May 2, 1939. A. MENNA 2,157,081

HAND LANTERN

Filed March 24, 1936 2 Sheets-Sheet 1

Fig. 1.

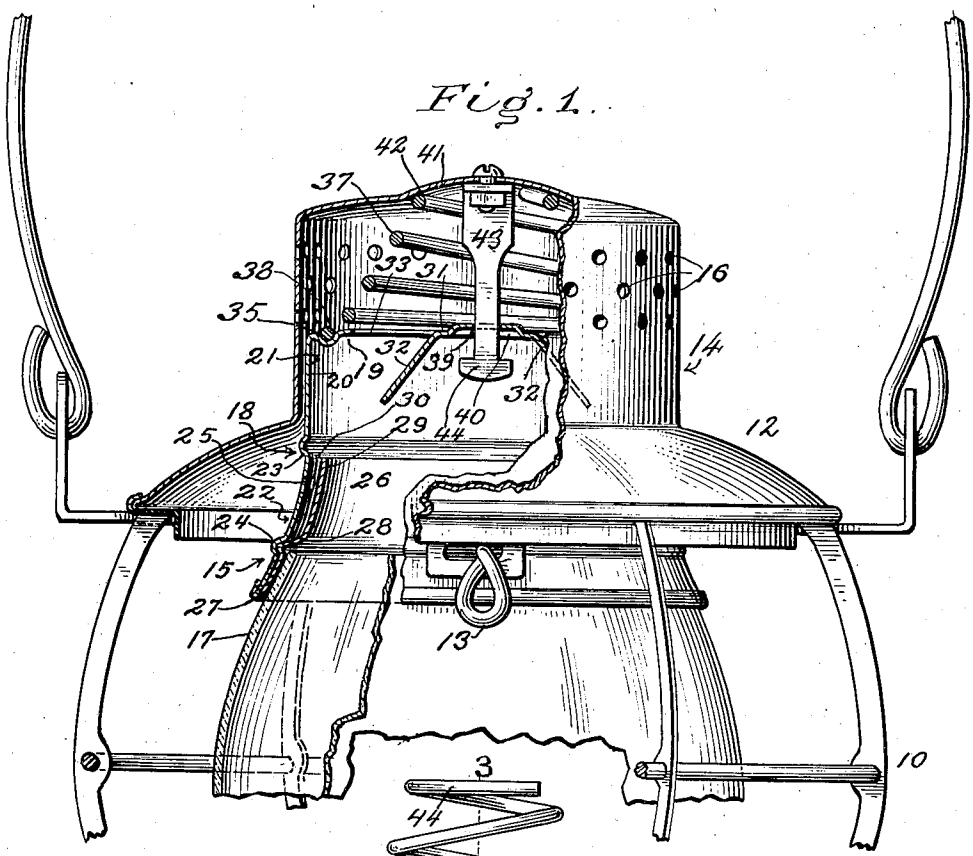
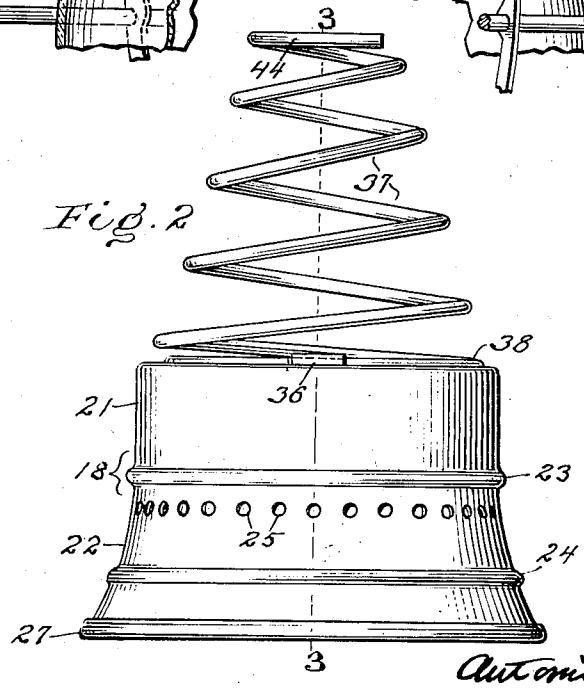


Fig. 2.



