

(No Model.)

L. HENKLE.
Hand Lantern.

No. 243,373.

Patented June 28, 1881.

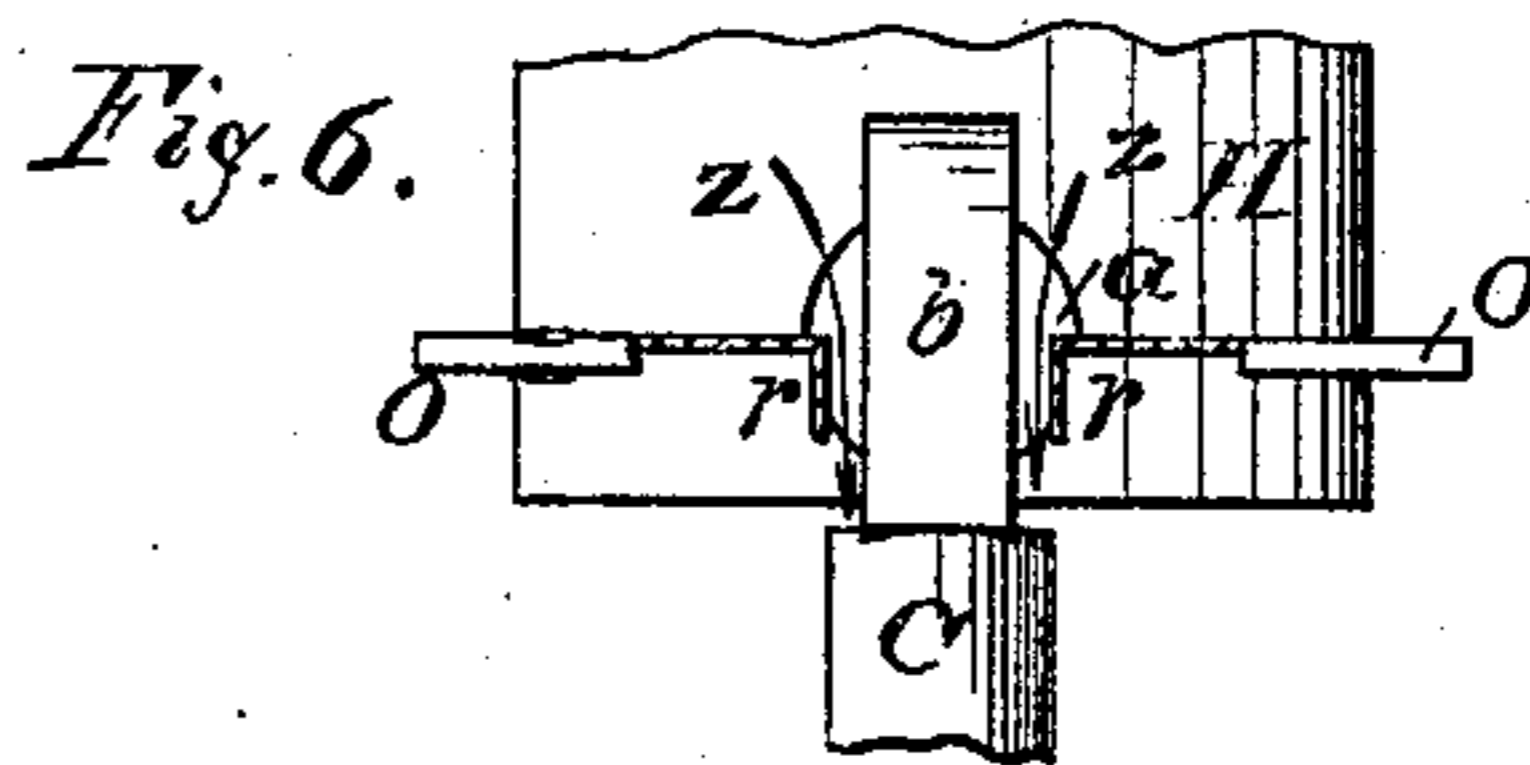
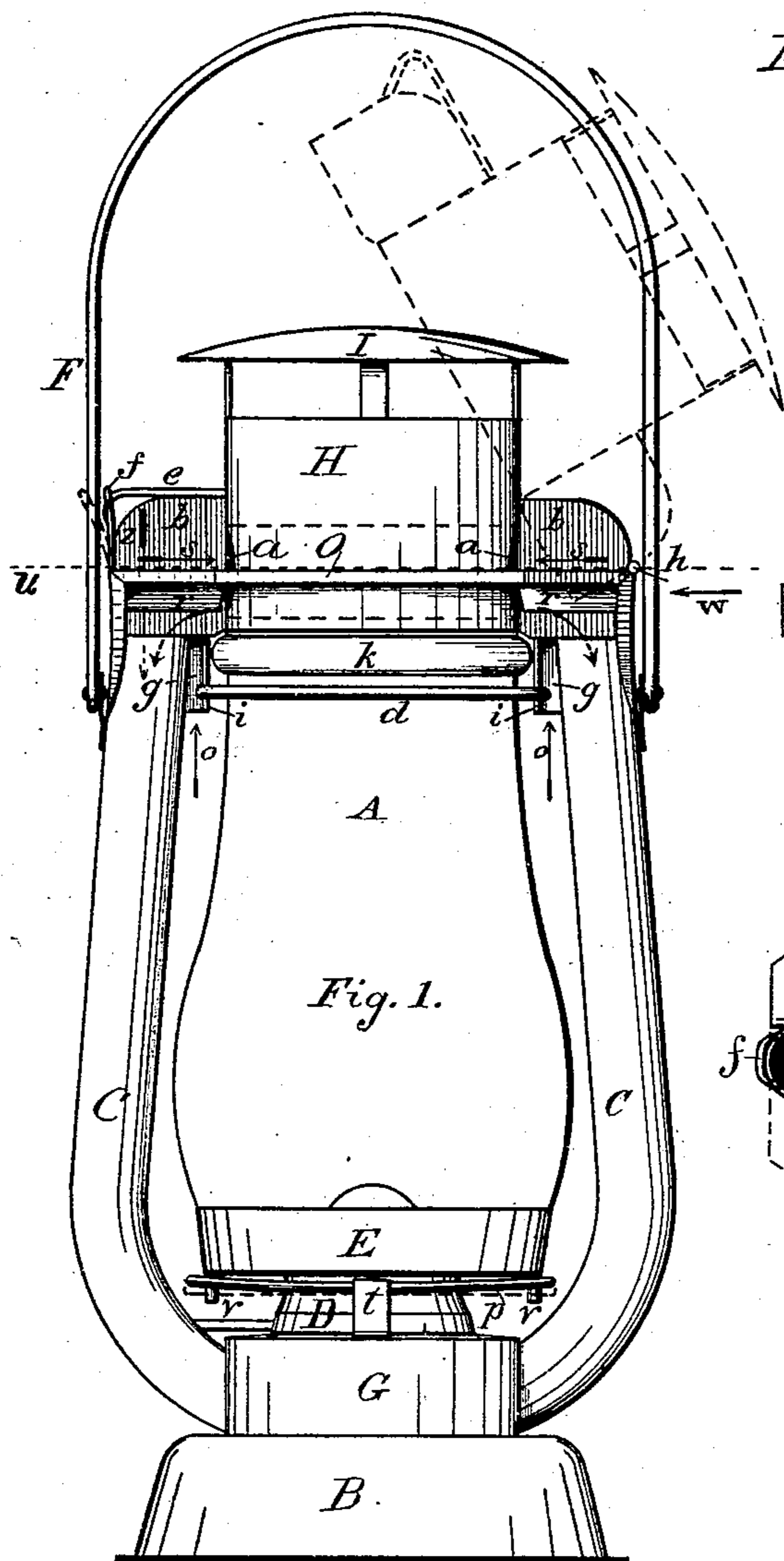


