W. P. DUNHAM.

PORTABLE ELECTRIC LAMP.

APPLICATION FILED APR. 21, 1914.

1,216,422.

Patented Feb. 20, 1917.

4 SHEETS—SHEET 1.

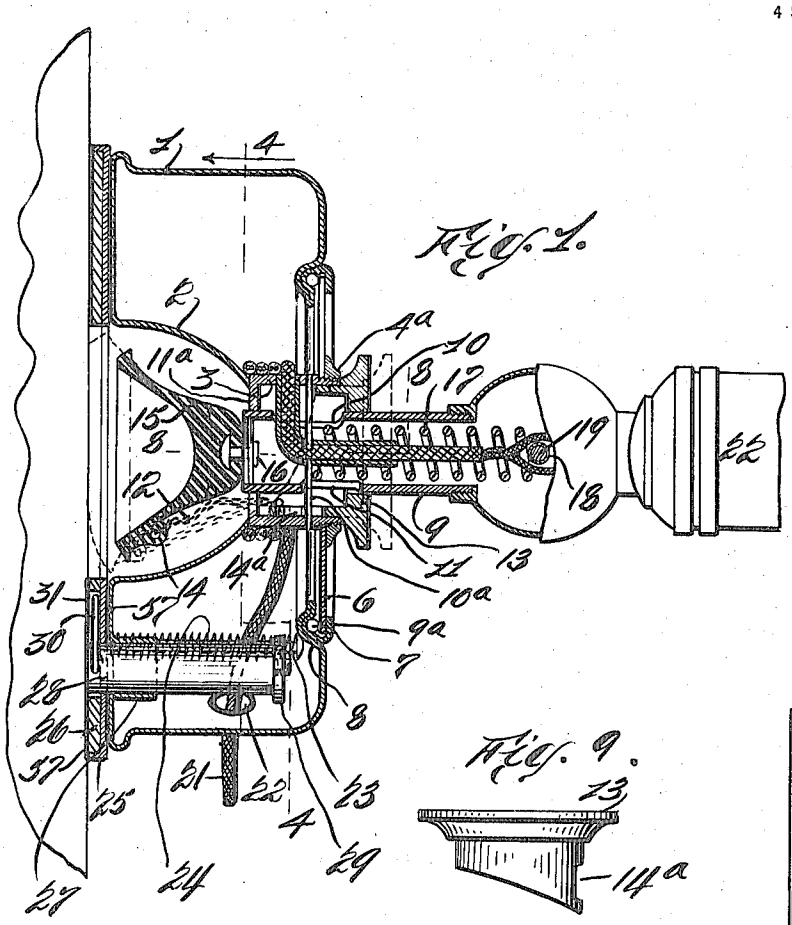


Fig. 1.

Fig. 9.

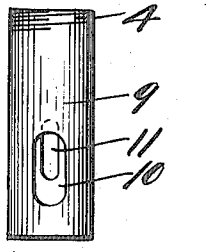


Fig. 11.

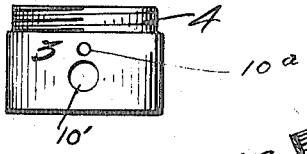


Fig. 10.



Fig. 12.

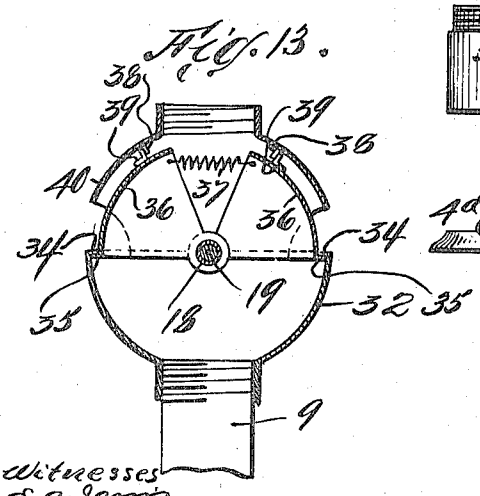


Fig. 13.

