(No Model.) 2 Sheets—Sheet 1

F. T. WILLIAMS.

LANTERN.

No. 589,588. Patented Sept. 7, 1897.

Fig. 1.

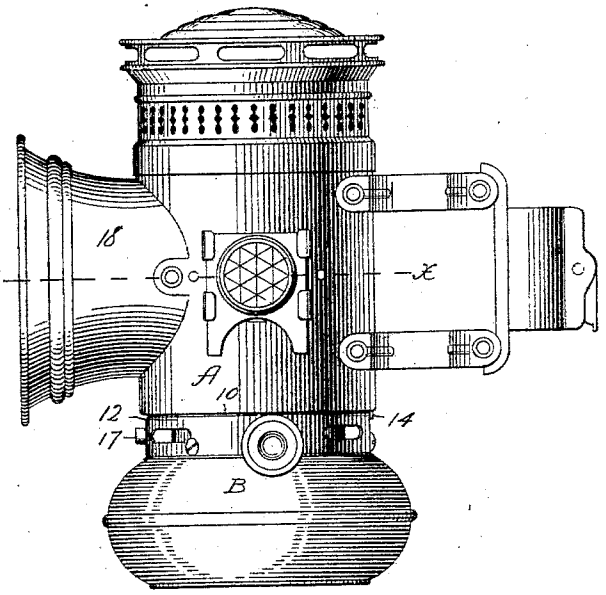


Fig. 2

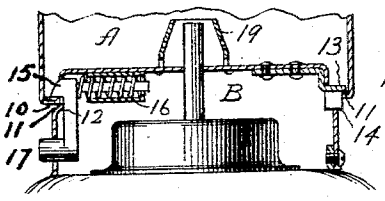


Fig. 3.

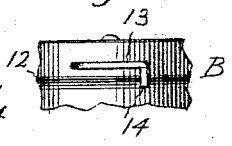


Fig. 4.

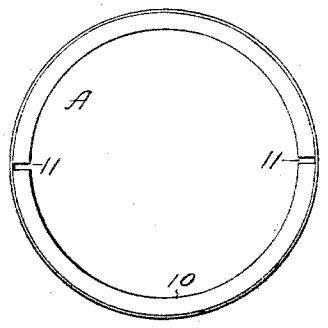
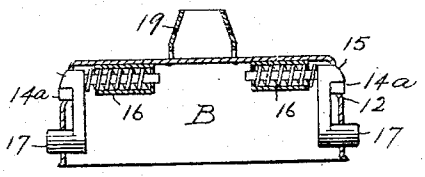
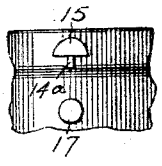


Fig. 5.



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Fig 6.



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LANTERN.

No. 589,588. Patented Sept. 7, 1897.

Fig. 7.

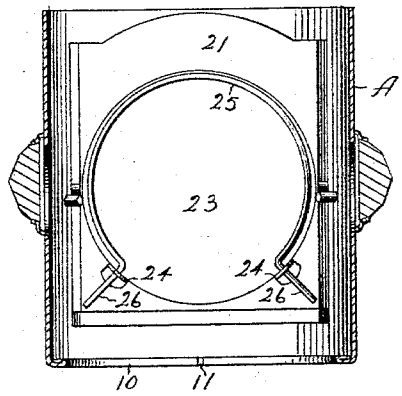


Fig. 8.

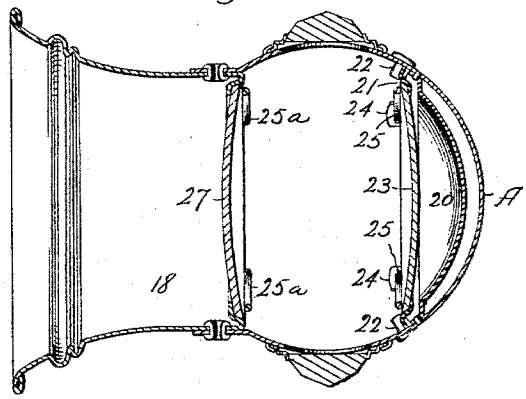
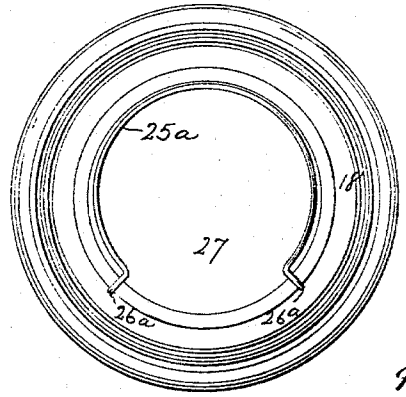


Fig. 9



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Atty.

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UNITED STATES PATENT OFFICE.

FRANK THEODORE WILLIAMS, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE EDWARD MILLER & COMPANY, OF SAME PLACE.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 589,588, dated September 7, 1897.

Application filed December 26, 1896. Serial No. 616,977. (No model.)

To all whom it may concern.

Be it known that I, FRANK THEODORE WILLIAMS, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Lanterns, of which the following is a specification.

My invention relates to improvements in lanterns; and the main objects of my improvements are to provide a simple arrangement of the devices for securing the lamp to the lantern-body, so as to properly locate the lens with reference to the burner, and to provide simple and convenient means for removably securing the cover-glasses for either the back reflector or the lens, or both.