Fig. 2.

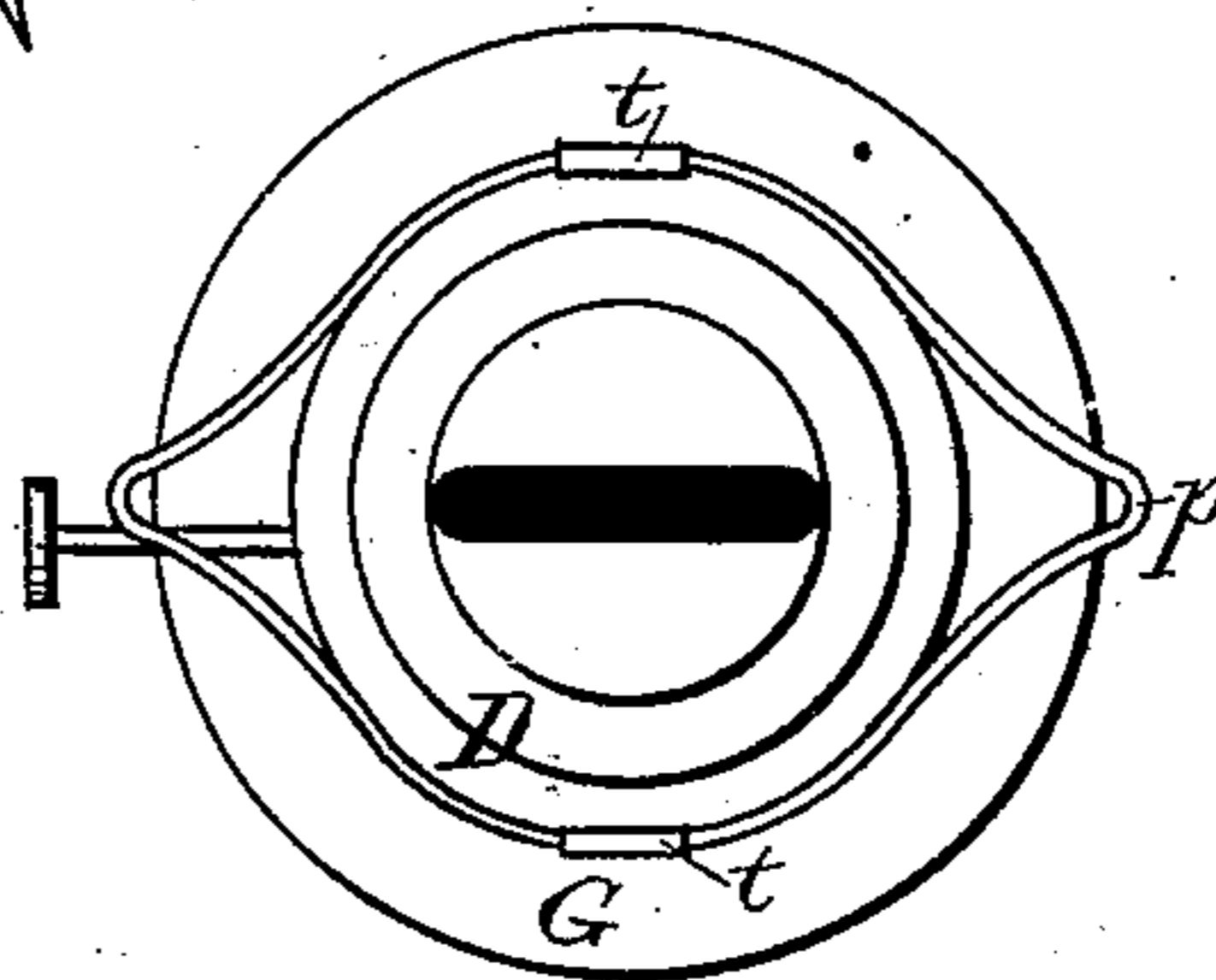


Fig. 3.