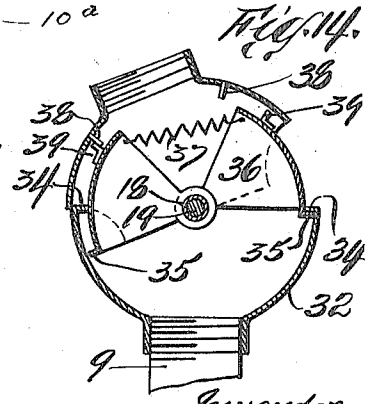


Fig. 14.

Witnesses
C. A. Jarvis
Mabel Dittenhoefer

Inventor
William P. Dunham
by F. Warren Wright
attorney.

W. P. DUNHAM.

PORTABLE ELECTRIC LAMP.

APPLICATION FILED APR. 21, 1914.

1,216,422.

Patented Feb. 20, 1917.

4 SHEETS—SHEET 2.

Fig. 2.

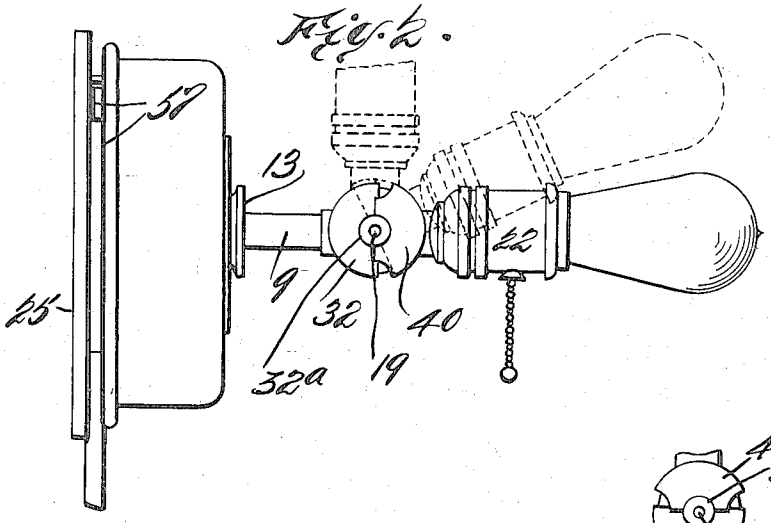
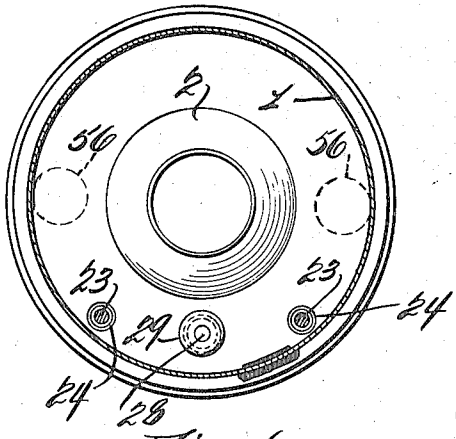


Fig. 4.



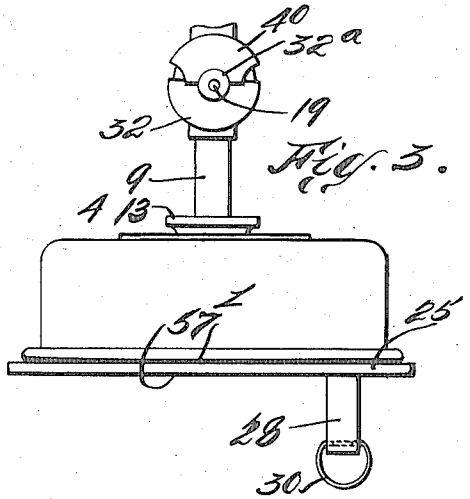
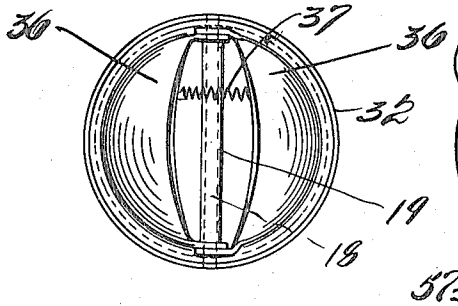


Fig. 3.

