(No Model.)

E. FERRISS.

LANTERN.

No. 581,200 Patented Apr. 20, 1897.

Fig. 1.

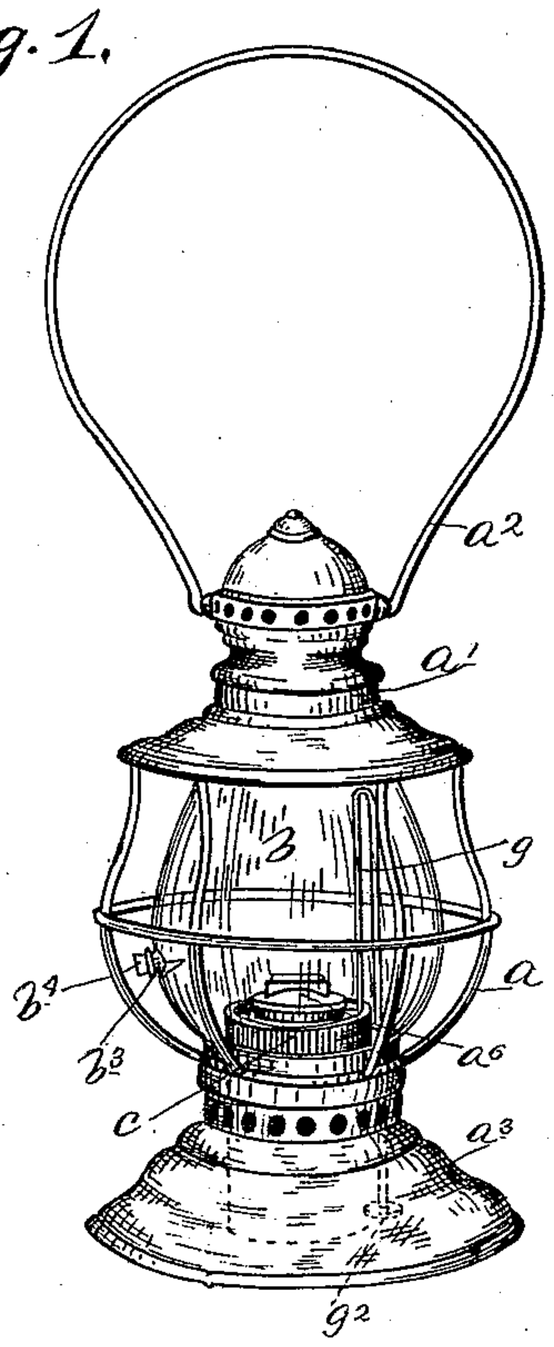


Fig. 2.