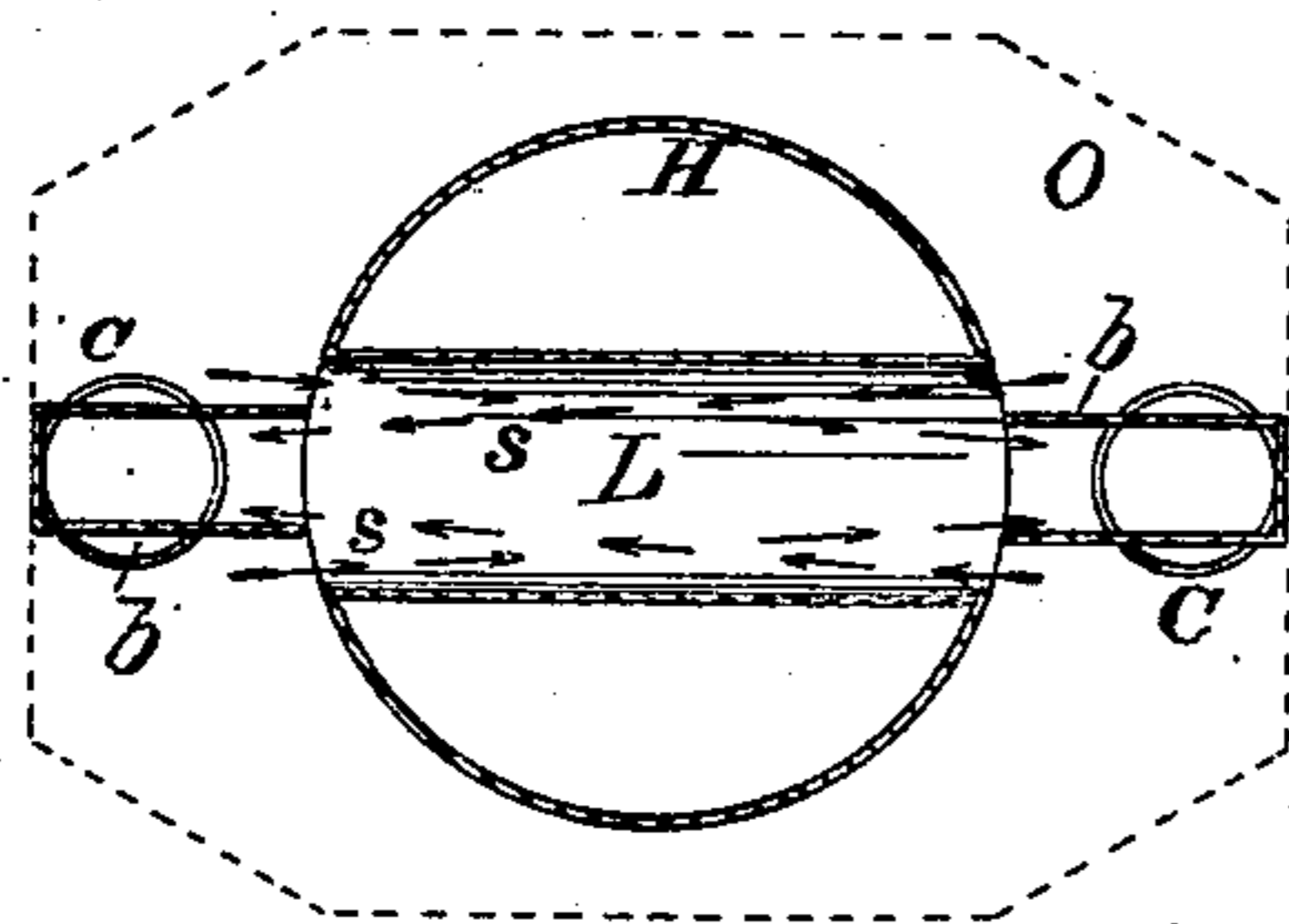
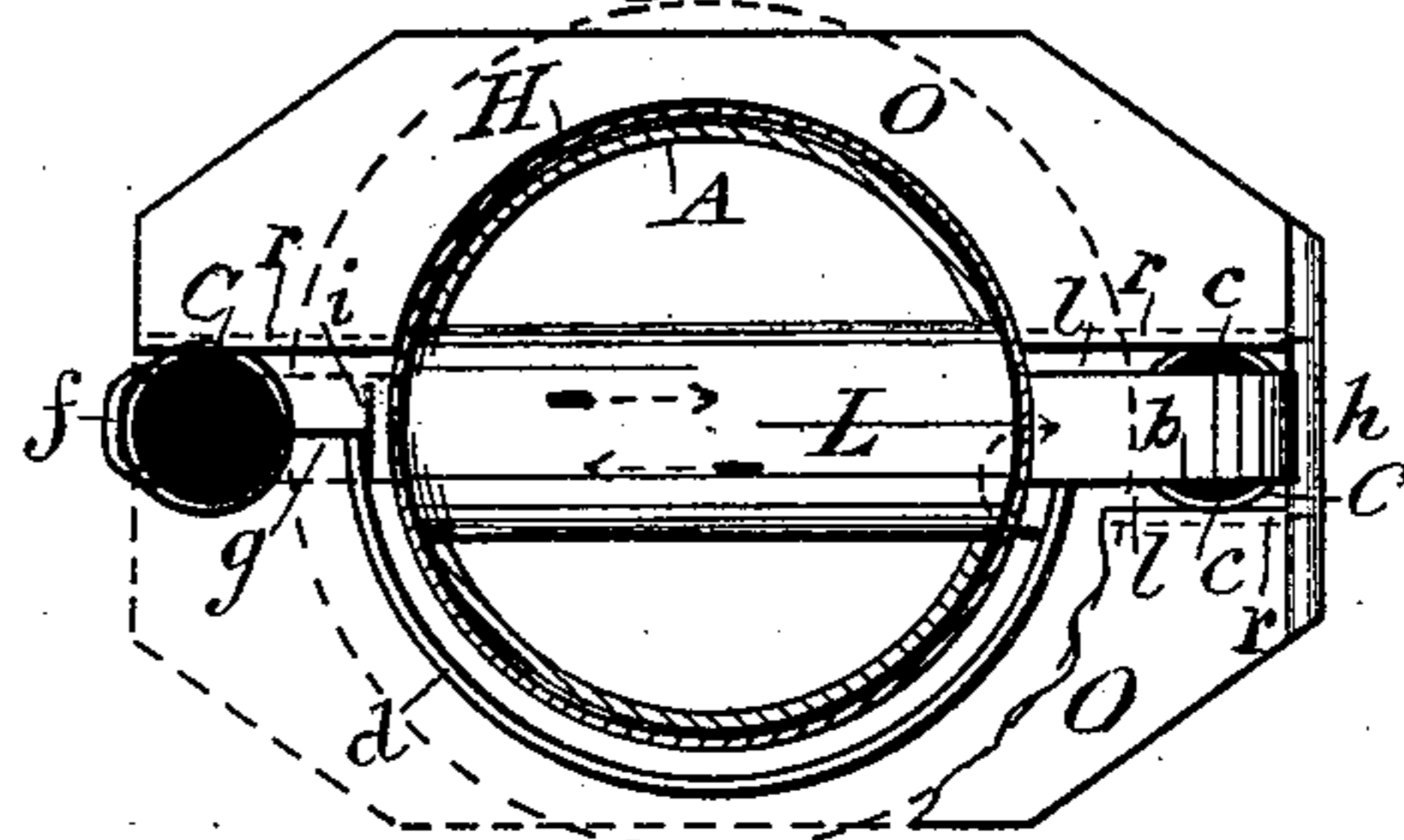