INVENTOR
Antonio Menna
BY
Conrad A. Wittock
his ATTORNEY

May 2, 1939. A. MENNA 2,157,081

HAND LANTERN

Filed March 24, 1936 2 Sheets-Sheet 2

Fig. 3

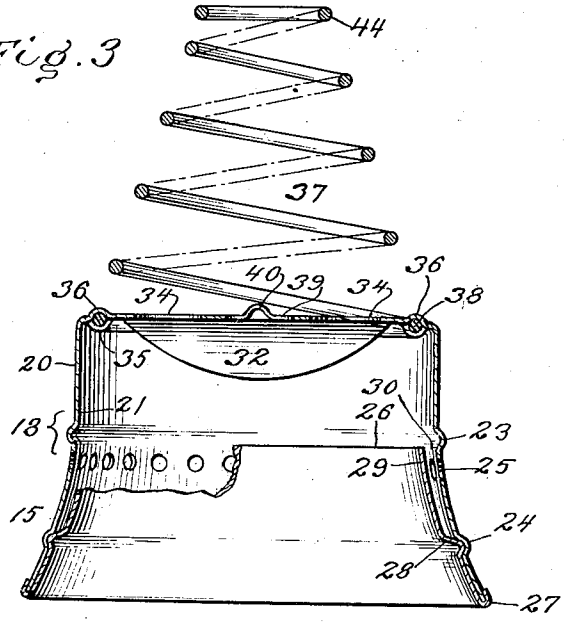


Fig. 4.

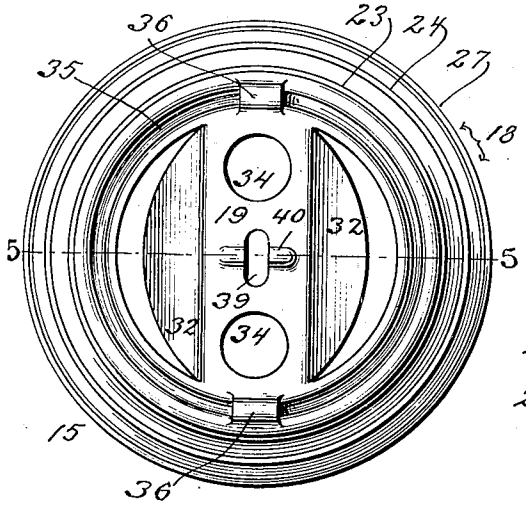
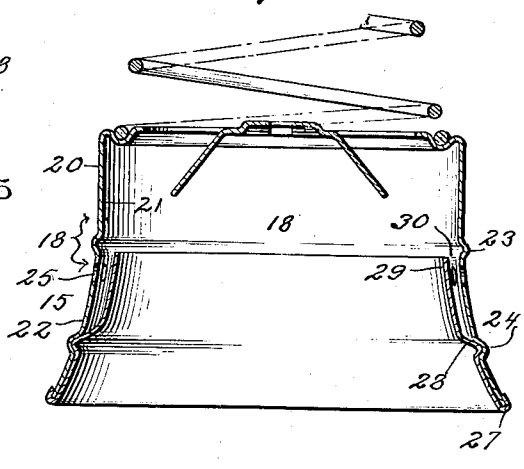


Fig. 5.



INVENTOR
Antonio Menna
BY
Conrad A. Wittenberg
his ATTORNEY

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UNITED STATES PATENT OFFICE

2,157,081

HAND LANTERN

Antonio Menna, Newark, N. J., assignor to Lovell-Dressel Company, Inc., Arlington, N. J., a corporation of Maine

Application March 24, 1936, Serial No. 70,582

2 Claims. (Cl. 240—51)

This invention relates to improvements in hand lanterns and the like. More particularly the invention relates to globe holders of the type adapted to engage the upper end of the globe of the lantern to hold the globe in position.

One of the objects of the invention is to provide a globe holder of this type which may be readily removed for cleaning, replacement or other purposes.

Another object of the invention is to provide a device of the character specified in which the globe holder enables the lantern to maintain a bright, steady flame without flickering, and minimizes the liability of the lantern being blown out or extinguished in the face of a strong wind or downdraft, or when the lantern is suddenly lifted, jarred or otherwise handled.

