(No Model.) 2 Sheets—Sheet 1.

L. F. BETTS.

LANTERN GUARD.

No. 384,821. Patented June 19, 1888.

Fig. 1.

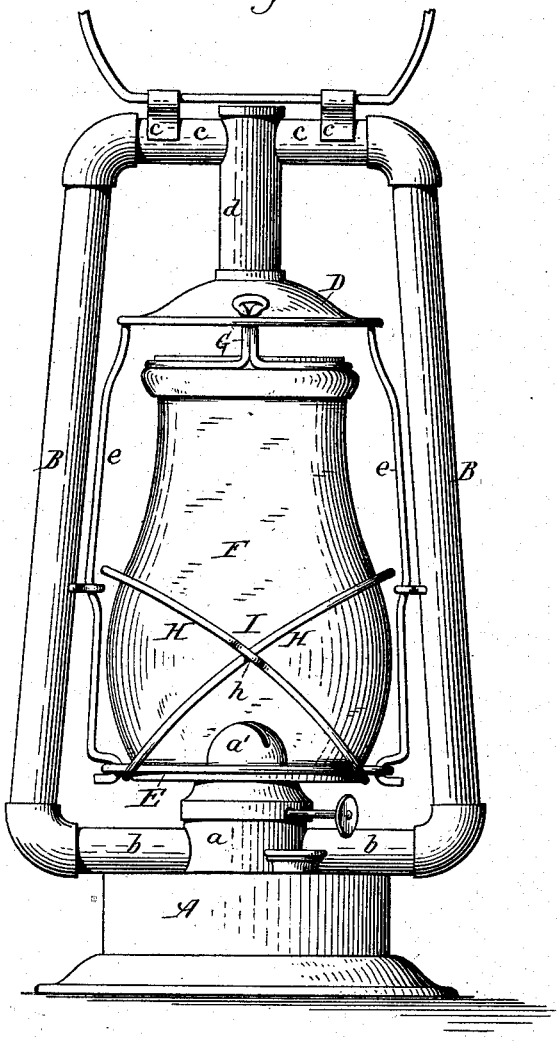


Fig. 2.

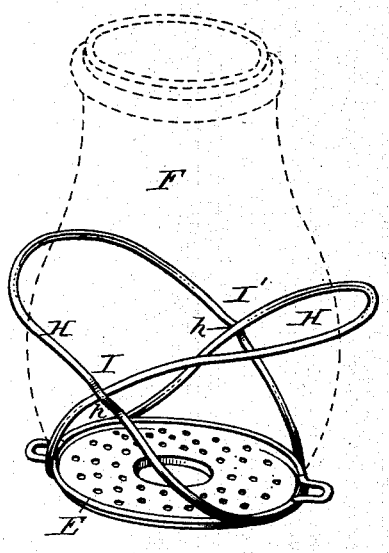
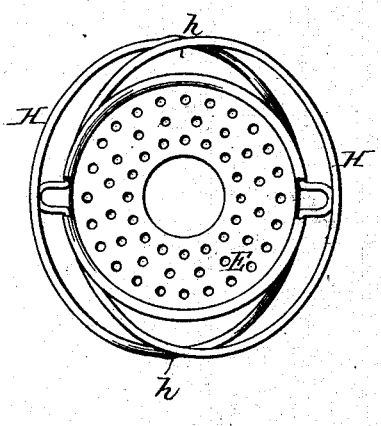


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

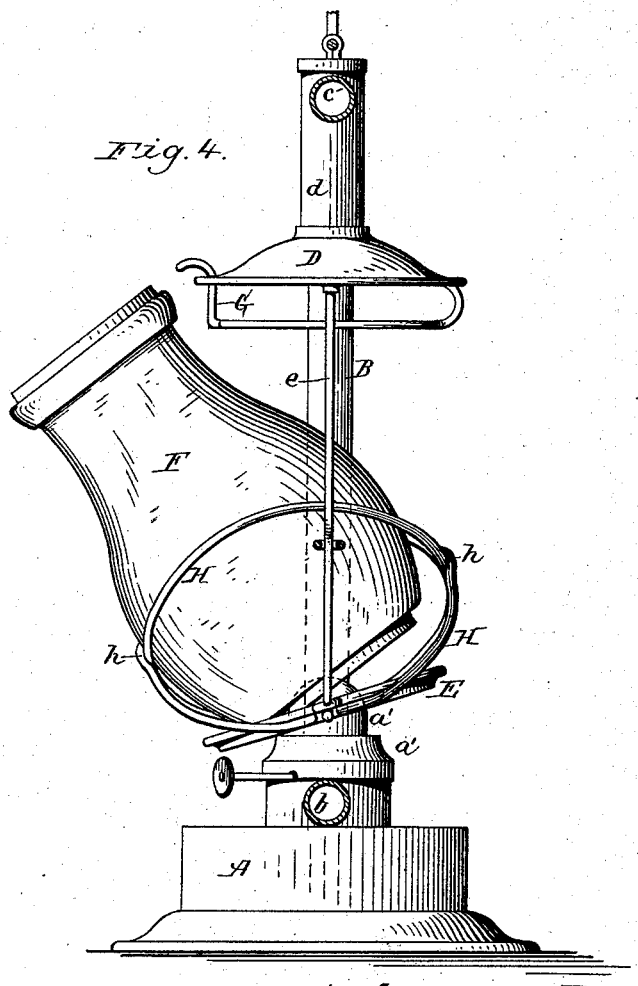
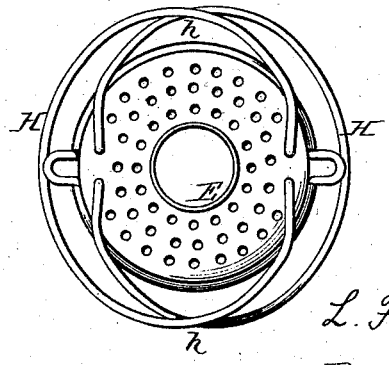


Fig. 5.