Fig. 6.



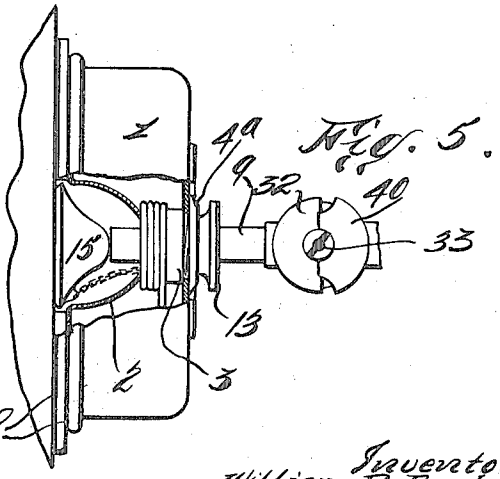


Fig. 5.

Witnesses
C. A. Jams
Mabel Dillenhoefer

Inventor:
William R. Dunham
by F. Warren Wright
attorney.

W. P. DUNHAM.

PORTABLE ELECTRIC LAMP.

APPLICATION FILED APR. 21, 1914.

1,216,422.

Patented Feb. 20, 1917.

4 SHEETS—SHEET 3.

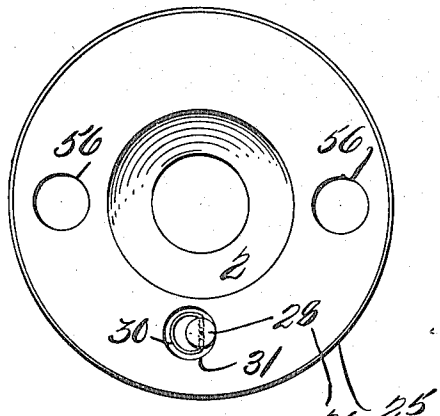


Fig. 7.

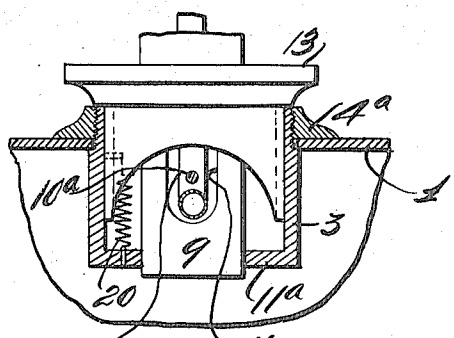


Fig. 8.

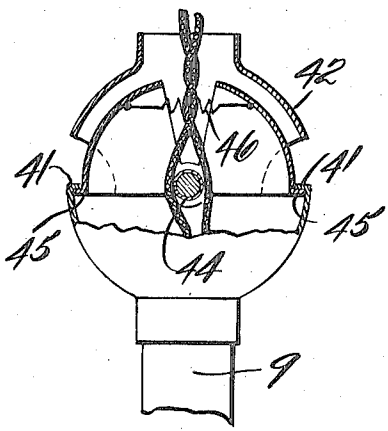


Fig. 15.

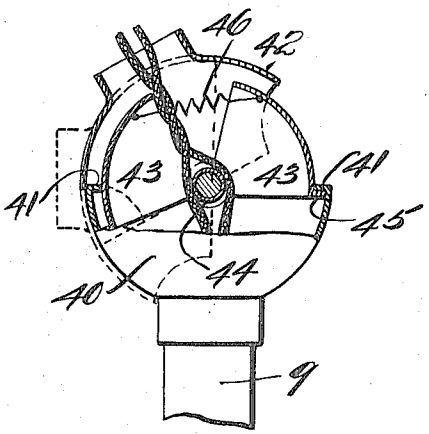


Fig. 16.

