

W. A. MCKAY & M. CLAUSSEN.
 PORTABLE ELECTRIC LAMP.
 APPLICATION FILED FEB. 11, 1913.

1,085,147.

Patented Jan. 27, 1914.

Fig. 1.

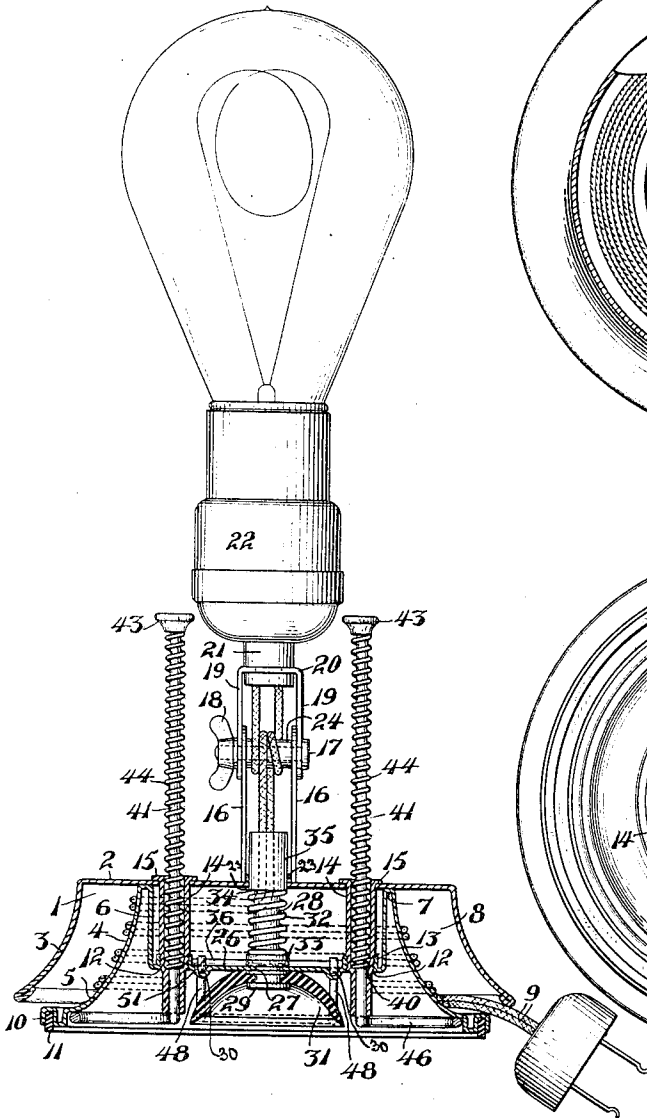


Fig. 2.

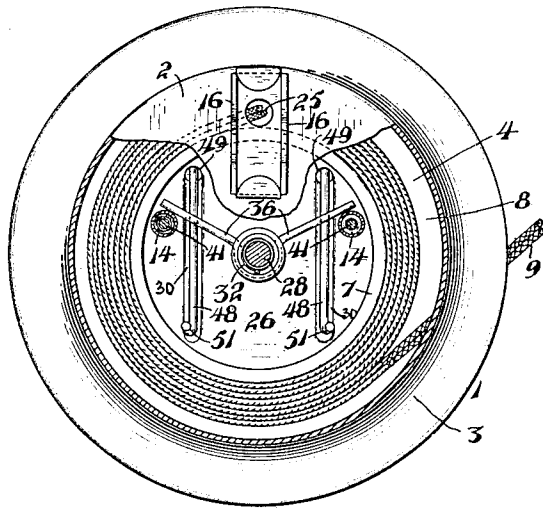
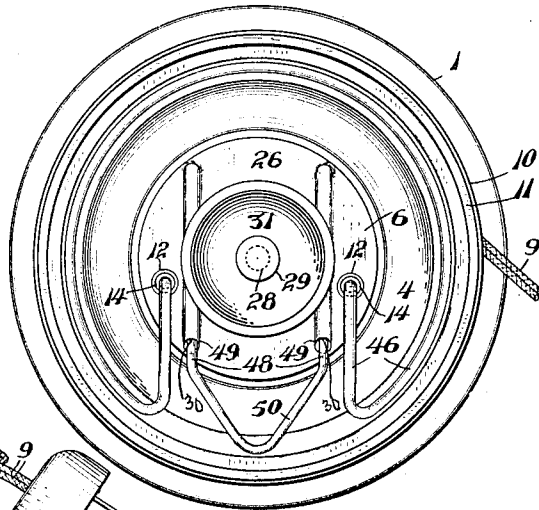


Fig. 3.



