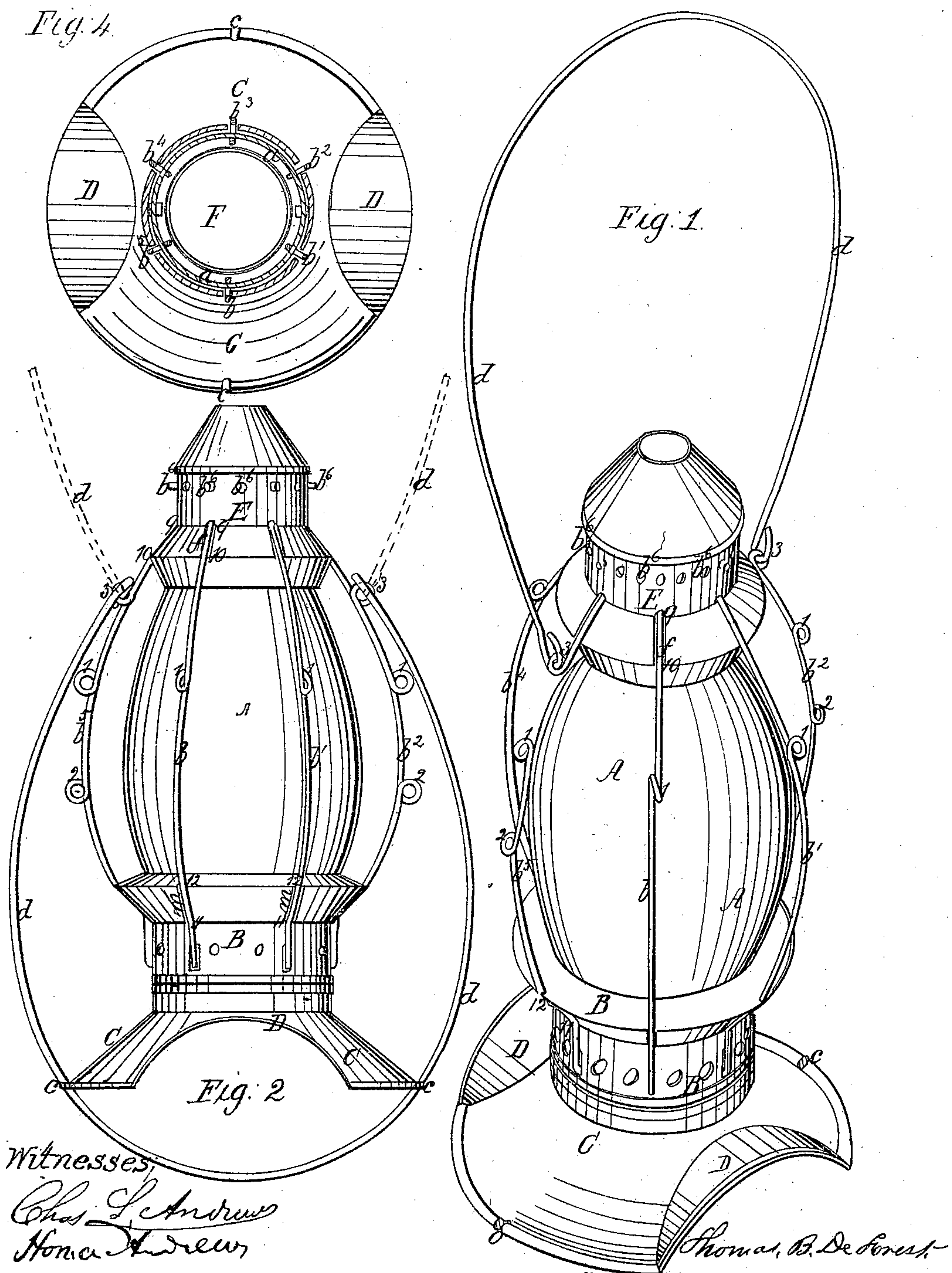


No. 29,472.

