

O. R. HENSON.
LANTERN.
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941,922.

Patented Nov. 30, 1909.

Fig. 1.

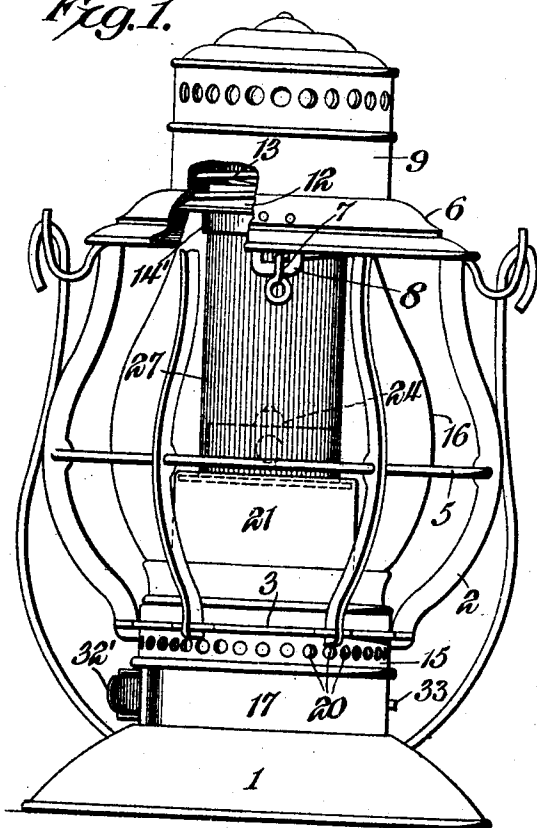


Fig. 2.

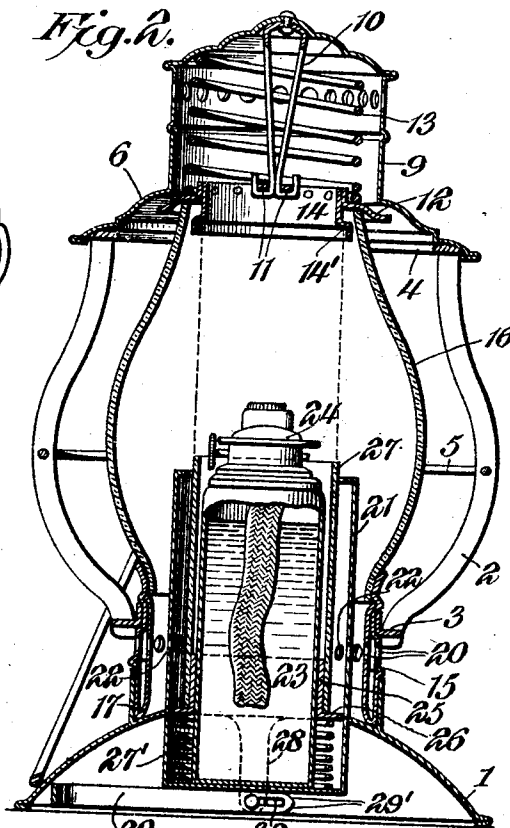


Fig. 3.

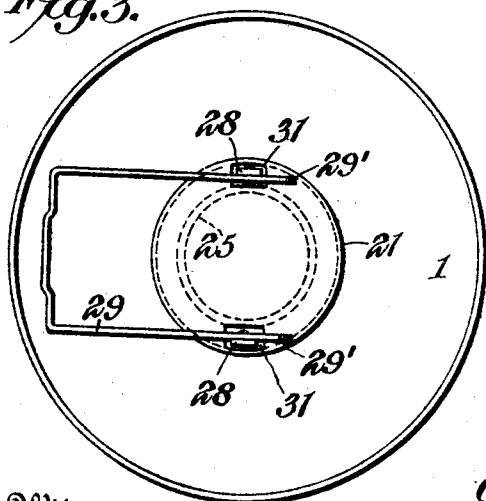
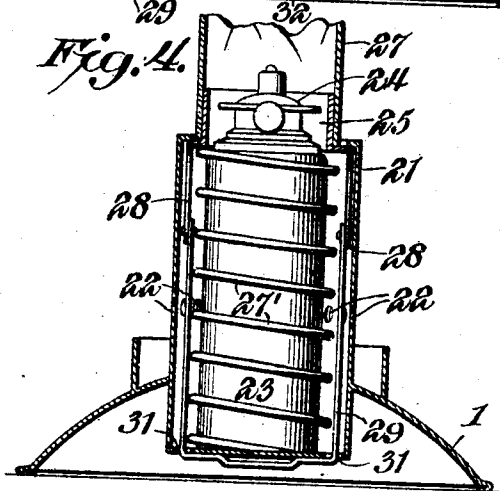