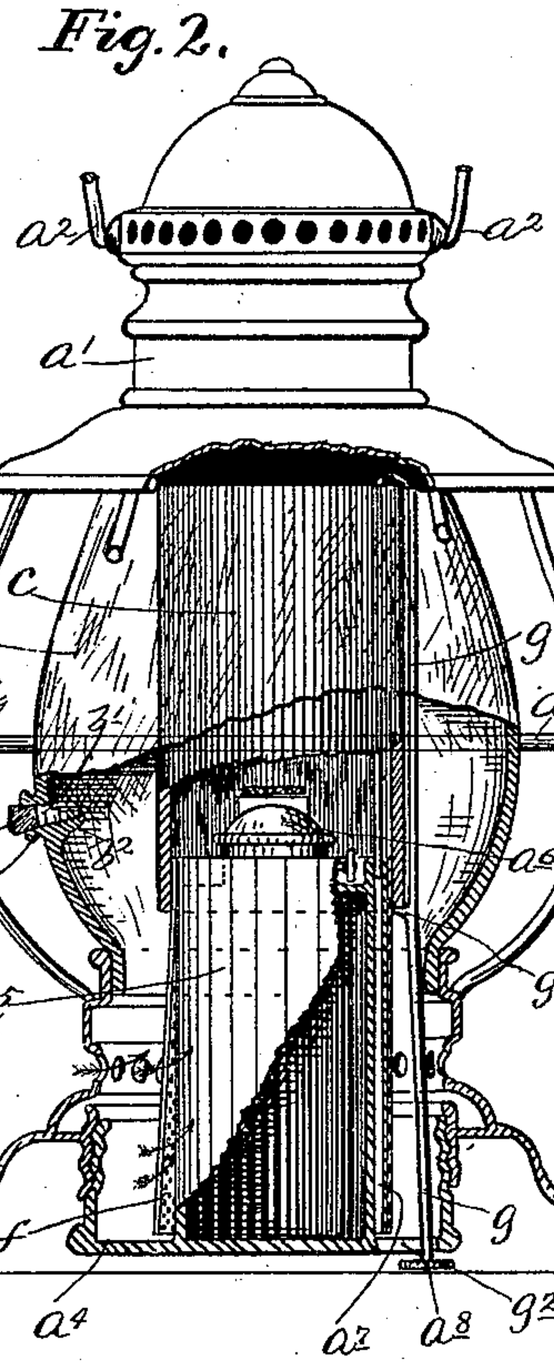


Fig. 4.

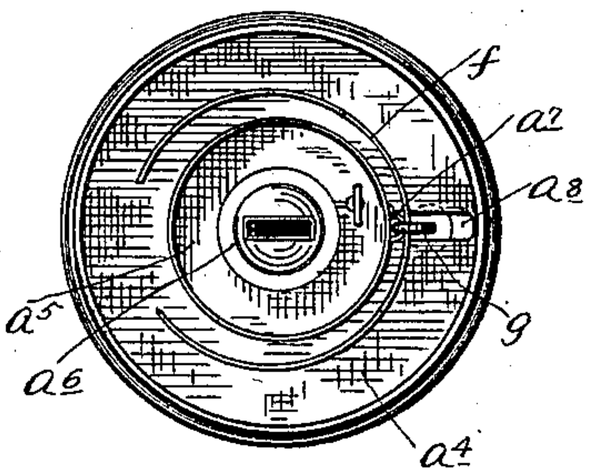


Fig. 5.

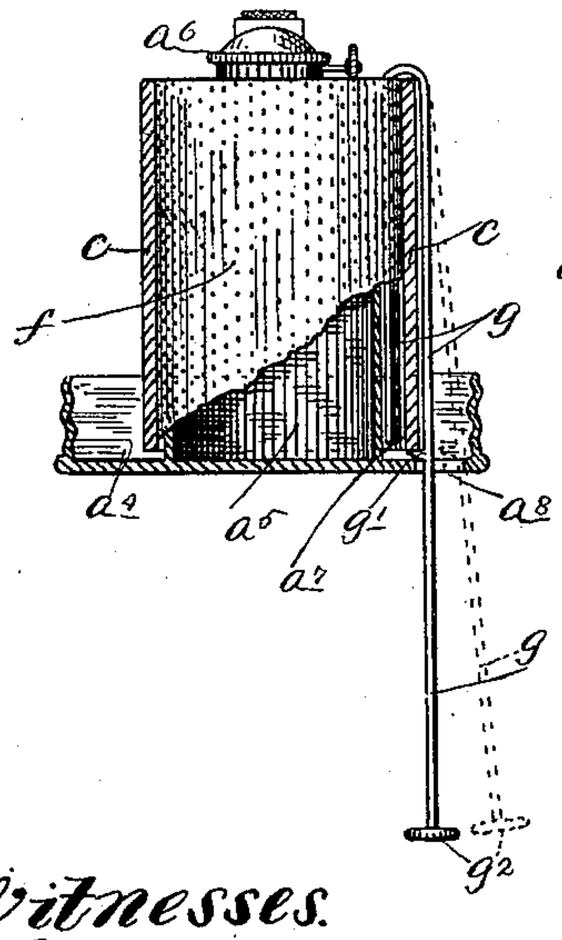


Fig. 6.