PATENTED AUG. 7, 1860.

T. B. DE FOREST.
LANTERN.

2 SHEETS—SHEET 1.

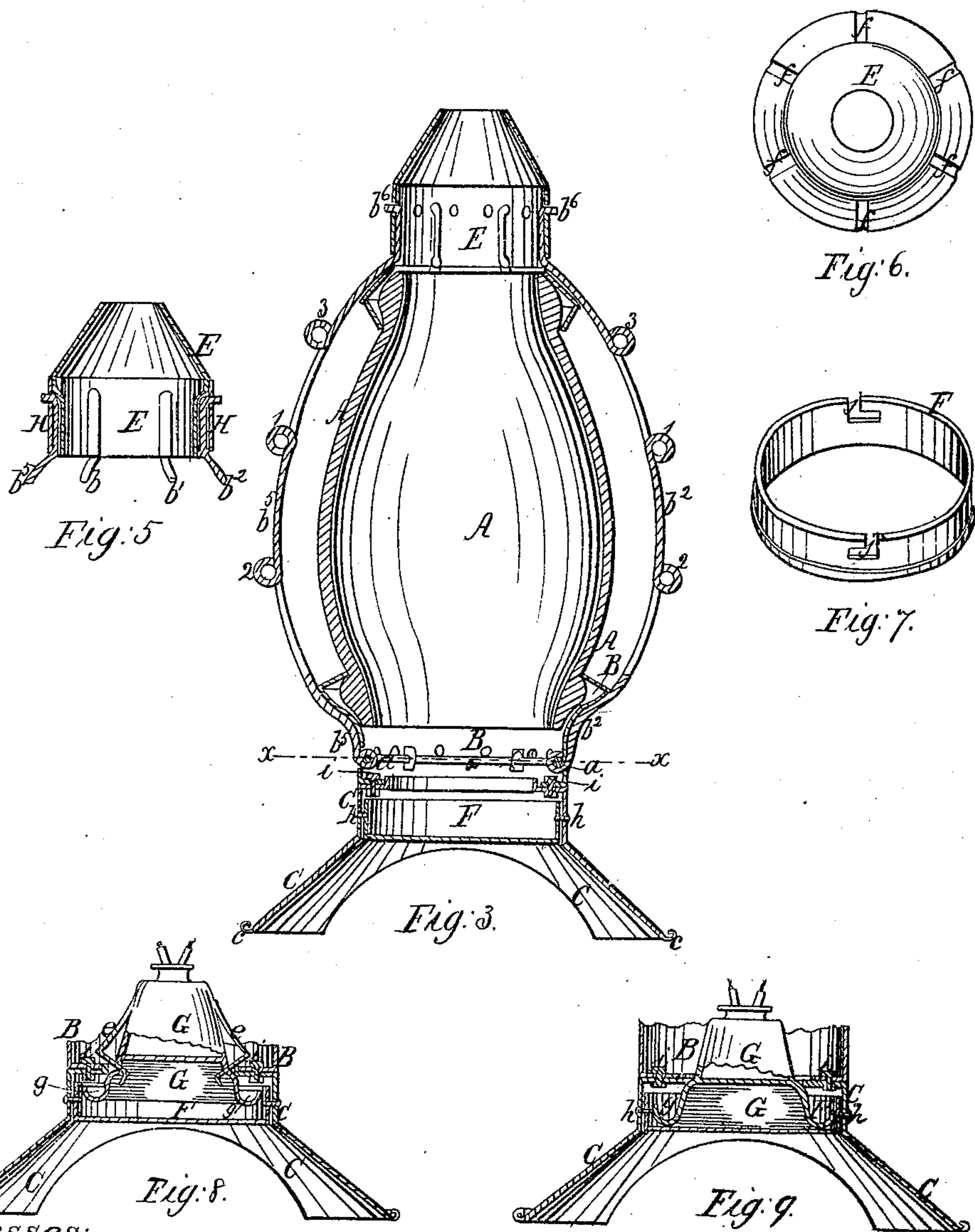


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2 SHEETS—SHEET 2.