Fig. 4.



Witnesses

Howard D. Orr

Indie B Wright

O. R. Henson,

Inventor,

By

E. J. Singer

Attorney

UNITED STATES PATENT OFFICE.

OLIVER R. HENSON, OF SPRINGFIELD, OHIO.

LANTERN.

941,922.

Specification of Letters Patent.

Patented Nov. 30, 1909.

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To all whom it may concern:

Be it known that I, OLIVER R. HENSON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented a new and useful Lantern, of which the following is a specification.

My invention relates to lanterns, and particularly to the signal lanterns of the kind wherein a transparent colored cylinder or screen is adapted to be raised when desired around the burner and within the usual white or translucent chimney, thus changing the color of the light emanating therefrom.

An object of my invention is to provide a lantern wherein a colored screen may be raised within the usual chimney and seated at its upper end, thus accurately centering the screen and preventing any deformation thereof.

Another object is to so construct the means whereby the screen is raised that the screen may be positively held and locked in a lowered position, or quickly unlocked and forced upward, and in this connection, a further object is to locate the locking and raising means within the hollow base of the lantern in such position that it shall be fully protected and guarded from any accidental operation.

To these ends, my invention consists in providing an elastically supported seat in the crown or cap of the lantern which shall receive the upper end of the cylindrical screen when the latter is raised, and in connecting the annular spring-actuated screen-carrying plate, which forces or carries the screen upward, to a pivoted sliding locking lever or handle, located within the base, whereby the cylinder may be drawn down and held in its lowered position.

My improvement is shown in the accompanying drawings wherein:—

Figure 1 is a side elevation of a lantern, the cap being partially broken away. Fig. 2 is a diametrical section of the same. Fig. 3 is an under side plan view. Fig. 4 is a fragmentary vertical section of the lower end of the lantern, showing the colored screen raised, the exterior portion of the lamp body being removed.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

I have shown in the drawings, a lamp of any ordinary construction, wherein 1 design-

ates the base of inverted bowl-shaped form, and 2 designates the lantern frame formed of the usual radially arranged vertical bars connected at their lower ends by the flanged ring 3, at their upper ends by the ring 4 and at their middles by the ring 5. The cap 6 is of any usual form, and is preferably hinged to the ring 4 and at a point opposed to this hinge is provided with a snap catch 7 passing through a guide 8. This construction is well known, and as it forms no part of my invention, requires no extended description.

The cap 6 is as usual formed with a flue extension 9, to the interior whereof is fixed the downwardly depending hangers 10 having opposed hooked ends. Supported in these hangers by means of transverse bars 11 is the chimney seating ring 12 formed of an annular concaved plate having an upturned flange at its interior circumference. A coiled spring 13, contained within the flue extension, acts to force the chimney ring downward against the upper end of the chimney 16.

Carried by the chimney ring 12 or made in one piece therewith and extending down through the central opening thereof, is the screen seating socket 14. This is composed of a short vertical cylinder having its lower edge downwardly and outwardly flanged as at 14' to form a shoulder against which the upper end of the screen 27 will seat when in its uppermost position. The parts 12 and 14 thus constitute a spring-pressed double seating element common to the globe and screen of the lantern.

Attached to the lower end of the guard bar ring 3 and projecting downwardly therefrom is the perforated lamp cylinder 15 which may be formed in any desirable or usual manner, the upper end of this cylinder being adapted to support the usual lamp chimney 16, while its lower end fits inside of and is attached to the upwardly projecting flange 17 of the downwardly and outwardly projecting base 1.

