

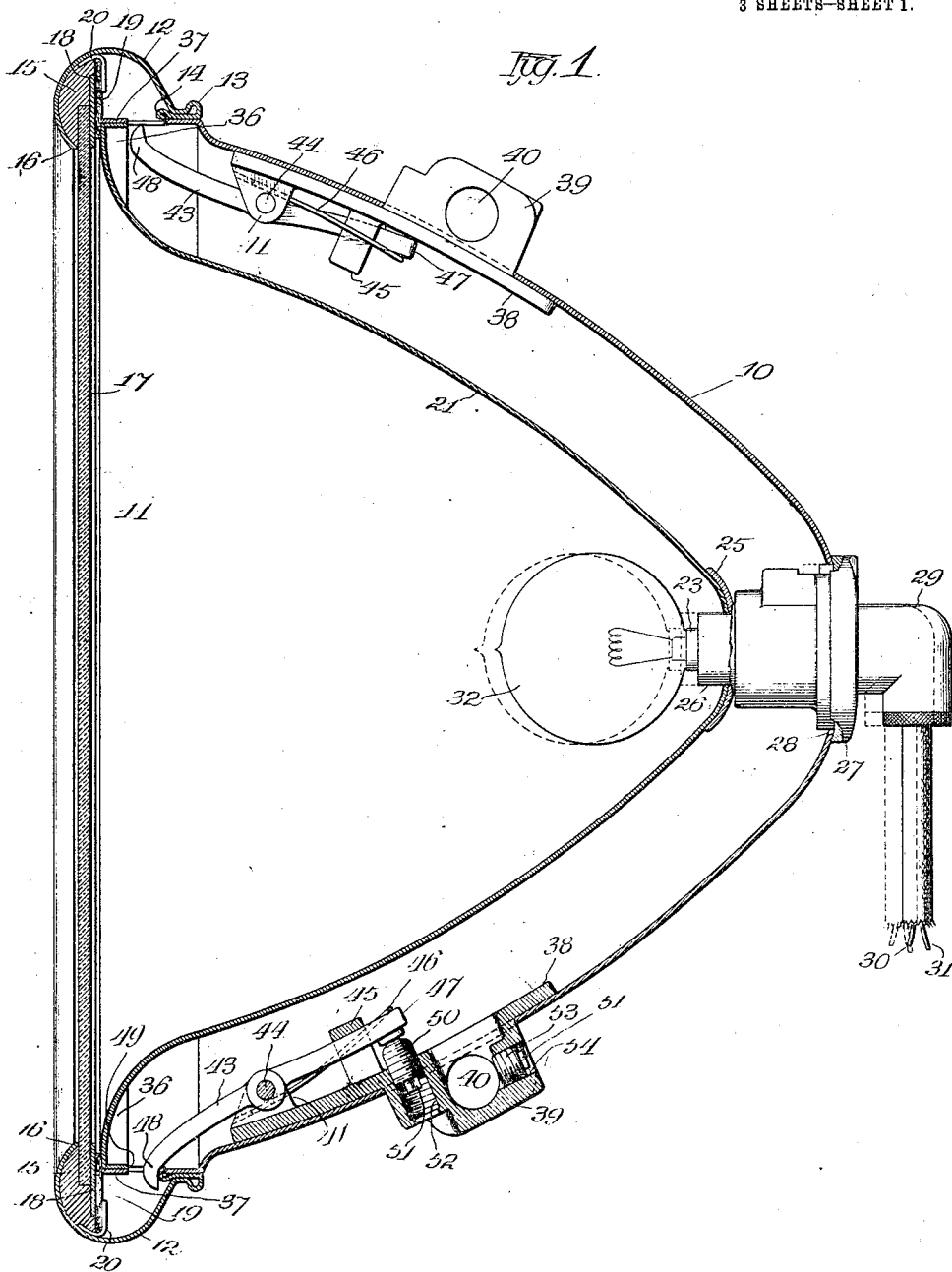
V. G. APPLE.
LAMP.

APPLICATION FILED JULY 10, 1911.

Patented Aug. 6, 1912.

3 SHEETS-SHEET 1.

1,034,562.