Witnesses;
Chas. L. Andrews
Homer Andrews

Inventor;
Thomas B. De Forest

UNITED STATES PATENT OFFICE.

THOMAS B. DE FOREST, OF NEW YORK, N. Y.

LANTERN.

Specification of Letters Patent No. 29,472, dated August 7, 1860.

To all whom it may concern:

Be it known that I, T. B. DE FOREST, of New York, county of New York, in the State of New York, have invented certain new and useful Improvements in Lanterns; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention relates to certain improvements in lanterns, the object of which is to render the lantern more simple and economical in its construction while it is applicable to all the purposes to which it has heretofore been adapted, and possesses additional advantages in its practical applications, and to these ends my invention consists in making the base, or stand piece of the lantern separate and detachable from the other parts of the apparatus, in order that it may be renewed when necessary, and in order that the detachment of parts of the apparatus for the renewal of the glass may be more readily effected, as will be more fully described hereinafter, and my invention further consists in the employment of a reversible handle in combination with a base piece suitably cut out, the whole so constructed and arranged as that the lantern may be carried as a pendant by the handle, or by reversing the said handle may be carried on the arm of a person, as will be hereinafter fully described.

In the accompanying drawings forming part of this specification Figure 1, is a perspective view of a lantern embracing my improvements. Fig. 2, is a side elevation of the same. Fig. 3, is a vertical section through the center of same. Fig. 4, is a horizontal section at x, x , Fig. 3. Fig. 5, is a partial vertical section of upper part of lantern illustrating another modification in the method of attaching the vertical guards. Fig. 6, is a top view of "top cap" of lantern. Fig. 7, is a perspective view of oil catcher. Figs. 8 and 9, are partial vertical sections of lower portions of lantern showing application thereto of two different kinds of lamps.

In the different views, the same parts of the apparatus are designated by the same letter.

I have illustrated and described a round lantern, since my improvements are particularly applicable to this kind of lantern though they may be with some advantage applied to other kinds of lanterns.

A, is the glass.

B is a strap into which the lower ends of guard wires $b, b', b^2, b^3, b^4, b^5$ are secured and in which the lower end of the glass A, rests.

C, is the removable base, or stand piece. 60

E is the top cap piece.

F, is the oil catcher and d , the handle of the lantern.

In the cylindrical portion of the cap E are formed, around it, two rows of holes, and through these holes the upper ends of the guards b, b' , &c., are bent as shown at Figs. 1, 2 and 5. By this method of interlacing the ends of the guard wires with the top cap of the lantern they are firmly attached thereto, though in such manner as to require no soldering, nor any auxiliary holding device, while at the same time they are easily attached, or may be readily extricated when the apparatus is taken to pieces. At Fig. 5, another mode of interlacing the guards is shown. 65 70 75

In the flared or flanged portion of the cap piece E, are formed a number of radially arranged, depressions, or corrugations f, f' , &c. (See Figs. 1, 2 and 6,) in which recesses, or depressions the guards b, b' , &c., lay or are embedded from 9, to 10. (See Figs. 1 and 2.) By this means the guards b, b' , &c., are afforded bearing between the points of connection (as from 9, to 10) by which they are retained more firmly laterally in their proper positions. The base piece, C, of the lantern I make separate of one piece, and attach it by two or more bolts, i , (see Figs. 3, 4) to the bottom band or holder, B, and said base c is cut away on two opposite sides and flanged out at D (see Figs. 1, 2, and 4) to form in connection with the handle, d , a means of carrying the lantern on the arm as will be presently fully explained. 80 85 90 95

The greatest advantages in making the base piece, or stand, C, separate and removable from the other parts of the apparatus are: that in replacing the glass, A, when broken (as often happens) this operation can be more conveniently and expeditiously performed with the base piece, C, off, also by making the base, C, separate from the portion, B, the whole is rendered more economical in its construction, and, further, the base or stand is generally mashed or disfigured before the rest of the apparatus is materially injured and by having the portion, C, separate and removable it may be replaced at very slight cost, little, or 100 105 110

no trouble, and render the apparatus again in complete order.