Another object of the invention is to provide a device of the character specified in which the globe holder thereof is normally retained within the perforated top of the lantern in spring engagement with the globe, and in which the globe holder and spring have an interlocking engagement with each other to permit of the parts being removed jointly as a unit.

Another object of the invention is to provide a device of the character specified in which the globe holder includes means coacting with the perforated top for neutralizing, deflecting or bypassing drafts away from the upper end of the globe to prevent blowing out or extinguishment of the flame.

Another object of the invention is to provide a device of the character specified in which means is included for keeping the top of the globe cool and preventing rain from reaching the same through the perforated top.

Other objects will in part be obvious, and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends, the invention consists in the novel features of construction, and in the combination, connection and arrangement of parts hereinafter more fully described and then pointed out in the claims.

In the accompanying drawings:—

Figure 1 is a side view showing the upper portion of a hand lantern constructed according to and embodying the said invention, parts being shown in section;

Fig. 2 is a detail side view of the draft cone;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a top or plan view of the draft cone, with the spring removed, and

Fig. 5 is a cross section on the line 5—5 of Fig. 4.

Referring to the drawings, the lower portion of the lantern frame 10 supports an oil font, and to the upper portion thereof is hinged a top 12 provided with a spring locking detent 13 to hold it in closed position. The top 12 has a dome-shaped upper portion 14 within which is removably positioned a globe holder 15. The dome 14 is perforated at 16 to provide outlets for the products of combustion.

The globe holder 15, which is of general annular formation in order to conform to and embrace the upper end of the globe 17, is formed from a sheet metal portion 18 stamped out by suitable dies or tools to form the top 19 and the side wall 20; the upper part 21 of the side wall being preferably cylindrical and the lower part 22 thereof flaring outwardly. The body 18 is provided with upper and lower reinforcing ribs 23 and 24, and with a circumferential series of perforations or openings 25 immediately below the upper rib 23 for the admission or escape of air as hereinafter described for keeping the top of the globe cool.

The lower portion 22 of the body 18 upon the inner side thereof is reinforced by a sheet metal portion 26 spun over the lower edge thereof as indicated at 27, and forming an internal ledge, abutment or shoulder 28 adapted to rest upon the upper edge of the globe 17 to hold it firmly in position. The reinforcing portion 26 is extended beyond said shoulder 28 to form a skirt, baffle or deflector 29 converging upwardly and overlying the openings 25, and thus providing an annular channel 30 open at the top in communication with said openings 25.

The top 19 of the portion 18 is provided with a diametrically extending bridging portion 31, preferably integral with the body 18 and having the downwardly directed wings or deflectors 32, said wings diverging downwardly and being disposed substantially entirely within the confines of said body 18. The spaces 33 formed by the displacement of the wings 32 from the plane of the top provide openings for the passage of the products of combustion, and additional circular openings 34 for this purpose are also formed through the bridging portion 31.

The marginal portion of the top 19 is provided with an annular groove 35 having loops 36 struck out from the material at opposite ends of the bridging member 31. The groove 35 serves as a seat for a compression spring 37, the spring preferably being of the conical coil type with the

lowermost or larger convolution 38 thereof threaded through the loops 36 and seated in said groove 35.

The cross-piece 31 centrally thereof has a longitudinal slot 39 therein, and a transverse groove 40 intersecting the slot 39. The top of the dome is provided with a recess 41 for receiving the smaller end 42 of the spring 37, and depending thereform is an arm 43 provided at its lower end with a laterally extending flat head 44 which is adapted to pass through the slot 39 and which, when the holder is positioned within the top as hereinafter described, is adapted to engage the lower side of the member 31 to limit the downward movement of the holder under the influence of the spring 37 then positioned between the top and the holder. The spring 37 serves to maintain the holder 15 in yielding engagement with the globe 17, and permits inward movement of said holder 15 relative to the top 12 in order to receive and hold the glass globe 17 duly in position within the lantern frame. The holder, when in its lowermost position is held against rotation within the top by the engagement of the head 44 with the groove 40.