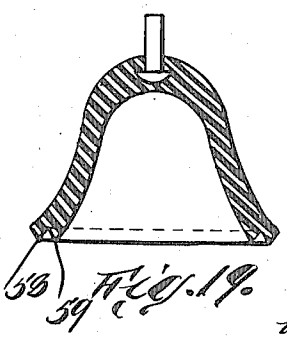


Fig. 19.

Witnesses
C. A. Jarris
Mabel Dillenhofer

Inventor
William P. Dunham
by F. Warren Wright
attorney.

W. P. DUNHAM.

PORTABLE ELECTRIC LAMP.

APPLICATION FILED APR. 21, 1914.

1,216,422.

Patented Feb. 20, 1917.

4 SHEETS—SHEET 4.

Fig. 17

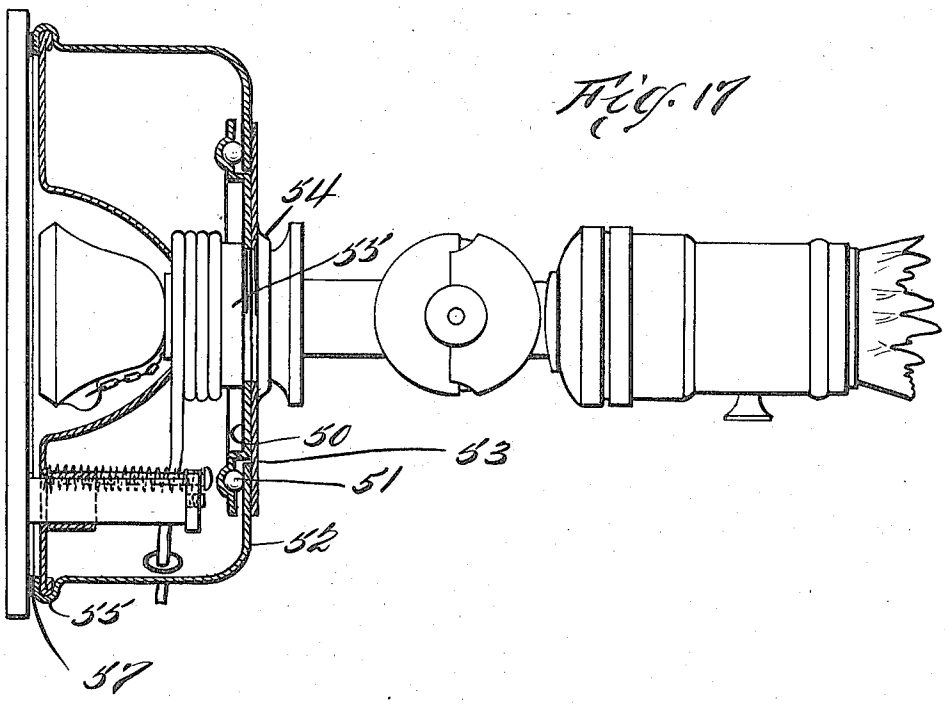
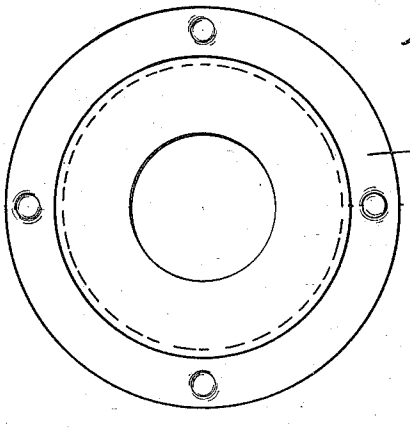


Fig. 18



Witnesses
E. A. Jarvis
Mabel Dittenhofer

Inventor
William P. Dunham
by F. Warren Wright
attorney

UNITED STATES PATENT OFFICE.