The lower ends of the guards *b*, *b'*, &c., I have shown attached in the following manner, viz: by means of eyes in the extremities of the guards, passed through slots in the band, *B*, (see Figs. 3 and 4) and keyed in by a threading wire, *a*, run around, inside of said guards.

The handle, *d*, I make of a simple piece of wire bent in a suitable shape and with hooks or loops formed at its ends to couple onto the guard wires *b*² and *b*⁵ in their eyes 3, 3. (See Figs. 1 and 2.) By bending the hooks in the end of the piece of wire, *d*, constituting the handle in a peculiar manner, so that the plane in which the hook lies shall not be at right angles to the plane in which the eyes 3 3, lie, the handle will freely turn down and pass under the bottom of the lantern in one direction, while in another direction it will not turn much beyond a vertical position. The advantages of this are evident as the handle thus constructed and attached may be used sometimes under the base of the lantern, and at other times to carry the lantern by as a pendant.

When the lantern is to be carried on the arm (as is frequently done with those lanterns formed with a circular or oval opening through their stands) the handle, *d*, is swinging around under the base, *C*, as illustrated at Fig. 2, and sprung, or clasped into the notches *c*, *c*, from which it is readily released when desired. As before mentioned the handle, *d*, will only swing under the lantern in one direction. When therefore the lantern is carried as a pendant, the handle, *d*, should be inclined in an opposite direction to this one (on setting the lantern down) so that it will stand nearly in an erect position ready to be conveniently grasped to lift the lantern up again.

1, 2, 3, &c., are eyes, or loops formed in the guards *b*, *b'*, &c., the size of which and number in each guard may be increased or diminished to suit the constructor. The objects and advantages derived from the formation of eyes in the guards will be fully explained in another application of which they will form part of the subject matter, and hence need not be alluded to particularly here.

Lanterns have heretofore been constructed in such a manner as to afford a suitable means for carrying the apparatus on the arm and with also a handle to carry it by

in the hand; but with my improvement this feature of the apparatus, I render much more simple and less costly, while, it is equally durable and desirable.

I so form and connect the handle, *d*, that it can be at pleasure turned down and under the base, *C*, (in the edge of which are cut two recesses *c*, *c*, into which said handle is sprung and by which it is retained in the proper relative position with base *C*) to afford in connection with base, *C*, (with its flanges *D*, *D*,) a suitable and sufficient means for carrying the lantern on the arm (which has to be much done by conductors and others who need the free use of both hands while they have to carry the lantern) the necessary means for thus carrying the lantern would be afforded without the flanges *D*, *D*, but I employ the flanges to afford more bearing on the arms which will render the apparatus more comfortable and hence more desirable.

F, is an auxiliary oil catcher which I propose to arrange below the lamp, *G*, or employ to support or carry said lamp, *G*, as shown at Figs. 8 and 9, said oil catcher is so arranged as to be readily removable and is intended to catch and retain the oil which overflows the ordinary oil receptacle, *g*, of the lamp, *G*.

The general operation and uses of the lantern described are already understood and of the several features of improvement forming the subject of this application. Enough has been said to render their construction, operation and advantages clear, to one skilled in the art.

Having described the nature and advantages of my improvements, what I claim as new and desire to secure by Letters Patent is—

1. Making the base, or stand piece, *C*, of the lantern separate and removable from the other parts of the apparatus, substantially as described for the purposes set forth.

2. The reversible handle, *d*, in combination with a base, *C*, cut out to fit partly around the arm, the whole arranged to operate substantially as and for the purposes herein described.

In testimony whereof I have hereunto set my hand this twelfth day of April, 1860.

THOMAS B. DE FOREST.

Witnesses:

CHAS. L. ANDREWS.

HORACE ANDREWS,