I have shown the lamp cylinder 15 as formed of double walls, but I do not wish to be limited to this or to any special construction, as this forms no essential part of my invention.

It will be seen that the perforations will admit air to the lamp inside the chimney. Mounted within the base is a cylindrical casing 21 closed at its lower end, but

open at its upper end, and there provided with an inwardly projecting annular flange. This casing is perforated as at 22. Centrally located within the casing is the cylindrical oil reservoir 23 carrying at its upper end any usual burner 24. Loosely surrounding the oil reservoir is a sleeve 25 having an outwardly projecting flange 26 at its lower end. This flange supports and carries the colored cylinder or screen 27. In the annular space in the base of the casing 21 beneath the flange 26 is the coiled spring 27' under compression when the signal or colored screen is in its lowermost position, and acting to force the screen carrying sleeve and screen upwardly. Projecting downwardly from the annular flange 26 are the opposed arms 28 which are pivotally connected to a yoke-like lever 29, whose arms extend upward through slots 31 in the bottom of the casing 21. The ends of the lever are slotted as at 32 for a short distance so that after the lever has been drawn down, it may be shot back into the position shown in Fig. 2 across the slots 31. The ends of the yoke arms are beveled as at 29' so that as the lever is turned, the screen carrier will be drawn down still farther against the force of the spring 28 until the beveled ends of the lever pass the slots 31, whereupon the spring will draw the lever arms upward into the slots.

When the screen carrier is in lowered position, as shown in Fig. 2, the spring 27' tends to force the carrier upwardly, and since the carrier is connected with the operating lever 29, the latter will be held firmly against the bottom of the casing 21, so that there is no danger of the lever becoming automatically unlocked.

It will be seen from Fig. 4 that the casing 21 is of a height to carry it somewhat above the upper end of the oil reservoir 23, and that thus when the carrier 25 is raised, a space is left surrounding the oil reservoir and communicating with the space above the burner 24. As the casing 21 is perforated, air will pass in through the perforations 20 to the interior of the casing 21, up between the casing and the oil reservoir and out to the exterior of the burner. As shown, the upper portion of the lamp is detachable from the base, and the lamp cylinder, is slipped out of the flange 17, to which it is normally held by pins 33 on the lamp cylinder which project through bayonet slots in the flange 15, the lamp cylinder and flange 15 being held in proper relation by a snap catch 32'. This is not shown in detail, as it is no part of my invention.

The advantages of my invention are obvious. The screen carrying mechanism being operated by a spring immediately beneath the same, the carrier is forced up equally on all sides, and thus there is no danger of jamming the screen as there would

be were the carrier operated from one side only. The screen locking and actuating lever or handle being contained within the hollow base, there is no chance of its being accidentally moved, and this is particularly the case inasmuch as the locking yoke is drawn tightly up against the lower end of the casing 21, and can only be operated by turning it against the force of its spring until its pointed ends enter the slots. It may also be pointed out that the beveled faces of the end of the lever arms permit the lever to be readily turned compressing the spring until the pointed ends of the arms enter the slots 31 when the lever may be released, whereupon the spring will force the signal screen up. It will also be seen that the supply of air is not cut off when the screen is raised, but that ample space is left between the upper end of the oil reservoir and the screen-carrying sleeve for the passage of air to the burner.

The screen supporting socket, which engages with the upper end of the screen, centers and supports the screen, thus permitting a relatively long screen to be used of lighter material than otherwise would be possible and holding the screen rigidly in place, a matter of great importance in signal lanterns, which are likely to be swung violently or otherwise used in a manner which would tend to dislodge the screen from its true vertical position were the upper end of it not held in place. It will be seen that I have provided a lantern wherein the screen is entirely protected from accidental dislodgment, wherein the signal screen cannot be operated except with intention and wherein the screen cannot be accidentally dropped, inasmuch as the force of the spring will always act to hold the screen upward surrounding the burner unless it has been deliberately pulled down by the actuation of the lever handle and its movement to the position shown in Fig. 2. This is particularly important as it prevents all chance of the screen accidentally dropping by reason of any jar or by the screen actuating handle catching upon a projection.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a signal lantern, a lamp reservoir, a burner carried thereon, a chimney sur-

rounding the burner, a cap supported above the burner, a vertically shiftable cylindrical screen, means for shifting said screen upward to surround the burner, and an annular bearing socket resiliently supported in the cap and having an outwardly and downwardly flanged lower edge against which the upper end of the screen is adapted to fit and be supported when the screen is in its uppermost position.

