

T. L. MOORE.
LANTERN.

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1,063,055.

Patented May 27, 1913.

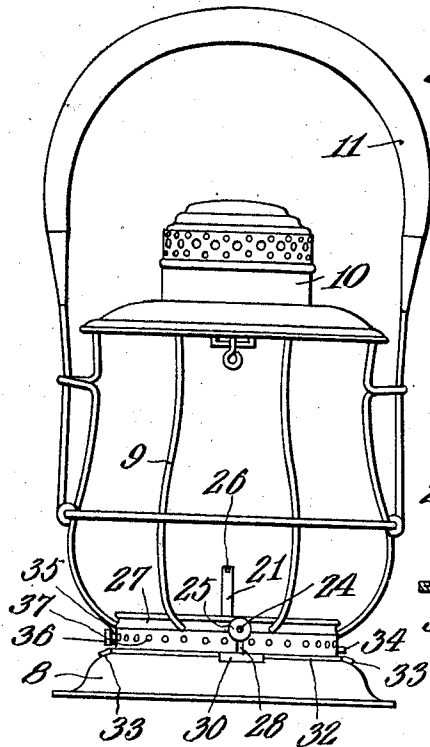


Fig. 1.

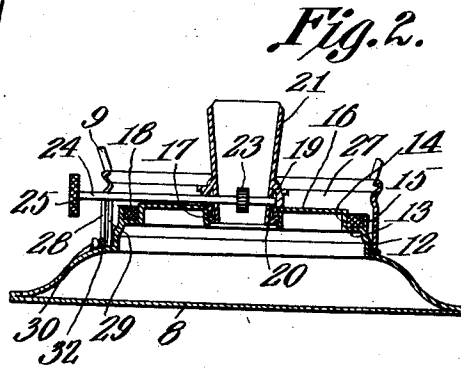


Fig. 2.

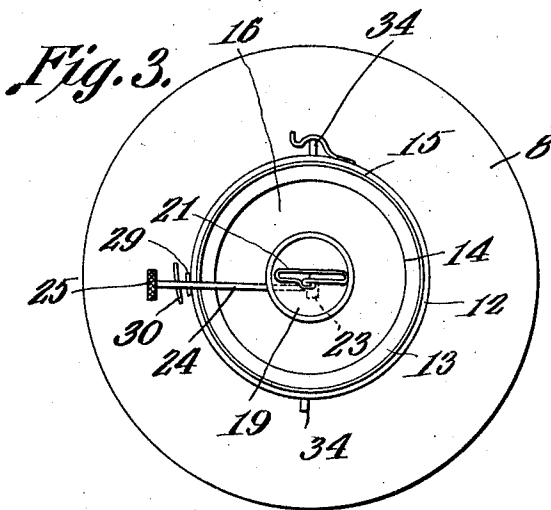


Fig. 3.

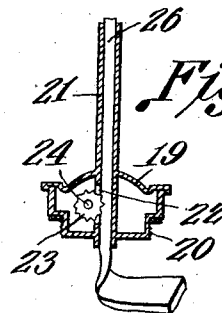


Fig. 4.

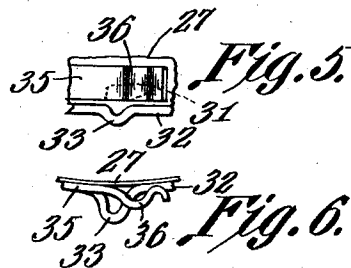


Fig. 5.

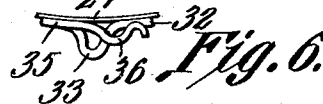


Fig. 6.

Witnesses

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LANTERN.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS L. MOORE, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Lantern, of which the following is a specification.

This invention relates to lanterns and has for its primary object the production of an improved lantern for switchmen and other railroad men for use in signaling and the like, and which is susceptible of being used for prolonged signals without extinguishing the flame and which is not liable to be accidentally blown out by a strong wind or current of air either when in a still position or when in motion, such as for signaling and the like.

The present invention also contemplates a lantern of this character embodying a novel burner for producing a high degree of combustion of the fuel.

The invention further aims to provide a burner which forms a compact and substantial connection between the font and the globe cage.

Another object of the present invention is to provide means for preventing the contents of the font from running over the sides of the font.

With the foregoing and other objects in view, which will be apparent as the invention is better understood, this invention resides in the novel construction and combination of parts hereinafter set forth and particularly pointed out in the appended claims, reference being had to the accompanying drawings wherein the preferred embodiment of the invention is illustrated, and wherein:—

Figure 1 is a side elevation of a lantern constructed in accordance with the present invention. Fig. 2 is a vertical central section through the lower portion of the lantern. Fig. 3 is a plan view on an enlarged scale of the lower portion of the lantern including the font and burner. Fig. 4 is a sectional detail of the burner. Fig. 5 is a fragmental detail in elevation. Fig. 6 is a plan view of the detail shown in Fig. 5.