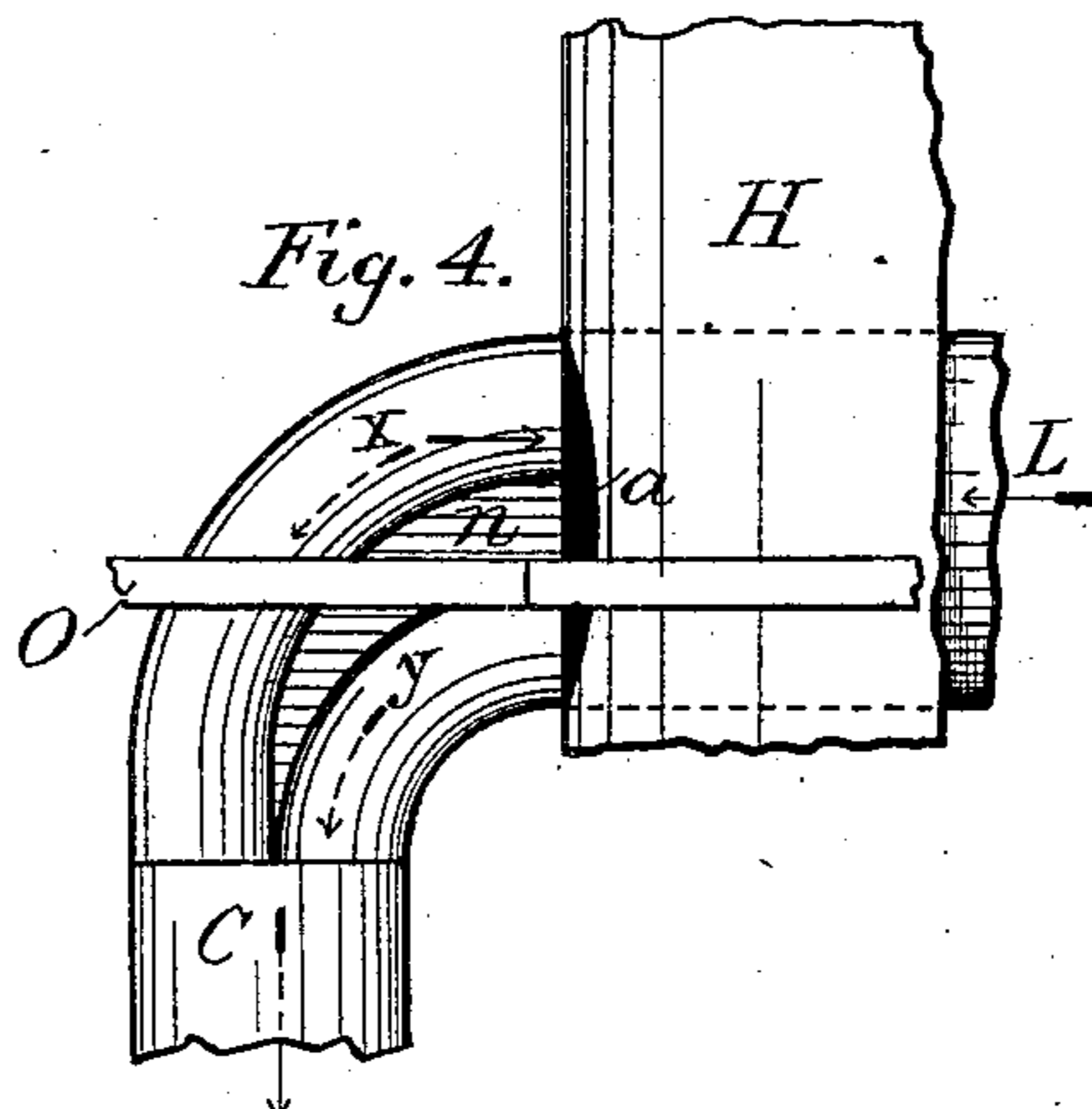