Witnesses:
Robert Weir
A. H. Daking

Inventor:
Vincent G. Apple.
by Jones Bain May
Attys

V. G. APPLE.

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3 SHEETS—SHEET 2.

Fig. 2.

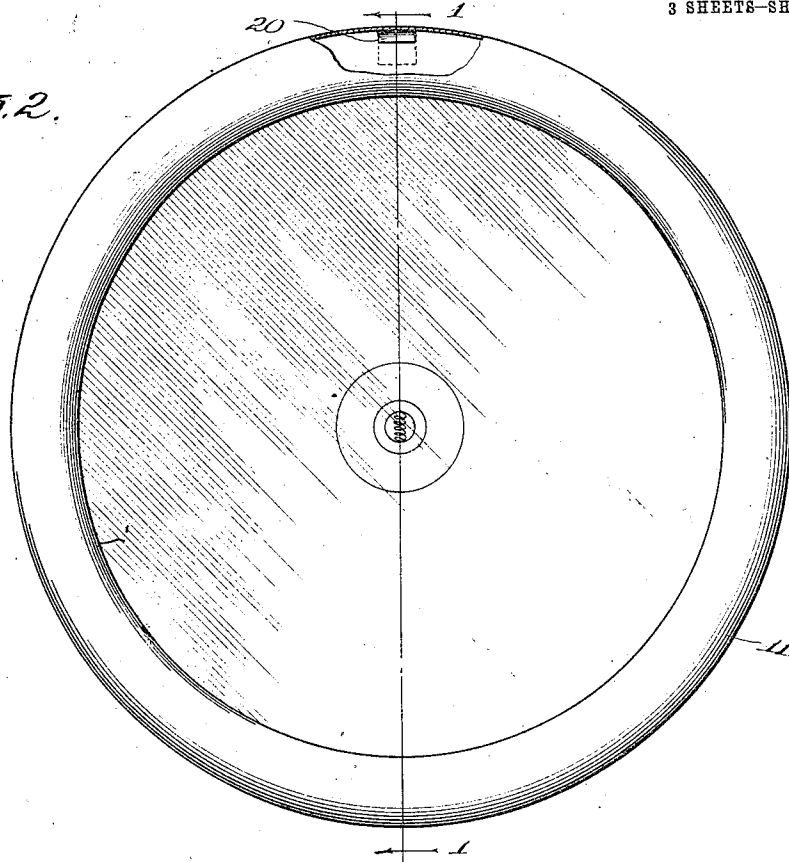
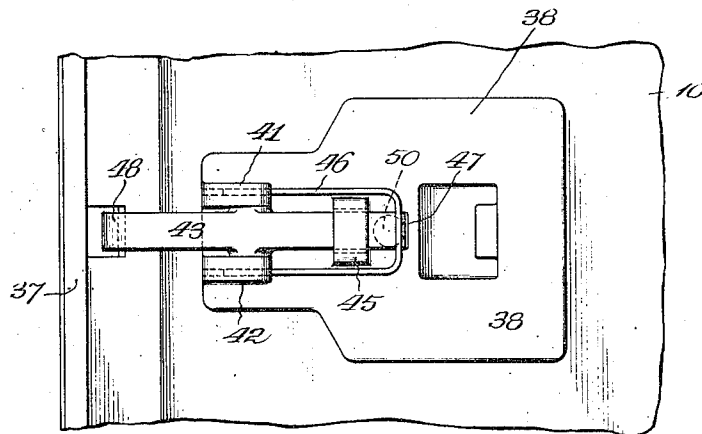


Fig. 3.



Witnesses:

Robert F. McEir
A. H. Rabag

Inventor
Vincent G. Apple.
by Jessie Bain May
Atty.

V. G. APPLE.
LAMP.
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3 SHEETS-SHEET 3.

Fig. 4.