Referring specifically to the drawings, wherein similar reference characters have been employed to denote corresponding parts, the numeral 8 designates the font or

fuel bowl, which has a flat bottom; the numeral 9 designates a wire globe guard or cage which is removably secured to the font; the numeral 10 designates a hood carried by the upper end of the cage or guard 9 and being preferably hinged there- to in order to permit the hood to be swung open for the insertion and removal of the globe; and the numeral 11 designates a wooden handle bail connected to the cage or guard 9, for carrying or handling the lantern.

The font 8 has the raised portion or boss 12, which is provided with an upper and outer rabbet 13, a ring or flange 15 rising from the outer edge of the rabbet 13 and co- operating with the upright wall 14 of the rabbet to provide a channel for containing cotton or other absorbent material 18. The top of the font or upper portion of the boss 12 is designated by the numeral 16, the same being provided with a central opening and an inturned or depending threaded flange 17 into which the burner is engaged.

The burner embodies a hollow or shell plug 19 having a lower or depending screw-threaded and reduced extension 20, which is designed to engage in the flange 17 of the font, the shoulder formed by the reduced extension 20 seating on the top of the font. A wick tube 21 passes through the plug 19, and projects slightly below the lower end of the plug and projects upwardly for a considerable distance above the plug, said wick tube increasing in width toward its upper end, or being flared upwardly. The usual wick 26 is inserted into the lower end of the wick tube 21 and is raised therein by means of a lateral stem or shaft 24 mounted or journaled in the plug 19 and carrying a spur wheel 23 engaging the wick, so that when the stem or shaft is rotated, the wick may be raised or lowered. The stem or shaft 24 projects to one side and at its outer end has a knurled thumb piece 25 for convenience in rotating same. The spur wheel 23 which is arranged within the plug 19 is arranged externally of the wick stem 21 and works through an opening 22 provided in the wick tube 21 within the plug 19.

The lower end of the guard 9 is secured to a globe support or ring 27, which is designed to seat on the font over the raised portion or boss 12, the support or ring 27 being pro-

vided with a downwardly opening vertical slot 28 adapted to receive the stem 24. A guard 29 projects upwardly from the font and within the ring 27 and in back of the slot 28 so as to close the passage through the said slot when the globe support or ring is seated on the font, the stem 24 also being adapted to seat upon the upper end of the guard 29. A brace or rib 30 is secured on the font externally of the support or ring 27 in rear of which the corners of the support or ring 27 formed by the slot 28 are designed to fit so as to prevent same from being bent outwardly or otherwise distorted, the brace or rib 30 thereby strengthening the supporting ring 27.

In order to engage and lock the supporting ring 27 to the font, the supporting ring 27 has been provided with bayonet slots 31 in its lower edges at diametrically opposite points and at right angles to the slot 28, which bayonet slots 31 are designed to engage lugs or fingers 34 projecting outwardly from the raised portion or boss 12 from the font. A length of wire 32 is secured to the lower edge of the supporting ring 27 and extends unbrokenly past and has outwardly offset portions or loops 33 adjoining the bayonet slots 31, in order that the lugs 34 may pass through the loops 33 when the supporting ring is seated on the font. Then as the supporting ring is turned, to bring the lugs 34 into the tails of the bayonet slots, the lugs will lock over the wire 32 to one side of the loops 33. The wire 32 braces the lower end or lower edge of the supporting ring 27 and also prevents the corners formed by the bayonet slots 31 from being bent outwardly or distorted. A leaf spring 35 is soldered or otherwise secured to one side of the supporting ring 27 and has an outwardly bowed portion 36 adapted to snap over corresponding lug 34 when the lugs are brought into the tails of the bayonet slots. In this manner, the supporting ring 27 is locked to the boss, and by disengaging the spring 35 from the corresponding lug 34, the supporting ring may be rotated reversely in order to disengage the supporting ring from the boss. It will be noted that the stem 24 in engaging in the slot 28 will cause the burner to be rotated slightly with the supporting ring when the supporting ring is swung to engage or disengage the lugs 34 with and from the tails of the bayonet slots, the font therefore rotating relative to the supporting ring and burner. The globe support or ring 27 is provided with a series of peripheral apertures or inlets 37 which are arranged below the upper edges of the annular flange 15, or the upper end of the font, the said apertures admitting air into the globe (not shown) which is seated between the supporting ring 27 and the hood 10.

The font 8 is filled with cotton or other

absorbent material, particularly when gasoline or other highly combustible fuel is employed.