2. In a signal lantern, a base, a lamp reservoir and burner carried thereon, a chimney surrounding the burner, a cap, an annular supporting ring carried within the cap and normally bearing against the upper end of the chimney, a spring within the cap forcing said supporting ring downward, a vertically shiftable cylindrical screen within the chimney and surrounding the oil reservoir, means for shifting the said screen upward to surround the burner, and an annular bearing socket mounted within the annular chimney-supporting ring and supported therefrom and having an outwardly and downwardly flanged lower edge in to which the upper end of said screen is adapted to fit and be supported when the screen is in its uppermost position.

3. In a signal lantern, the combination of a frame including a cap, a spring-pressed seating element therein, a chimney engaged by the element, and a screen within the chimney also engaged by the element.

4. In a signal lantern, a hollow base, a chimney supported on said base, an oil reservoir having a burner at its upper end supported on the base, a vertically shiftable colored screen surrounding the oil reservoir, an annular carrier therefor surrounding the reservoir, longitudinally shiftable means for operating said carrier, extending down into the hollow base and adapted to be folded up within the base transversely of the direction of movement of the carrier when said operating means is in its lowermost position, to lock the screen in its lowered position, a slot and pin connection between the said means and carrier to lock and unlock the said means by movement transverse to that of the said carrier.

5. In a signal lantern, a hollow base, a chimney supported on the base, an oil reservoir having a burner at its upper end supported upon the base, a vertically shiftable colored screen surrounding the oil reservoir, an annular carrier therefor surrounding the reservoir, a spring acting to force the carrier upward, and a lever adapted to draw the carrier downward against the force of said spring and to fold up within the hollow base.

6. In a signal lantern, a hollow base, a chimney supported in said base, an oil reservoir having a burner at its upper end supported within the base, a casing surrounding

the oil reservoir, a vertically shiftable colored screen surrounding the oil reservoir and located within said casing, a carrier therefor moving vertically in said casing, a coiled spring located in the bottom of said casing and tending to force said carrier upward, downwardly extending arms projecting through the bottom of the casing, and means for locking the carrier in its lowermost position, said means being located within the hollow base.

7. In a signal lantern, a hollow base, a chimney supported in said base, an oil reservoir having a burner at its upper end supported upon said base, a cylindrical casing surrounding the oil reservoir, an annular carrier vertically movable within said casing, a colored screen mounted upon said carrier and adapted to inclose the burner when the carrier is moved upward, a coiled spring surrounding the oil reservoir and located in the bottom of the casing acting to force the carrier and screen upward, downwardly extending arms on the carrier projecting through the bottom of the casing, and a two-armed lever located within said hollow base and slotted at its end, and pins on the carrier arms extending into the slots of said lever.

8. In a signal lantern, a hollow base, a chimney supported in said base, an oil reservoir having a burner at its upper end supported upon said base, a cylindrical casing surrounding the oil reservoir, an annular carrier vertically movable within said casing a colored screen mounted upon said carrier and adapted to inclose the burner when the carrier is moved upward, a coiled spring surrounding the oil reservoir and located in the bottom of the casing acting to force the carrier and screen upward, downwardly extending arms on the carrier projecting through the bottom of the casing, and a two-armed lever located within said hollow base and slotted at its end, the ends of the arms of said lever being beveled for engagement with the bottom of the casing, and pins on the carrier arms extending into the slots of said lever.