WILLIAM P. DUNHAM, OF LOS ANGELES, CALIFORNIA.

PORTABLE ELECTRIC LAMP.

1,216,422. Specification of Letters Patent. Patented Feb. 20, 1917.

Application filed April 21, 1914. Serial No. 833,340.

To all whom it may concern:

Be it known that I, WILLIAM P. DUNHAM, a citizen of the United States, residing at the city of Los Angeles, State of California, have invented certain new and useful Improvements in Portable Electric Lamps, of which the following is a clear, full, and exact description.

The object of this invention is to provide an improved portable electric lamp, which will be attractive in appearance, simple in construction, economic in use, and adaptable for attachment in various positions on various types of supports.

The lamp of this invention is provided with a movable base, which is ordinarily resiliently held in place against the bottom of the casing, and which can be distended to cause it to grasp the head board of a bed, the back of a chair, or a shelf or like protuberance. It is also provided with an opening which will permit it to be hung upon a nail or hook. It is also provided with an attaching suction device, which will permit it to be attached to a smooth surface, such as a mirror, window pane or metal, marble or other substantially non-porous smooth material.

The suction device has as one of its features the invention set forth in my application for United States Letters Patent filed March 25th, 1914, Serial Number 827,024, Patent 1,104,252, July 21, 1914.

The improved lamp is provided with an improved means for causing the suction cup to take hold, which permits a fastening of the lamp in place by suction upon the mere pressing inwardly of the lamp supporting tube. Thus I am enabled to do away with unsightly protuberances, projections or parts which need other mechanical operation in attaching the suction cup.

My improved lamp contains a hidden crank arm which may be pulled out of the casing, and through the base, to enable one to wind up the cord on a barrel within the casing. My improved lamp further is provided with a jointed socket and lamp member, which is capable of a movement upon the lamp supporting tube so as to secure such movements of the lamp as is shown in the D'Olier Patent 785,481 of March 21st, 1905, but my improved joint is one which is normally and at all times closed against access to the wires from the outside, notwithstanding what angle the lamp socket is placed at.

My lamp further is provided with an improved ring surrounding the tube, which is connected to the lip lifter of the suction cup. According to my invention, I mount the barrel for winding the conductors upon a plate supported on the casing, and I prefer to provide ball bearings between the plate and the casing, and in my improved device I secure the socket and lamp so as to be guided and slidable through the barrel member, but to turn with it. The assembling nut which secures the barrel and tube also secures the rotating plates to the barrel so that all such parts will turn together upon the barrel.

I am aware that in the patent of Baker and Graham, 465,039, dated December 15th, 1891, that it has been proposed to cause the socket tube and barrel to be rotated together, and that in the D'Olier patent above referred to, it has been proposed to turn the lamp and socket at any angle to the supporting tube, and I do not claim broadly any invention in such construction in my case, which permits such result to be secured.

The scope of my invention will be pointed out in the claims.

In the accompanying drawings:

Figure 1 is a central sectional view of one form of lamp made in accordance with my invention.

Fig. 2 is a side elevation of the lamp of Fig. 1 as attached to a ledge, the lamp being shown in various positions of adjustment.

Fig. 3 is a side elevation of my lamp with part broken away showing the crank extended for operation.

Fig. 4 is a section on line 4—4 Fig. 1 drawn to a reduced scale.

Fig. 5 is a view similar to Fig. 2 of a portion of my lamp, showing the suction cup in securing position.

Fig. 6 is a detail plan of the closure sections of the pivoted vizor joint.

Fig. 7 is a plan of the base of my improved lamp with suction cup removed.

Fig. 8 is a sectional detail of the lifting ring and guiding sleeve or barrel.

Fig. 9 is a side view of the lifting ring at right angles to the position shown in Fig. 8.