WITNESSES

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PORTABLE ELECTRIC LAMP.

1,085,147.

Specification of Letters Patent.

Patented Jan. 27, 1914.

Application filed February 11, 1913. Serial No. 747,670.

To all whom it may concern:

Be it known that we, WILLIAM A. McKAY and MARTIN CLAUSSEN, respectively a Canadian subject of the King of Great Britain and a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Portable Electric Lamps, of which the following is a specification.

Our invention relates to improvements in portable electric lamps, and the object of our invention is to provide a lamp of this character, of simple and cheap construction, with means for securing it in various positions, as upon the edge of a table or on a mirror, window pane, or other object having a comparatively smooth surface, or for suspending it from a hook or the like, and also with convenient means for winding up the loose lamp cord.

In the accompanying drawing, Figure 1 is a central vertical section of our improved lamp; Fig. 2 is a broken plan view thereof; Fig. 3 is a bottom plan view.

Referring to the drawing, 1 indicates an outer shell of a lamp stand, formed out of sheet metal, and comprising a top 2 and a depending conoidal side 3 concave outwardly. Within said shell is an inner shell 4 spun to form an outer conoidal portion 5, a central depressed portion 6, and an intermediate raised wall 7, the top of which abuts against the under side of the shell. Said central portion 6 is not however, depressed to the level of the lower edge of the inner shell, which thus forms a concave or hollow bottom for the stand. The conoidal portion 5 is spaced from the outer shell to form a cord winding chamber 8, its lower outer portion flaring outwardly more than the outer shell, so that the opening between the lower edges of the two shells is just sufficiently wide to permit of passage therebetween of lamp cords 9. Therefore, when the lamp cords are wound about the inner shell, with their terminal portions extending through said opening, said cords will not, when free, fall through said opening and unwind, but will remain wound about the inner shell. The marginal portion of said shell 4 is formed with a depending groove 10 in which is secured a ring 11 of rubber or the like, by which the lamp stand may be supported upon a table or other horizontal surface.

The depressed central portion 6 of the

inner shell is formed with two diametrically opposite holes 12, and with threaded flanges 13 extending upwardly around said holes. Into said threaded flanges 13 are screwed two tubes 14 externally threaded near their lower ends, their upper ends being externally flanged as shown at 15, and passing through holes in the top 2 vertically above the holes 12. The flanges 15 rest upon said top 2, so that by screwing the lower ends of the tubes into said threaded flanges 13, the inner shell 4 is drawn upward, so that the top of the wall is held firmly against the under side of the shell 1.

Upon one side of the top 2 are erected parallel standards 16, to the top of which are pivotally secured, by a bolt 17 and a nut 18, the side members 19 of a yoke 20, the middle portion of which is apertured and surrounds the neck 21 of an incandescent lamp socket 22. By means of said pivot said socket can be turned through any angle in a plane parallel with those of the standards. The cords 9 proceeding from said lamp socket are first wound around a tube 24 on said bolt 17 between said standards 16, and are then passed through a hole 25 in the top 2 between said standards and into said chamber 8 and around the shell 4 any number of times desired and then through the circular opening between the lower edges of the shells.

The central part 26 of the depressed portion 6 is formed with a central hole 27 through which passes a stem 28. The lower end of said stem, below said hole 27, is secured, as shown at 29, to the center of a suction cup 31 of rubber. A coiled spring 32, compressed between a washer 33 at its lower end and shoulder 34 at its upper end formed by an enlarged portion 35 of the stem, normally presses said stem upwardly. The washer 33 is supported by a wire 36 around the stem, the further purpose of which will hereinafter appear, which is itself supported by the part 26 and the enlarged portion 35 of the stem passes with a snug fit through a central hole 23 in the top 2, so that said hole forms a guide for said stem. Upon pressure being applied by a finger to the upper end of the enlarged portion 35 of the stem, the suction cup 31 is projected beyond the lower edge of the rubber ring 11 at the bottom of the shell 4. If it is so projected while said ring is in contact with a mirror, window pane, wall or

other object having a comparatively smooth surface, the suction cup is more or less flattened against said surface, and, upon removing said pressure, the resiliency of the cup and of the rubber ring 11 and the pressure of the spring 32 expand the cup to its original form and a powerful vacuum is produced, holding the cup firmly to such smooth surface.