If it is desired to remove the holder 15 for the purpose of cleaning it and the associated parts of the lamp, or for any other reason, the top 12 is opened and pressure is then applied to the holder to force it inwardly with respect to the top in order to disengage the groove 40 from the head 44 on the arm 43. While keeping the holder in this position it is rotated within the top until the slot 39 is brought into registry with the head 44 and then the pressure upon the holder is relieved whereupon the spring 37 will force it outwardly with respect to the top. During the outward movement of the holder the head 44 on the arm will pass through the slot 39 thereby permitting the holder 15 to be removed as a unit with the attached spring 37 from its position within the top 12.

To assemble the parts, the holder 15 with the spring 37 thereon, is inserted into the dome and the spring 37 centered within the recess 41 therein, and the head 44 caused to clear the slot 39. The holder is then rotated until the groove 40 registers with the head 44 whereupon the pressure upon the holder is relieved, and it will be forced outwardly by the spring 37 until the head engages the groove 40 whereupon the holder will be maintained in position.

By providing the interlocking engagement of the spring 37 with the globe holder 15, the globe holder with the spring attached thereto may be unlocked and removed from the top 12 as a unitary structure and inserted into the top and interlocked therewith by a simple manipulation, obviating the danger of the spring 37 being independently ejected when the pressure thereon is released, and allowing the unitary device to be removed from and inserted into the top with one hand.

The deflecting wings 32 coact with the deflecting skirt or baffle 29 and openings 25 to prevent back or down drafts through the outlet openings 16 which are liable to extinguish the flame, such down drafts being deflected outwardly by the wings 32 through the openings 25 or, since the skirt 29 and openings 25 are disposed substantially at the discharge end of the globe 17 under the suction action due to the flow of the heated products of combustion through the skirt 29 tending to cause introduction of cooling air through openings 25 so that back drafts through the outlets 16 are neutralized, opposed or prevented and the top of the globe is kept cool. Any rain entering the openings 16 in the top will also be deflected by the wings 32 into the channel 30 for escape through the openings 25.

Having thus described the said invention what is claimed and desired to be secured by Letters Patent is:

1. In a hand lantern, a lantern top comprising a cylindrical portion, a globe-receiving member formed as an integral structure having a cylindrical portion provided with a downwardly and outwardly flaring portion at its base, and a circular row of apertures in said flaring portion, a transverse member integral with the top of said globe-receiving member having oppositely-disposed downwardly and outwardly extending wings constituting deflectors, and air passages in said transverse member, an annular spring-receiving socket in said lantern top, spring-engaging loops formed in said top bridging said annular socket, a coil spring having one end disposed in said socket and retained in position therein by said loops and its other end bearing against the underside of said lantern top, means in said lantern top for detachably securing said globe-receiving member thereto, and a baffle, cooperating with the row of circular apertures in the top of said globe-receiving member, secured along its lower edge to the edge of the flaring portion of the top of said globe-receiving member and its other end free and extending upwardly within the flaring portion thereof in spaced relation thereto and terminating in a horizontal plane above the circular row of apertures in said globe-receiving member.

2. In a hand lantern, a lantern top comprising a cylindrical portion and a globe-receiving member including a cylindrical portion, disposed within the cylindrical portion of said lantern top, a downwardly and outwardly flaring portion at its base, and a circular row of apertures in said flaring portion, a transverse member integral with the top of said globe-receiving member and extending across the same, oppositely-disposed downwardly and outwardly inclined wings constituting deflectors and air passages in said transverse member at opposite sides thereof, an annular, semi-circular spring-receiving socket in the top of the cylindrical portion of said globe-receiving member, spring-retaining loops disposed at diametrically opposite sides of said annular socket, a coil spring having one end seated in said spring-receiving socket and retained in position therein by said spring-retaining loops, and its other end bearing against the underside of said lantern top, means for securing said globe-receiving member in said lantern top, an annular baffle, cooperating with the row of circular apertures in the side of said globe-receiving member and secured along its lower edge to the edge of the flaring portion of said globe-receiving member, and its other end free and extending upwardly within said flaring portion in spaced relation thereto and terminating in a horizontal plane above the circular row of apertures in said globe-receiving member, an annular bead intermediate the free and secured edges of said baffle, and an annular bead in said globe-receiving member registering and engaging with the annular rib in said baffle.

ANTONIO MENNA.