In use, the upper end of the wick 20 is broomed out or loosened so that the upper end of the wick loosely fills the upper or enlarged end of the tapered wick tube 21. This tapered form of the wick tube provides for a high degree of combustion of the fuel, for the reason that the fuel in rising upwardly along the wick by capillary action will be assisted by the upwardly flaring formation of the wick tube which permits the proper expansion of the fuel as it approaches the flame and becomes heated and vaporized. It will therefore be seen that the tapered form of the wick tube permits the proper expansion of the fuel as it approaches the flame, which will produce a more perfect combustion of the fuel, and will support the flame. The flame is not only larger than the ordinary flame with the same sized wick, but is of such a character that it will be harder to extinguish by winds or gusts of air. The flame is fed with air through the apertures 37 around the periphery of the globe support or ring 27, these perforations being arranged below the top of the font. The flange 15 and the sides of the font inclosed by the ring 27 provide means for breaking up the currents of air so as to prevent the air from passing readily upward to the wick, and the arrangement of the apertures 37 around the periphery of the globe support or ring at a comparatively large distance from the flame, will prevent the flame from being accidentally extinguished when signals are given by the lantern, particularly when prolonged signals are given. This lantern is adapted to be employed for prolonged signals without extinguishing the flame, which is frequently the case with many lanterns now in use, for the reason that the present lantern may be swung for a continued period without exhausting the air, and the flame provided being of such a character as to withstand the various conditions of air within the globe. Various fuels may be employed for this lantern, such as "signal" oil, gasoline, or the like, the cotton or absorbent material within the font being particularly provided for absorbing gasoline and other highly combustible fuels in order that the same will be properly fed to the wick without the liability of an explosion. The flame provided by the present lantern, particularly when gasoline is employed for fuel, is steady, white and bright and produces a maximum lighting effect with a minimum consumption of fuel, and it is practically impossible to extinguish the flame under the various conditions to which the lantern is subjected. The wick may be readily raised or lowered from the side of

the lantern by means of the thumb piece 25 attached to the stem or shaft 24, and it will be noted that the manner in providing the compact union between the font and the cage is also of advantage, and permits the stem or shaft 16 to pass outwardly and project from between the font and the cage. This lantern is short and compact and is not bulky or cumbersome, and meets the requirements for which it is designed.

A further feature of this lantern is the provision of an annular channel formed by the ring or flange secured on the rabbet 13 and containing the cotton or other absorbent material 18, so that if any of the fuel leaks or spills out of the opening in the font, the same will be caught and absorbed by the cotton or material 18. This is particularly of advantage when oil is used for fuel, and is not highly essential when gasoline or the like is used for fuel. Air in entering the globe through the apertures 37 will be fed to the flame uniformly regardless of the external conditions.

This lantern is comparatively simple and inexpensive in construction and is also substantial, as well as being capable of producing a flame of the high degree, and which will not be extinguished by the various conditions to which the lantern is subjected.

The various parts may be constructed of various materials, and the various details may be in various sizes and proportions, and it is understood that this lantern is otherwise susceptible of alterations or deviations in its details within the scope of the appended claims without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is:—

1. A lantern embodying a font having a raised portion, a burner in rotatable engagement with the top of the font and including an actuating stem, a globe cage ring seating on the font around the raised portion and having a straight slot receiving the stem, means for locking the said ring to the font when rotated, and a guard projecting upwardly from the font adjoining the raised

portion to close the said slot and on which the stem is seatable when the ring is rotated to locked position.

2. A lantern embodying a font, a burner in engagement therewith and including an actuating stem, a globe cage ring seating on the font and having a slot receiving the stem, means for engaging the said ring to the font, and a rib projecting upwardly from the font exteriorly of the ring to brace the corners of the ring formed by the said slot.

3. A lantern embodying a font having a raised portion, a burner engaged with the font and having a laterally projecting stem, a supporting ring seated on the font around the raised portion, and having a slot receiving the stem, a lug projecting from the raised portion of the font, the ring having a bayonet slot receiving the lug, and a wire secured to the lower edge of the ring and extending unbrokenly past and looped outwardly adjoining the bayonet slot.

4. A lantern embodying a font having a raised portion, a burner in screw-threaded engagement with the font and including a laterally projecting stem, a supporting ring seating on the font around the raised portion and having a slot receiving the stem, a guard projecting upwardly from the font within the ring back of the said slot and on which the stem is seatable, a rib projecting upwardly from the font exteriorly of the ring to brace the corners of the ring formed by the said slot, diametrically opposite lugs projecting from the raised portion of the font, the ring having bayonet slots receiving the lugs, a wire secured to the lower edges of the ring and looped outwardly adjoining the bayonet slots, and a leaf spring secured to the said ring and designed to engage one of the said lugs.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THOMAS L. MOORE.

Witnesses:

D. F. MOONEY,
H. V. WIGGINS.