10 An important feature of our invention resides in the specific construction of the suction cup. It will be observed that the edge of the suction cup is comparatively broad and flat, and is not continuous with the inner concave surface of the cup but makes an angle therewith. Heretofore, so far as we are aware, it has been the practice to make suction cups with a sharp edge, the inner and outer surfaces of the suction cup meeting at said edge. Our construction differs therefrom in that the inner concave surface does not meet the outer convex surface but both terminate in a flat broad edge. We have found that a suction cup so constructed, by reason of its having a broad surface of rubber in contact with the object to which the suction cup is adhering, excludes the air for a very long time.

A further important feature of the invention is the construction whereby the stem is guided by the top beyond, or outside of, the spring, the spring being contained wholly within the body. We are aware that it has been proposed to employ a spring, in addition to the natural resiliency of the suction cup, to restore a suction cup to its original form against atmospheric pressure and thus increase the vacuum within the suction cup. But, so far as we are aware, this has not been done with a stem guided outside of, or beyond, the spring. By providing an additional guide beyond the spring, the stem is prevented from moving sidewise when pressure is applied to its outer end. Hence the pressure can be more effectively applied, and a more powerful spring can be used. Since a more powerful spring can be used, the degree of vacuum contained within the suction cup is greater, the edge of the suction cup is pressed more tightly against the surface to which it is applied, and the outside air is excluded longer.

Through the tubes 14 pass the two terminal portions 41 of a wire clamp 46, on the ends of which terminal portions are secured heads 43. Coiled springs 44 surround said terminal portions 41, and are compressed between said heads 43 and inwardly extending flanges 40 on the lower ends of the tubes 14, thus tending always to press said clamp inwardly. Its central portion is bent into a plane substantially at right angles to the terminal portions, and normally is received within the cavity in the bottom of the hollow body, extending

therewithin through an arc greater than a semi-circle. When pressure by the fingers is applied to the heads 43, so that the terminal portions 41 are depressed against the action of said springs 44, then said central portion is projected to a considerable distance below the rim of said hollow body, so that an object of considerable thickness, as the edge of a table or of a shelf or a bed-post can be clamped between said clamp 46 and said rim.

The terminal portions of the wire 36 are extended to form guides for the sides 48 of a wire yoke or hanger 50, which sides pass through holes 49 in the depressed portion 6 and are normally retained by the wire 36 in grooves 30, in the part 26, the center of said yoke then forming a loop for hanging the lamp upon a hook, nail, or the like. Normally this yoke is contained wholly within the circle formed by the edge of the shell 4, and above said edge, but its engagement with said holes and guides is such that, if the finger be applied to said loop portion of the yoke, it may be drawn through the holes 49, and extended beyond said edge. The ends of the yoke 50 are hooked, as shown at 51, to engage said guides, which thus arrest the outward movement of the yoke.

We thus provide a lamp stand, which, in a very small compass, contains several various contrivances for supporting it.

It will be observed that after the suction cup has been applied to a smooth surface, as a mirror, the cover, and, if desired, also the body, can be turned around said suction cup and stem through any angle, so that the electric lamp, and the reflector placed thereon, if desired, can be adjusted in position as required.

A valuable use of which our improved electric lamp is capable results from the fact that in such a lamp, for the first time so far as we are aware, there has been provided an extensible cord and a clamp for clamping by spring pressure an object to the bottom of the lamp. For by this means the cord itself can be clamped between the spring clamp and the body of the lamp, and the lamp can thus be used as a drop light of any desired height.

We claim:—

1. The combination of a lamp supporting means having vertical tubes, a horizontally extending clamp having portions slidable in said tubes, and resilient means for pressing said clamp to said supporting means.

2. In an electric lamp support, the combination of a hollow body, having a concave bottom, tubes connected to said bottom, a clamp having portions slidable in said tubes, its mediate portion being contained in said concavity, and resilient means for pressing said clamp to said bottom.

3. In an electric lamp support, the combination of a body having a concave bottom, a wire hanger normally contained in said concavity above the whole of the periphery
5 of said bottom and slidable outwardly and downwardly, and means supported by said bottom for guiding and for positively arresting the hanger.

4. In an electric lamp support, the combination of a body having a concave bottom, a wire yoke normally contained in said concavity with its center adjacent to the edge, and means supported by said bottom through which the sides of said yoke can
15 slide, the ends of said yoke being hooked to engage said means to arrest the outward movement of the yoke.

5. In an electric lamp support, the combination of a hollow body having a concave
20 bottom with holes therethrough, a wire yoke, the sides of which pass through said holes, and guides within the body for said sides.