Fig. 10 is a side elevation of the barrel.

Fig. 11 is a side elevation of the sliding supporting sleeve.

Fig. 12 is a side elevation of the assembling lock nut.

Fig. 13 is an enlarged central sectional view of the pivot vizor joint.

Fig. 14 is a view similar to Fig. 13 showing the joint partly rotated.

Fig. 15 is a view similar to Fig. 13 of a modified form of joint.

Fig. 16 is a view similar to Fig. 14 showing the modified joint of Fig. 15.

Fig. 17 is a view similar to Fig. 1 of a modified form of lamp showing a different means for attaching the plate to the casing.

Fig. 18 is a plan view of the ball supporting plate of Fig. 17.

Fig. 19 is a sectional view of the suction cup.

As shown in the drawings, particularly Fig. 1, the device consists of a casing 1 formed with a curved interior projection 2 extending with its upper end adjacent to the lower end of a barrel 3. The barrel 3 is provided with a threaded end 4 to be engaged by a lock nut 4^a. A plate 6 rests upon the shoulder at the bottom of the threads 4 on the barrel 3, and is held in place by the lock nut 4^a. The plate 6 rests upon balls 7 in ball pockets provided near the interior edge of the casing 1, where the metal is shown as bent over upon itself at 8, while the metal of the casing 9^a is spun over on top of the plate 6 after the plate is in the position shown in Fig. 1.

A lamp supporting tube 9 having apertures 10 and 11 in its sides is adapted to slide to a limited extent within the barrel 3, a pin 10^a passing through the apertures 10 and 11, providing against a rotation of the tube within the barrel, but permitting a limited longitudinal motion of the tube within the barrel. The lower end of the barrel is formed with a guide aperture formed by bending over the bottom edge of the barrel as shown at 11^a, and through the closed end 11^a of the barrel a chain or flexible cord 12 projects, being secured at one end to the collar 13, and at its other end to a lug 14 integral with the suction cup 15. The suction cup is secured by a rivet or screw 16 to the bottom of the tube 9.

A spring 17 resting on the pin 10^a at one end and against the tube 18 surrounding the pivot rod 19 of the joint tends to normally hold the lamp and socket distended as in the position of Fig. 1. The collar 13 is provided with an opening 14^a through which the pin 10^a passes, so that it may be given a limited motion from the position shown in full lines to that shown in dotted lines Fig. 1. A spring 20 normally holds the collar in the position of Fig. 1, particularly shown in Fig. 8. The conducting cord 21 passes through an aperture 22 in the casing, is wound around the barrel or drum 3, passes through the opening 10′ in the sleeve below the pin 10^a and up through the center of the spring 17, the conductors being divided around the pivot post 19 and the ends of the conductors being connected with the socket 22.

Within the casing I provide a pair of posts 23 each provided with a spring 24. The outer ends of the posts 23 are secured in the movable base 25 having a center opening through which the suction cup 15 may be projected, and openings 56 for finger and thumb. The movable base 25 is provided with recesses filled with a felt material 26. The bottom of the casing carries an inturned sleeve 27 in which there is guided a crank handle 28 having an enlarged head 29 to prevent a removal of the handle from the casing, but to allow it to be pulled out to the extent shown in Fig. 3. The end of the handle 28 projects through the movable base as well as through the casing, and is provided with a bail 30, which ordinarily fits in a recess 31 in the felt covering of the movable base.