In the accompanying drawings, Figure 1 is a side elevation of my lantern. Fig. 2 is a sectional elevation showing the lower end of the lantern-body and upper part of the lamp. Fig. 3 is a side elevation of a portion of the lamp, showing the fixed holding-lug. Fig. 4 is a plan showing the lower end of the lantern-body. Fig. 5 is a sectional elevation showing a modification in the holding devices. Fig. 6 is a side elevation of a portion of the lamp, showing one of said holding devices. Fig. 7 is a central vertical section of the lantern-body, looking toward the back deflector. Fig. 8 is a horizontal section of the lantern-body on the line x x of Fig. 1; and Fig. 9 is a detached elevation of the lens-tube, showing the cover-glass at its smaller end.

A designates the lantern-body, and B the lamp, both of which as to their general features may be of any ordinary construction. The lower end of the lantern-body is provided with an inwardly-turned horizontal flange 10, having one or two (preferably two) radial slits 11, Fig. 4. The lamp B has its burner-deck or upper end fitted to the interior of the flange 10 and is provided with a horizontal ledge or shoulder 12, upon which the lower end of the lantern-body may rest. At one side of the lamp, above the shoulder 12, is a fixed holding-lug 13 and a vertical wing 14, the said lug being adapted to receive the flange 10 under it, while the wing is received in the radial slit 11, if there be but one slit, or in one or the other of said slits, in case there are two. The flange can be made to engage these parts by tipping the lantern-body a little and presenting the lowest point in the flange thereto from one side. Diametrically opposite the wing 14 of the fixed holding-lug 13 is a sliding and beveled latch 15, that is forced outwardly by the spring 16 and inwardly by the pressure of the flange 10 on its beveled end or by pressure on the push-piece 17, as in ordinary latches of this class.

It will readily be seen that the slit or slits 11 and wing 14, being properly located with reference to the lens-tube 18 and the lamp-burner 19, will always locate said lens in its proper relation to said burner, while at the same time the lantern-body is of a very simple construction. If there is only one of said slits, the lens must always stand in one position with reference to the lamp. If there are two such slits, it can stand in either of two diametrically-opposite positions; but in each of these positions it will face the broad side of the wick-tube, and hence be in the proper position with reference to the burner.

I do not claim devices for locating the lantern-body with reference to the burner, but only claim such devices as are illustrated and described in connection with a lantern-body having the flange 10 and holding devices for locking over the top face of said flange.

If desired, I can employ two latches, each having vertical wings 14^a, as shown in Fig. 5, said wing being fixed on the latch and moving with the same as if formed in one piece therewith.

It is evident that the spring-latches herein shown and described on the left-hand side of Figs. 2 and 5 are interchangeable without any modification whatever.

With two spring-latches the lantern-body may be forced down upon the lamp without any reference to the position of the lens, the said body acting to force the latches inwardly against their springs. The wings, however, will prevent said latches from properly engaging the top of the flange 10 unless the slits 11 register with said wings. If they do not so register, the lantern-body is rotated on the lamp until the slits come in front of the wings and the springs force the latches into engagement. The lens will then be in its proper relation to the burner.

The back reflector 20 has its edges resting on one side of the lantern-body, and in front of said reflector I arrange the cover-glass slide 21 back of suitable lugs or pins 22, so that said slide may readily be slipped into place and removed. Said slide is provided with a circular opening surrounded with a shallow recess or depression that receives the cover-glass 23. Said slide is also provided with two lugs 24 near its lower end. I detachably secure the cover-glass within the slide by means of a wire spring 25, bent into a circular form, but extending only over about three-quarters of a full circle. The ends of the wire are then bent outwardly to form widely-separated radial shanks 26, which are extended through holes in lugs 24 close to the surface of the slide. The said shanks rest upon the surface of the slide and serve to hold the spring flatly upon the cover-glass near its edge.

The cover-glass can be readily slipped upwardly out of the slide when desired for cleaning or other purpose and returned again by slipping it down under the wire spring. The connection of the two ends of the spring with the cover-glass slide at widely-separated points forms suitable stops to properly seat the cover-glass in position as it is pressed down.

While I prefer the lugs 24 for attaching the wire spring, it is evident that the ends of the spring could be secured in the same position by soldering. In Fig. 9 the ends of such a spring are illustrated as merely soldered in place. A slide and cover-glass, as illustrated and described, may also be used to cover the inner end of the lens-tube. I have, however, illustrated the lens cover-glass 27 as seated directly in the inner end of the lens-tube 18 and held therein by a wire spring 25^a, substantially like the wire spring 25, only its shanks 26^a are soldered in place instead of being secured by means of perforated lugs. It is evident that a cover-glass and its holder, as herein illustrated and described, for the lens could be secured directly to the back deflector.

By this improvement in holding the cover-glasses the construction is simple and inexpensive. The cover-glasses may be readily lifted out of place for removal when desired and readily placed. They are also very efficiently held, and held under such a yielding, gentle, and even pressure that they are not liable to break.

I claim as my invention—

1. A lantern the lamp of which has upon one side the fixed holding-lug 13 and vertical wing 14 and on its opposite side a spring-pressed latch and the body of which lantern is provided at its lower end with the inwardly-turned flange 10 having a radial slit 11, the said lug 13 and latch engaging said flange over its top face while the said wing 14 enters the said slit in said flange substantially as described.

2. A lantern having a cover-glass fitted to a recess in a suitable support and a wire-holding spring extended in circular form for about three-quarters of a circle and secured by its two separated ends to said support with its free circular portion otherwise disconnected from said support and adapted to bear on the said cover-glass near its edge substantially as described.

3. In a lantern the cover-glass slide having a circular opening and cover-glass seat with perforated lugs near the lower corners of said slide, the cover-glass fitted to the said slide, and a wire spring embracing the major portion of a circle for resting on said cover-glass near its edge and with outwardly-bent shanks extended through the holes in said lugs and permanently secured thereto substantially as described.

FRANK THEODORE WILLIAMS.

Witnesses:
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I. B. MILLER.