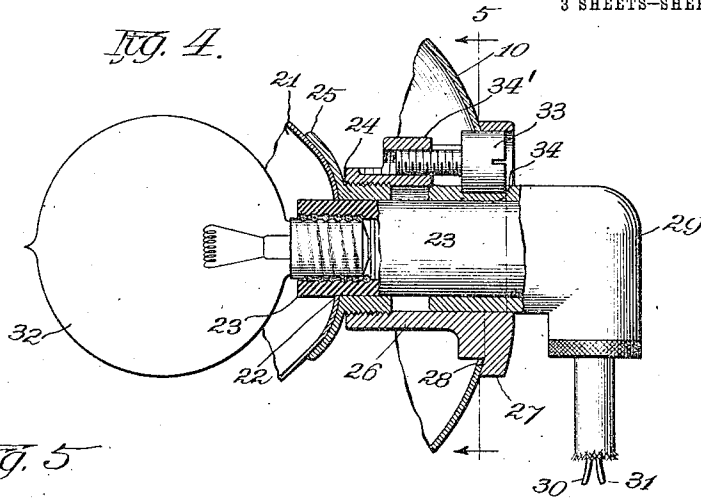


Fig. 5.

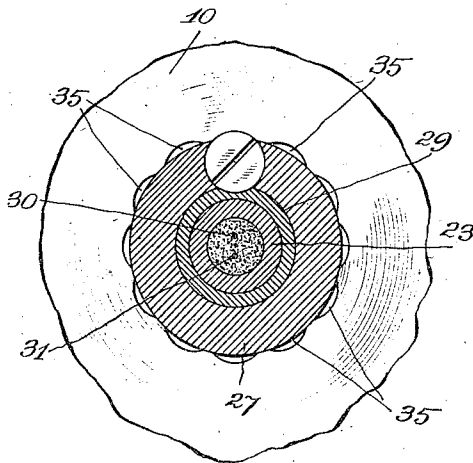


Fig. 6.

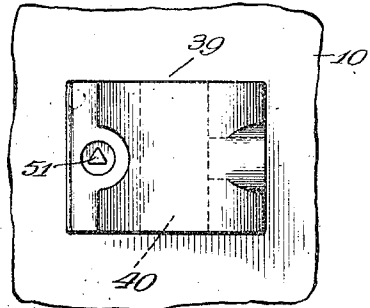
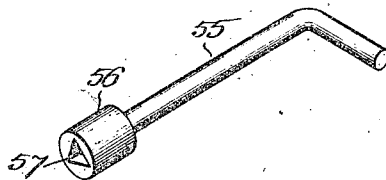


Fig. 7.



Witnesses:

Robert N. Weir
A. H. Raborg

Inventor
Vincent G. Apple
by Jone's Rain May
Atty.

UNITED STATES PATENT OFFICE.

VINCENT G. APPLE, OF DAYTON, OHIO.

LAMP.

1,034,562.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed July 10, 1911. Serial No. 637,670.

To all whom it may concern:

Be it known that I, VINCENT G. APPLE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

My invention relates to improvements in lamps and has especial reference to that class of lamps that are used to project light into the path of a vehicle, such as locomotives, automobiles, and the like.

More specific objects of my invention are to generally improve structures of this character to the end that they shall be water and dust tight, that the exterior thereof may be cleansed by water, from a hose, if need be, without impairing its operation or effectiveness; and that it may be dust tight to avoid the necessity of frequent cleansing of the reflector and to prevent corrosion of the polished surfaces thereof or deposit of dust thereon.

Another object of my invention is to provide means whereby the lamp proper may be conveniently adjusted, from the exterior of the casing, thereby to maintain the lamp in the desired focus of the parabola.

Other and further objects of my invention will become apparent to persons skilled in the art from a consideration of the specification, taken in conjunction with the drawings, wherein—

Figure 1 is a central axial section, taken on line 1—1 of Fig. 2, showing the lamp with a minimum of shading for the sake of clearness; Fig. 2 is a front view looking into the reflector; Fig. 3 is a side view of the locking mechanism whereby the cover and reflector are locked in their respective relations with the exterior casing; Fig. 4 is an enlarged central section taken through the lamp, socket, and focus-adjusting means, showing fragments of the reflector and exterior casing; Fig. 5 is a section taken on line 5—5 of Fig. 4; Fig. 6 is an end and side view of the locks used for locking the parts of the lamp together and for locking the lamp on its supports; and Fig. 7 is a perspective view of the key for said locks.

In all of the views, the same reference characters indicate similar parts.