9. In a signal lantern, a hollow base, an annular chimney ring supported on the base and having a series of perforations there-through, a cap supported on the chimney ring, a chimney, an oil reservoir having a burner at its upper end, a cylindrical casing surrounding the oil reservoir and mounted within the chimney ring, said casing being perforated opposite to the perforations of the chimney ring and extending upward above the oil reservoir, an annular carrier surrounding the oil reservoir within the cylindrical casing and shiftable vertically therein, a colored screen mounted upon said carrier, a spring for forcing the carrier upward, and means located in the hollow base

for drawing said carrier downwardly and against the force of the spring and locking it in its lowermost position.

10. In a signal lantern, a hollow base, a
5 cylindrical chimney ring supported on said
base and having perforations therethrough,
a cap supported on the chimney ring, a
chimney, a cylindrical casing located within
the chimney ring extending down within
10 the hollow base and having perforations op-
posed to the perforations of the chimney
ring, an oil reservoir and burner located
centrally within the hollow casing, said cas-
ing being of greater height than the oil res-
15 ervoir and having an inwardly extending
flange at its upper end, an annular carrier
surrounding the oil reservoir and shiftable
vertically within the casing, a colored cylin-
drical screen mounted on said carrier, a
20 spring in the lower part of the casing acting
to force the carrier and the screen upward,
downwardly depending arms on the carrier
projecting through the bottom of the cas-
ing, and a yoke shaped lever located within
25 the hollow base and beneath the bottom of
the casing and slotted at the terminations of
its arms, and pins passing through the arms
of the carrier and into the slots of said yoke
shaped lever.

30 11. In a lantern, the combination of a
frame including a cap, a hanger therein, a
double seating element movably mounted on
the hanger, a spring acting on the said ele-
ment, a chimney engaging the element, and
35 a screen also engaging the element.

12. A lantern comprising a frame, a light-
emitting device, a chimney surrounding the
device, a screen movable upwardly and
downwardly along the said device, a spring
40 for moving the screen in one direction, and
a spring-pressed seating element against
which the screen is held by the said spring.

13. A lantern comprising a frame, a light-
emitting device, a chimney surrounding the
45 device, a screen movable upwardly and
downwardly along the said device, a spring
for moving the screen in one direction, a
spring-pressed seating element against which
the screen is held by the said spring, and a
50 combined retracting and locking device for
moving the screen against the tension of the
said spring and holding it in retracted posi-
tion.

14. In a lantern, the combination of a
55 frame, a light-emitting device mounted
thereon, a chimney surrounding the device,
a movable screen disposed within the chim-

ney and mounted to be moved into and out
of cooperative relation with the said device,
a guiding means for the screen, a spring for
60 throwing the screen to operative position, a
spring-pressed seating element common to
the screen and chimney, and means for re-
tracting the screen against the tension of the
spring and locking the screen in retracted
65 position.

15. A signal lantern including a frame, a
light-emitting device, a chimney surround-
ing the device, a screen, and separate means
engaging opposite ends of the screen and
70 tensioned respectively one to press down-
wardly and the other to press upwardly.

16. In a lantern, the combination of a cas-
ing constituting a holder for a light-emit-
ting device, a spring housed therein, a car-
75 rier movable in the casing, a screen carried
by the carrier and projectible out of the cas-
ing, a lever connected with the carrier and
movable into and out of the casing, and a
slot and pin connection for permitting the
80 lever to move longitudinally while disposed
transversely against the end of the casing
for locking and unlocking the carrier, said
lever being held against the casing when in
locked position by the tension of the said
85 spring.

17. In a lantern, the combination of a
frame, a base therefor, a screen carrier, a
guide therefor extending into the base, a
spring arranged within the guide and acting
90 on the carrier, a combined locking and re-
tracting element for the carrier, and means
connecting the element with the carrier to
permit the element to have movement inde-
pendently of the carrier for locking and un-
95 locking the latter, and said element being
normally disposed within the base of the
lantern.

18. In a lantern, the combination of a
frame, a light-emitting device carried there-
100 by, a globe surrounding said device, a screen
disposed within the globe, a carrier for the
screen, a spring for urging the carrier up-
wardly, a lever for lowering the carrier and
locking the same against the tension of the
105 said spring, said spring serving to hold the
lever in locking position.

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

OLIVER R. HENSON.

Witnesses:

W. G. CAMPBELL,
EDMOND J. OGDEN.