig. 2, and are held askew by the slots  $d'$  and  $f^2$ .

Taking the position of the parts as shown in Fig. 3, the adjusting of the heating-wire farther from the flame is accomplished by freeing the lug  $g^2$  from the stud  $f'$  and moving said lug to the other end of its slot  $f$ . This causes a partial rotation of the cam-plate G, which, by the cam-like action of its slots  $g$  upon the wire, forces said wire to the outer ends of the slots  $d'$  and  $f^2$  in the screw-cap and top plate. A reverse motion of the lugs and cam-plate will, of course, produce an opposite effect.

It will be seen that by coiling the wick within the bent portion or loop of the wire-

heater the wick-tube and parts thereto attached can be easily withdrawn from the oil-cup for the purpose of cleaning or refilling the same without danger of pulling the wick from the tube in case the oil remaining in the cup chances to be stiffened or congealed by cold.

Having thus described my invention, what I claim as new is—

1. The combination, substantially as before set forth, of the separate flanged oil-cup, the base having an upwardly-projecting ring-flange, and the depending flange of the lantern-frame, adapted to be secured within the ring-flange of the base.

2. The combination, substantially as before set forth, of the oil-cup, the wick-tube, and the bifurcated heater, the curved ends of which stand askew with reference to the said tube.

3. The combination, substantially as before set forth, of the oil-cup, the wick-tube, and the bifurcated heater, arranged exteriorly of the wick-tube, said heater having a bend at its lower end which stands across and beneath the lower end of the wick-tube.

4. The combination, substantially as before set forth, of the oil-cup, the screw-cap, the wick-tube, the bifurcated heater, and the cam-plate, all constructed as described.

In testimony whereof I affix my signature in presence of two witnesses.

W. S. ROGERS.

Witnesses:

C. A. NEALE,  
H. J. ENNIS.