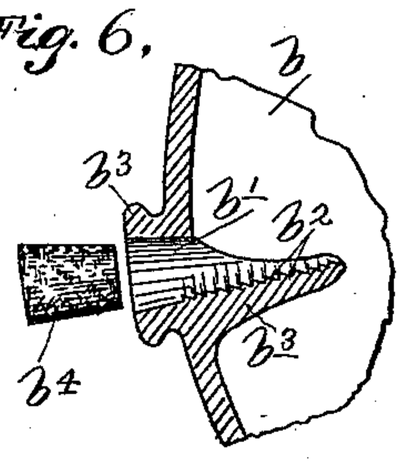
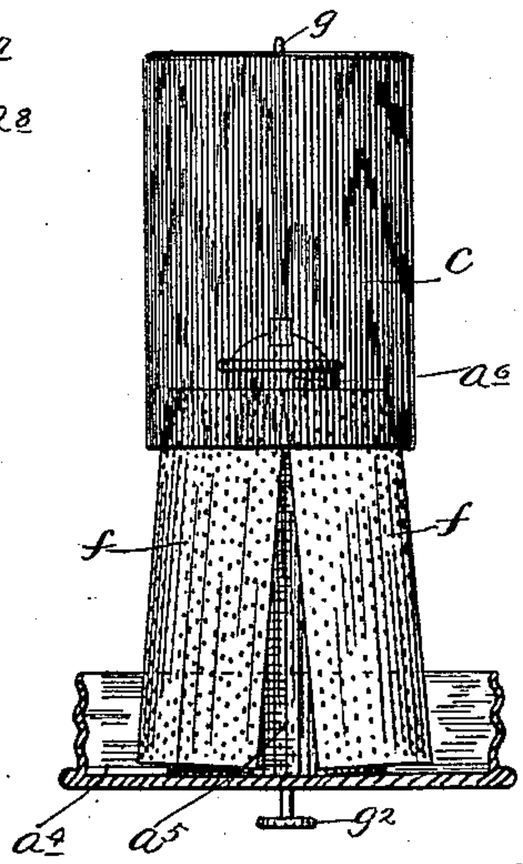


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD FERRISS, OF PULLMAN AVENUE, MINNESOTA.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 581,200, dated April 20, 1897.

Application filed November 15, 1895. Serial No. 569,002. (No model.)

To all whom it may concern:

Be it known that I, EDWARD FERRISS, a citizen of the United States, residing at Pullman Avenue, in the county of Washington and State of Minnesota, 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.

My invention relates to lanterns, and has for its object to provide efficient means for lighting the same and for giving either a white or a colored light at will, so as to adapt the lantern either for ordinary lighting or for signaling purposes.

To these ends my invention consists of the novel features of construction hereinafter described, and defined in the claims.

The preferred form of my invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout the several views—

Figure 1 is a perspective view of a lantern embodying my improvements, the parts thereof being set for white light, as for ordinary use. Fig. 2 is a view, partly in front elevation and partly in vertical section, the colored globe being set in its uppermost position for giving colored light. Fig. 3 is a view, principally in side elevation, but partly in vertical section, showing the lamp, the colored globe, and the supporting spring-wrapper removed from the lantern, said parts being shown in the position set forth in connection with Fig. 2. Fig. 4 is a plan view of the lamp removed from the lantern, the colored globe being removed from said lamp. Fig. 5 is a view, partly in front elevation and partly in section, showing the lamp, colored globe, and spring-wrapper, said globe being shown in its lower or ordinary position; and Fig. 6 is a horizontal section taken centrally through the lighting-passage formed in the globe, parts of the globe being broken away.

The frame or cage a, the top a', the handle a^2, the fixed base-section a^3, and removable base-section a^4, with lamp a^5 a^6 secured thereto, are all of the ordinary standard construction.

The main outside or white-light globe b is similar to the standard or ordinary construction, with the important exception that it is provided in its side wall with a match-passage b', the interior wall of which passage is in turn provided with a frictional or roughened match-striking surface b^2. As preferably constructed this match-passage b' and frictional or roughened match-striking surface b^2 are formed in the interior of a laterally-extended nipple or neck portion b^3, which is formed integral with the globe b. This nipple, when constructed as above set forth and shown in the drawings, would be molded or formed at the time the globe itself is formed. The passage b' may be normally closed by a stopper or plug b^4.