The jointed connection between the socket and the tube 9 consists of a hemispherical lower housing 32, which is threaded or otherwise secured to the tube 9 at one end. It may be of the type shown in Figs. 13 or 14 or of the type shown in Figs. 15 or 16. In Figs. 3 and 5 the central securing rod 19 is provided with a nut 32^a at one end and a screw slot 33 at the opposite end on the outside of the joint. The opposite edges of the hemispherical housing 32 is formed with hooks 34 engaging hooks 35 on pivoted closure plates 36, which are mounted to turn on the sleeve 18. The two closure plates 36 are connected by a spring 37 and carry engaging lugs 38 adapted to abut against lugs 39 on a hemispherical part 40 which also turns on the sleeve 18. The hemispherical part 40 may be cut out at opposite sides as indicated in Figs. 3 and 5, to permit a turning of the lamp into a right angled position, in which case one cut-out portion will rest against the tube. Upon moving the lamp from a longitudinal to a right angle position as shown in Figs. 13 and 14, the lug 39 will first move its closure shield downwardly to keep an opening through the center of the hemispherical member 40 free for the passage of the conductors, the spring 37 permitting such closure piece to be moved. The opposite closure piece on the right hand side Fig. 14 remains in position to close the aperture because its hooked end 34 engages the hooked end 35, of the lower hemispherical part 32; thus a free passage for the wire is maintained at all times without the wire coming into contact with the closure member

and at the same time the opening made by a bending of the joint is closed in either direction of the bend by the closure members.

In Fig. 15 I have shown a simpler form of device, in which I permit the wires themselves to move the closure members out of position instead of having it mechanically accomplished by the joint itself. In such figures 40 represents the lower hemisphere having bent over edges 41. The upper hemisphere 42 is without lugs, and the closing member 43 pivoted on the center sleeve 44 is is also provided with a single lug 45 at its lower edges; the spring 46 is also provided to hold the closure pieces together.

Upon turning the device as indicated in Fig. 16 the wires will move the left hand closure member out of position. The spring 46 will hold the right hand closure member in position to close the aperture. In both modifications,—that shown in Figs. 13 and 14 and that shown in Figs. 15 and 16,—I have exaggerated the fitting of the closure pieces and the hemisphere. In actual practice the parts will almost rest and slide on one another, except for the very minutely formed hooks 41 and 45 on each part.

In the device shown in Figs. 17 and 18, instead of spinning a portion of the casing over the supporting plate I construct the device by using a pair of plates, one plate 50 having four or more ball pockets 51, with an upstanding portion to fit within the central recess in the casing 52. A second plate 53 is secured on top of the first plate by means of the lock nut 54 engaging the threads on the barrel 55. In this modification I make my casing of two parts, the bottom part being spun into the bead 55 at the base of the main casing. Other than thus specified, the device of Figs. 17 and 18 is similar to that of Fig. 1.

As shown, particularly in Figs. 2 and 17, the bottom of the casing and top of the movable base may also be provided with felt or the like as shown at 57 to prevent scratching when the device is clamped in place.

As shown in Figs. 19,—58 and 59 are two concentric gripping rings at the edge of the suction cup. They are provided so that on the failure of one ring to prevent air admission the other will operate.

As many changes could be made in the above construction, and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted in an illustrative and not in a limiting sense.

I claim as my invention:

1. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing.

2. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing, and a spring normally holding the suction cup out of operative position.

3. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing, and a movable base at the bottom of the casing having an opening for the suction cup.

4. A portable lamp having a casing, a winding barrel for conductors carried thereby, a suction cup and a tube, a lamp socket carried thereby, said tube and suction cup sliding in the casing, a movable base at the bottom of the casing having an opening for the suction cup, said movable base extending across the bottom of the casing conforming to the shape of the casing.

5. A portable lamp comprising a casing having an open face, a rotatable plate covering said open face and a winding barrel carried by the plate, in combination with a lamp carrying tube slidably mounted within the barrel and a suction cup carried thereby.

6. A portable lamp comprising a casing having an open face, a rotatable plate covering said open face and a winding barrel carried by the plate, in combination with a lamp carrying tube slidably mounted within the barrel and a suction cup carried thereby, said barrel, tube and plate rotatably connected.

7. A portable lamp having a casing, a winding barrel for conductors therein, a pair of plates, one over and one under an opening in the casing, and attached to said barrel.