Fig. 5.

Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

LEONARD HENKLE, OF ROCHESTER, NEW YORK.

HAND-LANTERN.

SPECIFICATION forming part of Letters Patent No. 243,373, dated June 28, 1881.

Application filed April 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, LEONARD HENKLE, of Rochester, in the county of Monroe and State of New York, have invented a new and useful
5 Improvement in Hand-Lanterns, which improvement is fully set forth in the following specification and accompanying drawings.

The object of my invention is to produce new and better forms of air-passages to the flame
10 of the lantern, and an improved method of inserting and supporting the globe.

In the drawings, Figure 1 is a side elevation of my hand-lantern with all parts in place; Fig. 2, a plan view of a portion of the bottom
15 part of the same; Fig. 3, a plan of the top with parts removed; Fig. 4, a modification of the air-passages; Fig. 5, a horizontal section of the air-boxes and band, taken along the dotted line *u*; and Fig. 6, an elevation of a part of the
20 upper portion of the lantern, partially in section, indicated by the arrow *w* in Fig. 1.

Referring to the figures, A is the globe, B the oil-reservoir, C the side tubes, D the cone, E the globe-base, G the air-chamber, and F the
25 bail, all of ordinary construction. Air to supply the flame passes down through the tubes C C, in the usual manner.

H is a vertical cylindrical band employed to surround and hold the top end of the globe,
30 surmounted by a canopy, I, in the usual manner. The band H is pierced diametrically by a horizontal tube, L, somewhat larger in diameter than the side tubes, C C, (better shown in Fig. 3,) the ends of which tube are fastened to
35 the opposite sides of said band H, which sides have holes cut in them of the size of the tube, thus forming an air-passage through the band.

b b are hollow air-boxes, resting respectively upon the upper ends of the tubes C C and
40 against the sides of the band H, partially covering the open ends of the tubes L and C C. The boxes are open at the respective sides, resting against the band and the ends of the side tubes, and narrower than the extent of the diameters of the tubes, so that there are
45 left segmental openings *a a* in the band and similar openings, *c c*, at the ends of the tubes C C, outside of the boxes, as shown. The horizontal plate O, in two parts, as shown in Fig.
50 3, surrounds the band and air-boxes, and is made to span the space between the tops of

the tubes C C and stay them to place. Stiffening-braces *r r* serve to strengthen the plate O at the corners. The air-boxes *b b* are fastened rigidly to the band H, and the box ap-
55 pearing at the right hand in Figs. 1 and 3 is attached to the plate O by a hinge, *h*, so that the whole upper part of the lantern may be swung upward, as indicated by dotted position shown in Fig. 1, for the purpose of insert-
60 ing the globe.