The device for changing the lantern from the ordinary condition into the signal-lantern with red light comprises a cylindrical red-glass globe c, which loosely telescopes around the lamp-tank a^5 and normally stands in its lowermost position, (shown in Figs. 1 and 5,) completely below the burner a^6.

f is an expansible spring-wrapper which, as shown, is in the form of a piece of perforated spring sheet metal wrapped around the lamp-tank a^5 and expanded against the interior of the colored globe c. The spring-wrapper f serves, by its spring expansion, to hold the colored globe c wherever set. (See Figs. 2 and 3, which show said globe c held in its uppermost position.) The space between the lamp-tank a^5 and the expansible wrapper f is such as to permit sufficient draft of air to the burner, and the perforations of said cylinder f permit the passage of air through the same when the colored globe is used, as indicated by arrows on Fig. 2.

The vertical movement of the colored globe c is effected, preferably, by a U-shaped slide g, which is turned over one side wall of the globe c, with its inner prong working in a vertical seat or guide a^7 in the lamp-tank a^5. The outer prong of this slide g is provided with a catch-lug g', which, when said slide g is gripped onto the globe c, bears under the lower edge of the same, and this outer prong is extended below the inner prong and terminates in a finger-piece g^2.

The bottom of the lamp-support a^4 is cut away, as shown at a^8, to permit the passage

of the outer prong of the slide *g* and of a limited lateral movement of the same. Normally this slide *g* stands in the position shown in Fig. 1. To raise the globe *c*, it is only necessary first to draw down the slide *g* until the catch-lug *g'* of the outer prong thereof engages under the globe *c*, as shown in Fig. 5, and then to push the globe upward into the position shown in Fig. 2. In this position, as already stated, the globe *c* renders the lantern available for signaling purposes. The colored globe *c* may of course be drawn back into its normal or lowermost position by simply drawing downward on the slide *g*. When the parts are thus drawn into the positions shown by full lines in Fig. 5, the slide may be thrown back into its uppermost position (shown in Fig. 1) without carrying the globe *c* therewith by first disengaging the catch-lug *g'* from said globe by forcing the outward prong into the position shown by dotted lines in said Fig. 5 and then pushing upward on the same.

It will be noted that the slide *g* when pushed into its uppermost position (shown in Fig. 1) is entirely out of the way.

The above device gives a very simple, convenient, and efficient means for transforming the lantern from its ordinary use for lighting purposes into a colored-light signaling-lantern.

The match-passage *b'*, with frictional or roughened match-striking surface b^2, formed in the outside globe *b*, as above set forth, affords an extremely convenient means for lighting the lamp and makes it possible to light the lamp in the strongest gale of wind. As is obvious, it is only necessary in lighting the lamp to push the head of the match briskly over the friction-surface b^2 while passing the match through the passage *b'*. Thus by one movement the match may be ignited and brought into contact with the lamp-wick.

The purpose of the stopper b^4 is of course to prevent the circulation of air through the passage *b'* when the lamp is in use.

The lamp, being lighted, may be readily extinguished by removing the plug or stopper b^4 and blowing through the match-passage *b'*.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a lantern, the combination with the frame, lamp and lamp-casings, of the vertically-telescoping inside colored globe surrounding the lamp, and the expansible spring-wrapper between said lamp and colored globe, for supporting said globe wherever set, substantially as described.

2. In a lantern, the combination with the frame, lamp and lamp-casing, of the vertically-telescoping inside colored globe surrounding said lamp, and the perforated, expansible, spring-wrapper loosely surrounding said lamp and engaging the interior of said colored globe, for holding said globe wherever set while permitting the draft of air to the burner, substantially as described.

3. In a lantern, the combination with the frame, lamp and lamp-casings, of the vertically-telescoping inside globe *c*, a friction device for holding said globe *c* in its uppermost position, and the pronged spring-slide *g*, the prongs of which embrace one wall of said globe, and the outer prong of which is provided with the catch-lug *g'*, said parts operating substantially as described.

4. In a lantern, the combination with the frame and lamp-casing, of the lamp provided with the vertical seat or guideway a^7, the vertically-telescoping globe *c*, the expansible perforated spring-wrapper *f* frictionally engaging the inside of said globe *c*, and the pronged spring-slide *g*, the prongs of which engage one wall of said globe, and the outer prong of which is provided with the catch-lug *g'* and finger-piece g^2, said parts operating substantially as described.

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

EDWARD FERRISS.

Witnesses:

JAS. F. WILLIAMSON,

E. F. ELMORE.