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UNITED STATES PATENT OFFICE.

LEWIS F. BETTS, OF NEW YORK, ASSIGNOR OF TWO-THIRDS TO THE R. E. DIETZ COMPANY, OF NEW YORK, AND THE STEAM GAUGE AND LANTERN COMPANY, OF ROCHESTER, NEW YORK.

LANTERN-GUARD.

SPECIFICATION forming part of Letters Patent No. 384,821, dated June 19, 1888.

Application filed November 26, 1887. Serial No. 256,225. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. BETTS, of the city, county, and State of New York, have invented new and useful Improvements in Lantern-Guards, of which the following is a specification.

This invention relates to that class of guards which are secured to the perforated plates or base-supports upon which the globes rest in tubular lanterns, and has for its object to produce a guard which permits the easy insertion and removal of the globe without removing the perforated plate from the lift-wires or other parts to which it is attached.

My invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a tubular lantern provided with my improved guard. Fig. 2 is a detached perspective view of the perforated plate and guard. Fig. 3 is a top plan view of the same parts. Fig. 4 is a sectional side elevation of the lantern, illustrating the manner of inserting and removing the globe. Fig. 5 is a bottom plan view of the perforated plate and guard, showing a slightly-modified means for securing the guard-wires to the plate.

Like letters of reference refer to like parts in the several figures.

A represents the oil-pot; *a*, the air-chamber resting thereon, and *a'* the burner surmounting the air-chamber *a*. B B represent the upright air-tubes, *b b* the lower horizontal branches thereof secured to the top of the oil-pot, and *c c* the upper horizontal branches connecting with the vertical central tube, *d*. D represents the bell, loosely mounted on the central tube, *d*, so as to slide thereon. *e e* represent the lift-wires, secured with their upper ends to the bell D. E represents the perforated plate or base-support, which is attached to the lower ends of the lift-wires *e e*, and upon which the globe F rests. G represents the catch or clasp, which is attached to the bell and which engages with the upper end of the globe and holds the latter in place. All of these parts may be of any ordinary or suitable construction.

H H represent the two bent wires or bows of which the guard is composed and which are secured with their lower ends to the perforated plate E by soldering their lower portions to the rim of said plate, as represented in Fig. 2, or by bending their lower portions, passing the bent portions upwardly through holes in the perforated plate, and clinching them on the upper side of the plate, as represented in Fig. 5. The two bows or guard-wires are arranged obliquely in opposite directions, so as to cross each other, and extend upwardly beyond the crossing-points *h h* on both sides of the globe and on the inner sides of the air-tubes to the proper height to protect the globe. The two bows are preferably secured together at the crossing-points *h h* by soldering or otherwise. The guard-bows clear the globe at all points, so as not to come in contact with the same, which would render the globe liable to breakage by the transmission of blows applied to the guard or by unequal chilling of the globe when heated. The parts of the guard-bows which extend obliquely upwardly beyond the crossing-points *h* are separated by depressions or open spaces I I' on the front and rear sides of the lantern, which permit the globe to be inserted and removed by inclining it without disconnecting the perforated plate from the lift-wires, or without removing the globe-supporting plate from the lantern-frame. This construction permits the side portions of the guard to be extended upwardly to a sufficient height to properly protect the globe without interfering with the insertion and removal of the globe, while it would be impossible to insert and remove the globe without disconnecting the perforated plate from the lift-wires if the top portion of the guard extended around the globe horizontally in a guard of the same height. This construction also avoids making the guard partly of movable parts, which are liable to become unfastened in use.

When the clasp G is secured to the bell in such manner that the globe can only be removed forwardly or toward the front side of the lantern, as indicated in Fig. 4, the depression I' on the rear side of the guard does not come into use for inserting and removing the globe, but serves merely to render the guard

symmetrical on the front and rear sides of the lantern. When the perforated plate is capable of being tilted, as illustrated in Fig. 4, the insertion and removal of the globe is further facilitated by the inclined position which the perforated plate assumes.

My improved guard occupies but little space. It is constructed at comparatively small cost and presents a neat and attractive appearance, while being perfectly rigid and reliable.

I claim as my invention—

1. The combination, with the tubular lantern-frame having its base provided with a burner, of a globe-supporting plate surrounding the burner, and a rigid guard secured to said plate, open at the top, and provided on the front side of the lantern-frame with a depression through which the globe can be inserted and removed, substantially as set forth.

2. The combination, with the tubular lantern-frame having its base provided with a burner, of a globe-supporting plate surrounding the burner, and rigid oblique guard-bows secured with their lower ends to said plate and having their raised portions arranged opposite the inner sides of the tubes, substantially as set forth.

Witness my hand this 14th day of November, 1887.

LEWIS F. BETTS.

Witnesses:
WORTH OSGOOD,
JOHN BUCKLER.