8. A portable lamp having a casing, a winding barrel for conductors therein, a pair of plates, one over and one under an opening in the casing, and attached to said barrel by a thread on the barrel and a nut.

9. A portable lamp having a casing, a winding barrel for conductors therein, a pair of plates, one over and one under an opening in the casing, and attached to said barrel, and a tube slidable within the barrel but rotatable therewith.

10. A portable lamp having a casing, a winding barrel for conductors therein, a pair of plates, one over and one under an opening in the casing, and attached to said barrel, and a tube slidable within the barrel but rotatable therewith, said barrel forming at one end a guide for the tube.

11. A portable lamp having a casing, a winding barrel for conductors therein, a pair of plates, one over and one under

an opening in the casing, and attached to said barrel, and a tube slidable within the barrel but rotatable therewith, a collar slidable on said tube, a suction cup and a flexible connection between said cup and the collar.

12. A portable lamp having a casing, a winding barrel for conductors therein, a pair of plates, one over and one under an opening in the casing, and attached to said barrel, and a tube slidable within the barrel but rotatable therewith, a collar slidable on said tube, a suction cup and a flexible connection between said cup and the collar, and a spring attached to said collar.

13. A portable lamp having a casing, a base movable away from said casing, a winding barrel within the casing, a crank pin within the casing and passing through said movable base.

14. A portable lamp having a casing, a base movable away from said casing, a winding barrel within the casing, a crank pin within the casing and passing through said movable base, a recess in the movable base and a bail for the crank pin within the recess.

15. A vizor joint for an electric fixture comprising two housings, a common shaft therefor and closure members operatively connected thereto adapted to cover an opening made by the housings on a movement of one upon the other.

16. A vizor joint for an electric fixture comprising two housings, a common shaft therefor and closure members operatively connected thereto adapted to cover an opening made by the housings on a movement of one upon the other, said closure members being resiliently held together.

17. A vizor joint for an electric fixture comprising two housings, a common shaft therefor and closure members operatively connected thereto adapted to cover an opening made by the housings on a movement of one upon the other, and engagement devices limiting the movement of the closures in one direction of movement.

18. A vizor joint for an electric fixture comprising two housings, a common shaft therefor and closure members operatively connected thereto adapted to cover an opening made by the housings on a movement of one upon the other, and engagement devices limiting the movement of the closures in one direction of movement, said closure devices being free for movement in the opposite direction.

19. A casing, a barrel rotatable therein and carried by the casing, a sliding tube within the barrel, said tube and barrel having registering openings and means to prevent the rotation of the tube in the barrel.

20. A casing, a barrel rotatable therein and carried by the casing, a sliding tube within the barrel, said tube and barrel having registering openings and means to prevent the rotation of the tube in the barrel, in combination with a suction cup secured to the tube.

21. A portable lamp comprising a base, a stem movable longitudinally with respect to said base, a lamp carried by said stem, and a sucker carried by said stem, said lamp, stem and sucker movable as a unit with respect to said base.

22. A portable lamp comprising a base, a stem movable longitudinally and rotatable with respect to said base, a lamp carried by said stem, and a sucker carried by said stem.

23. A portable lamp comprising a base, a stem movable longitudinally with respect to said base, a lamp carried by said stem, a sucker carried by said stem, said lamp, stem and sucker movable as a unit with respect to said base, and a spring for retracting said stem.

24. A portable lamp comprising a base, a stem movable longitudinally and rotatable with respect to said base, a lamp carried by said stem, a sucker carried by said stem, and a spring for retracting said stem.

25. A casing, a barrel rotatable therein and carried by the casing, a sliding tube within the barrel, said tube and barrel having registering openings and means to prevent the rotation of the tube relative to the barrel, in combination with a suction cup secured to the tube.

Signed at New York city, New York, this 18th day of April 1914.

WILLIAM P. DUNHAM.

Witnesses:
J. W. DUNHAM,
E. G. THOMAS.