In the exemplification which I have selected for illustrating the characteristics of my invention, the main, exterior casing is indicated by reference character 10. It is

of generally conical shape and is preferably made of sheet brass.

The closure 11 for the enlarged end of the casing consists of an annular, preferably sheet metal, frame 12, spun, or otherwise formed, into a preferably semi-circular head, as shown in section in Fig. 1, and returned upon itself to form a subsidiary, strengthening bead 13, and the inturned edges again returned to thereby provide a smooth edge, as at 14, against which edge the locking bolt impinges in locking the parts together. The front portion of the frame 12 incloses a filler 15 of any suitable material. The front edge 16 of the bead 12 is inturned and immediately overlies the glass plate 17 that serves as a closure for the opening. A thin annulus 18, preferably of metal, overlies the edge of the glass plate, and a similar ring 19, but of some yielding material, such as felt, rubber, or the like, is placed over and parallel with the ring 18, and serves as a packing for sealing the lamp casing when the closure is properly in place. Clips 20 are placed at intervals around the outside of the filler, 15, and overlap the outer edge of the packing ring 19 to hold the plate 17 in the frame 12 of the closure.

An interiorly polished, preferably paraboloidal, reflector, or as commonly termed "parabola," 21 is perforated at its apex, as at 22, for admission of the lamp socket 23. A screw-threaded collar 24, having a flange 25 is secured to the parabola, and has screw-threaded engagement with the hollow fitting 26. The fitting 26 is flanged, as at 27, which flange effectually closes the opening 28 in the apex of the outer casing. An angular casting 29 carries the socket 23 and the electric conducting wires 30 and 31 which are properly connected to suitable contacts within the socket for engagement by the lamp 32. The angular casting 29 and the socket 23 are freely slidable within the fitting 26 and the collar 24, respectively, and are relatively movable in an axial path by means of the adjusting screw 33. The filister head of the screw 33 enters a crescent-shaped depression 34 in the casting 29, whereby to move said casting, and connected parts, axially, when the screw is turned into or out of the screw-threaded boss 34 which projects laterally from one side of the fitting 26. When the screw is turned clockwise, the casting, socket, and lamp are moved farther, in a direction toward the in-

terior of the structure, as shown by dotted lines in Fig. 1, and when turned counter-clockwise, the axial movement of said parts is in the opposite direction. By this means, the position of the lamp, within the parabola, with reference to the true focusing point may be conveniently adjusted from without the casing and without affecting the seal of the casing.

To prevent relative rotation of the casing 10 and parts just described, I provide crescent-shaped notches 35 around the perforation 28 of the casing 10 for engagement by the screw head of the screw 33, and for adjusting the relative rotatable positions of the casing and the lamp-carrying parts, I provide a plurality of such notches, as clearly shown in Fig. 5.

The parabola 21 is provided on its large open end with an inturned flange 36, which serves as a means for strengthening this portion of the structure and provides a centering means for the larger end of the parabola, as the flange portion 36 snugly fits within the cylindrical portion 37 of the casing 10. It will be seen that the casing and inclosed parabola constitute together a closed imperforate structure, inclosing a space for the electric lamp.

The lock, by means of which the closure 11 is secured and locked to the casing 10, comprises a plate 38 having a laterally projecting lug 39, perforated, as at 40, for reception of the vertical rods upon which the lamp is to be supported. The casing 10 is perforated to permit the lugs to pass therebeyond and the plate 38 is secured in a suitable manner to the inner surface of the casing 10. At the forward end of the plate 38 are inwardly-projecting brackets 41—42 between which a lever 43 is pivoted, as at 44. A projecting guide 45 is provided near the inner end of the lever 43 to prevent any lateral motion of said lever. A spring 46 is fixed to the brackets 41 and 42 and has its looped end overlying the end 47 of the lever 43 to yieldingly hold said lever in unlocked position, as shown at the upper part of Fig. 1. The outer end 48 of the lever 43 is curved outwardly, which in locked position projects through a perforation 49 in the cylindrical portion 37 of the casing 10, and has bearing against the edge 14 of the frame 12. It will be observed that the lock at the upper part of Fig. 1 has its parts in unlocked position, while the lock at the bottom of the figure has its parts in locked position.