e is a latch attached to the air-box *b*, and *f* a spring-catch attached to the downward-turned end of the plate O, which, in combination with the latch *e*, holds the swinging or
65 hinged top in position when closed down over the upper end of the globe A.

g g, Figs. 1 and 3, are small vertical pieces, attached respectively to the inner surfaces of the tubes C C and extend toward the globe A.
70 To these pieces is attached a semicircular wire, *d*, which forms a stop for the globe when it is put into place in the lantern. The pieces *g g* have each a flange, *i*, which form guides for the upper end of the globe as it is carried into
75 place, the lower end of said globe being first inserted in the globe-base E, in the usual manner. The flanges *i i* and stop-wire *d* together center the upper end of the globe, so the upper swinging or hinged part of the lantern may be
80 shut down to place, inclosing the upper end of the globe, as shown. The flanges *i i* also serve another purpose. They assist to form channels on each side of the two vertical pieces *g g*, along which air-currents may flow into the
85 air-boxes *b b*, as hereinafter described.

Small currents of air for supplying the flame pass in through the segmental openings *a a*, as indicated by the arrows *s s*, accordingly as the lantern is held with reference to the direc-
90 tion of the currents of air outside, and follow through the tube L and opposite air-box *b*, and down through the adjacent tube C to the air-chamber G. Should the outer current of air be downward, small divided currents will flow
95 down through the slits *l l*, formed between the inner edges of the parts of the plate O and the sides of the boxes *b* into the tubes C C, as indicated by the arrow Z. Small portions of upward blasts or currents of air will be caught
100 and carried along the channels formed by the pieces *g g* and adjacent sides of the tubes C C

into the air-boxes *b b*, as indicated by the arrows *o o*, and thus into the tubes *C C* to the flame. With these arrangements for subdividing blasts of wind into small currents and regulating the flow thereof, the flame burns steadily though the wind be violent, or while the lantern is swung about the head, as for signals in railroad practice.

Beneath the globe-base *E* is placed a spring, *p*, Figs. 1 and 2, held horizontally by standards *t t*, rising from the upper surface of the air-chamber *G*, upon which said globe-base rests. Pins *v v* project downward from the under side of the globe-base through the openings at the ends of the spring, which serve to keep the globe-base in place. When the hinged upper part of the lantern is closed to place, as above described, the lower edge of the band *H* rests firmly upon the bead *k* of the globe and presses the latter with the globe-base down against the spring *p*. This holds the globe with a yielding pressure firmly to place and prevents it shaking or rattling when the lantern is carried or swung about.

Fig. 4 shows a pair of quadrantal tubes, *xy*, a pair of which it may be desirable to use respectively in place of the air-boxes *b b* above described. The upper horizontally-turned ends of the tubes oppose the respective ends of the tube *L* in the same manner that the open sides of the air-boxes oppose the ends of said tube,

and the lower ends of the tubes *xy* converge to correspond to the lesser diameter of the side tubes, *C C*. A web, *n*, unites and stiffens the tubes *xy*, as shown.

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I claim as my invention—

1. In combination with a side tube, *C*, of a lantern, the vertical band *H*, provided with an internal open-end tube, *L*, and an air-box, *b*, partially covering the adjacent ends of the said tubes *C* and *L*, and forming an integral part of an air-passage continued through said tube *L*, air-box *b*, and side tube, *C*, to the flame, as set forth.

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2. In combination with the side tubes, *C C*, and air-boxes *b b*, the plate *O*, having downward-turned parts *r*, parallel with the sides of the air-boxes *b b*, forming therewith vertical air-passages to the open ends of said tubes *C C*, substantially as set forth.

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3. In combination with the side tubes, *C C*, and air-boxes *b b*; channel-pieces *g g* for regulating upward currents of air, as set forth.

4. The combination of the tubes *C C*, pieces *g g*, with the cross-pieces *i i*, and the connecting-wire or stop *d*, substantially as shown, and for the purpose set forth.

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LEONARD HENKLE.

Witnesses:

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