6. In an electric lamp support, the combination of a hollow body having a concave
25 bottom with holes therethrough, a wire yoke, the sides of which pass through said holes, and guides within the body for said sides, the ends of said yoke being hooked to engage said guides to arrest the outward
30 movement of said yoke.

7. In an electric lamp support, the combination of a body, its top and bottom having registering apertures, a stem passing through said apertures and having a shoulder
35 below the top, a suction cup secured to the lower end of said stem, and a coiled spring around the stem and compressed between the bottom and the shoulder.

8. In an electric lamp support, the combination of a body, a stem slidable vertically
40 in the body, a spring for raising the stem and a suction cup secured to the lower end of said stem and having an edge flat and broad in a plane transverse to the stem.

9. In an electric lamp support, the combination of cords for an electric lamp, a support for said lamp, and a hollow base for
45 said support formed with a cord winding chamber and with a continuous annular opening therefrom just sufficiently wide to permit the lamp cords to pass therethrough.
50

10. In an electric lamp support, the combination of sheet metal outer and inner shells, having outer conoidal portions spaced
55 from each other to form a cord winding chamber and an annular outlet therefrom, the inner shell having a central depressed portion and an intermediate wall, the top of which abuts against the under side of the
60 outer shell, and means, in the space between the outer shell and the central portion of the inner shell, for drawing said shells together.

11. In an electric lamp support, a base
65 having a centrally depressed portion with

threaded flanges, an outer shell having holes in alinement with said flanges, tubes passing through said holes and screwed into said flanges, and an extensible clamp having parallel terminal portions passing through said
70 tubes and guided thereby.

12. In an electric lamp support, a base having a centrally depressed portion with threaded flanges, an outer shell having holes in alinement with said flanges, tubes passing
75 through said holes and screwed into said flanges, an extensible clamp having parallel terminal portions passing through said tubes and having heads on the ends of said terminal portions, the lower ends of said tubes being
80 of a size to accommodate said terminal portions and their upper ends being of larger diameter to accommodate extension springs on said terminal portions, said springs thrusting in one direction against said heads
85 and in the other against the shoulders at the junction of the larger and smaller portions of the tubes.

13. In an electric lamp support, a base having holes therein, a hanger adapted to
90 slide in the holes and having hooked portions, a central hole in the base, a stem engaging in the hole, and a yoke associated with the stem and adapted to limit the motion
95 of the hanger.

14. In an electric lamp support, a base having holes therein, a hanger adapted to
slide in the holes and having hooked portions, a central hole in the base, a stem engaging in the hole, a spring on the stem
100 expanding in one direction against a shoulder on the stem and in the other against a washer, and a yoke associated with the stem and between the washer and base, and adapted to guide the hanger vertically.
105

15. In an electric lamp support, a base having parallel holes vertically through it, and an extensible clamp having parallel terminal portions adapted to engage the holes.

16. In an electric lamp support, a clamp
110 operatively connected to a base, the clamp being formed of one piece of wire having a loop extending for more than a semicircle, the wire returning to near the center, and then extending at right angles to the loop in
115 two parallel terminal portions.

17. In an electric lamp support, a base having a central depressed portion, a central hole therein, a stem in the hole having a suction cup at the lower end, and a shoulder
120 at the other end, a spring on the stem expanding against the shoulder in one direction and against a washer at the other, a yoke between the washer and the base, a hanger having parallel sides adapted to slide
125 through holes in the base, hooked portions at the termination of the parallel sides adapted to engage with the yoke when the hanger is extended, the spring and washer
130 yielding when a pressure is exerted against

the hook in a direction perpendicular to and away from the base.

18. In an electric lamp support, a base consisting of an upper and a lower portion, 5 a stem passing through the center of each and carrying a suction cup, a spring on the stem bearing in one direction against a shoulder on the stem and in the other against the lower portion of the base, the upper portion being adapted to guide the stem by the 10 shoulder thereof.

19. A support for an incandescent electric lamp comprising a concave base having a horizontal lower edge, a rigid device in said 15 base having a horizontally extending member and an upwardly extending member, means for guiding said latter member vertically, and a spring for pressing upwardly

said latter member, said latter member and spring being sufficiently long to permit the 20 former member to be depressed below said lower edge.

20. A support for an incandescent electric lamp comprising a concave base having a horizontal lower edge, and a securing device 25 therefor within said base, extensible both below, and horizontally outside of, the lower edge of said base.

In testimony whereof we have hereunto set our hands in the presence of two sub- 30 scribing witnesses.

WILLIAM A. MCKAY.
MARTIN CLAUSSEN.

Witnesses:

FRANCIS M. WRIGHT,
D. B. RICHARDS.