A screw 50, provided on its outer end with a triangular projection 51, takes through a screw-threaded perforation 52 provided in the lug 39; its inner end abuts against the end 47 of the lever 43. A similar screw 53 takes through a similar perforation 54 at right angles to screw 50, and bisects the vertical perforation 40 in said lug.

Screw 53 is for engagement with the supporting rods that are intended to enter the perforations 40—40 for supporting the lamp on the vehicle. A socket surrounds the perforations so that the angular projections 51 are never outside of their respective screw threaded apertures and therefore they cannot be seized with pliers, screw-driver, or the like, for turning them. A key 55 having a socket 56, and a triangular shaped depression 57, is adapted to enter the apertures within which the screws 50 and 53 are respectively contained and engage the triangular projections 51 whereby said screws may be conveniently turned for accomplishing their respective objects.

It will be observed that in the movement of the lever 43 from unlocked to locked position, it has an outward and a rearward movement. Therefore, the end 48 first engages the edge 14 of the closure, through the perforation 49 and its subsequent motion is in a rearward direction, so that it draws the closure 11 tight against the end 37 of the casing 10 and the flange 36 of the parabola. The yielding packing ring 19 is brought forcibly into contact with these parts, and thereby a tight seal is effected. The movement of the screw 50 inwardly against the spring 46 forcibly places the lever 43 in locking position. The outward movement of the screw permits the spring 46 to return the lever 43 to retracted or unlocked position.

The locking mechanism is contained within the casing 10 and between said casing and the parabola so as not to interfere with the inward operation or the outward appearance of the structure and said locking mechanism is operative from without the casing without the necessity of producing openings into the casing for insertion of the key, as the screws retain the casing water and dust tight.

While I have herein described a specific embodiment of my invention with some particularity, it is evident that many changes may be made in the structure within the spirit of the invention and without departure from the scope of the appended claims.

What I claim is:

1. In a device of the character described, a substantially impervious housing comprising a casing and a closure therefor, said closure having a continuous unbroken rim for slip connection with said casing, an inner casing, and a lock contained between said outer and inner casings, operable from the exterior of the housing, the bolt whereof engages the rim of said closure to lock the parts together.

2. In a device of the character described, a substantially impervious housing comprising a casing and a closure, an inner

casing, a packing between said closure, outer casing, and inner casing, and a lock between said outer and inner casings operable from the exterior of the housing for holding said parts together.

3. In a device of the character described, a substantially impervious housing comprising a casing having lock bolt openings, and a closure having slip connection with said casing, a locking means within said housing consisting, in part, of a lever having an outward and rearward movement, a part of said closure overlying the end of said lever, and means for operating said lever from the exterior of the casing to lock the parts together.

4. In a device of the character described, a housing comprising a conical casing terminating in a cylindrical part at its larger end, said cylinder part provided with an opening for a lock bolt, a closure having a slip fit for said cylindrical part and having an inclosed part registering with said bolt opening for engagement by said bolt, a bolt mechanism, within said housing, having a lock bolt, and means operable from the exterior of said housing for moving said bolt.

5. In a lamp structure comprising a casing and a closure, a casting comprising a plate within the casing and a portion integral with the plate extending through the casing wall to the exterior thereof; and interior closure-locking means, and exterior lock-operating and casing-supporting means, carried by said casing.

6. In a lamp structure comprising a casing and closure, said casing having a perforation in its side, a lock-supporting plate within said casing, a lock upon said plate, and means projecting through said perforation to support said casing and to permit operation of said closure-locking means from the exterior.

7. In a device of the character described, a housing comprising a casing and a closure in combination with a plate within the casing and locking means for said closure and casing, supported on said plate, and means extending from the plate through said casing for operating said locking means.

8. In a device of the character described, a housing comprising in part an outer conoidal casing having a cylindrical part at its open end, an inner casing within said outer casing and spaced apart therefrom having an outturned cylindrical part at its open end and a slip fit with the cylindrical part of said outer casing, and a closure having a cylindrical part for engagement with the outside surface of the cylindrical part of said casing, and a lock within the space between said inner and outer casings for locking the parts together.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

VINCENT G. APPLE.

In the presence of—

N. E. SNYDER,
E. M. EARNHART.