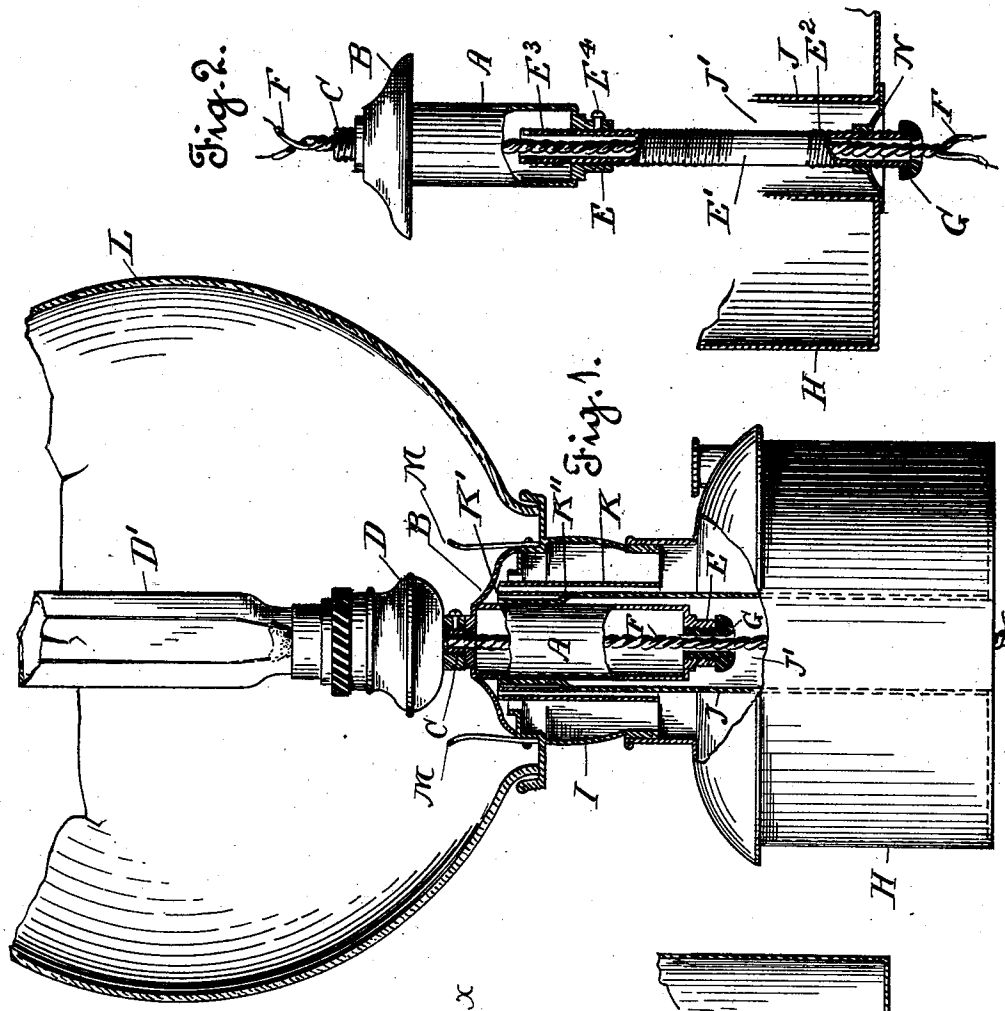
No. 716,043. Patented Dec. 16, 1902.

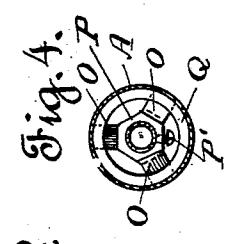
M. S. HUFSCHMIDT.

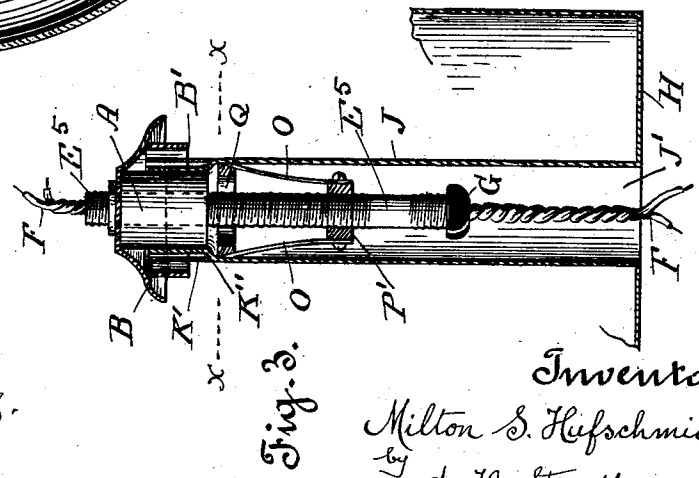
LAMP.

(Application filed Feb. 10, 1902.)

(No Model.)







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UNITED STATES PATENT OFFICE.

MILTON S. HUFSCHMIDT, OF SAN FRANCISCO, CALIFORNIA.

LAMP.

SPECIFICATION forming part of Letters Patent No. 716,043, dated December 16, 1902.

Application filed February 10, 1902. Serial No. 93,426. (No model.)

To all whom it may concern:

Be it known that I, MILTON S. HUFSCHMIDT, a citizen of the United States of America, and a resident of the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

This invention is an improvement in light-producing devices. It provides means for attaching or combining an electric burner, particularly incandescent, to or with a coal-oil lamp and is intended to combine novelty and effect with cheapness and utility, all of which will be sufficiently set forth hereinafter.

The accompanying drawings are integral herewith as mediums of illustration, in which I will employ like reference characters to indicate like or analogous parts in the several figures.

Figure 1 is an elevation of one form of my invention combined with a kerosene-lamp of ordinary or any preferred type and is partly in section or has parts removed to expose within-lying details. Fig. 2 is an elevation of a more complete form of my invention, partly in section and showing near the bottom a part of the reservoir of an oil-lamp. Fig. 3 is a somewhat similar elevation of a modification of my invention. Fig. 4 is a cross-section on the line $x\ x$ of Fig. 3.

Although, as will be seen, my improvement may be employed in connection with lamps of any variety with or without slight alteration, I have illustrated it in connection with my preferred means of combining an incandescent electric burner with oil-lamps of the central-air-tube variety.

The principal parts of my invention, as illustrated, are a barrel-shaped plug or steadier A, a flange or flange-like expansion B at its upper end, means, as a threaded part C, for attaching the electric burner D, Fig. 1, to or above the flange B, a provision, as the pipe E, for insulating and conveying the electric wires, herein marked F, to and from the burner D, and an insulator G, secured to the lower end of the pipe E. It will be understood later on that for some forms of oil-lamp the pipe E will be quite dispensable, and the insulator would be attached to the bottom of the plug or barrel A directly or be placed in connection with the socket of the oil-burner.

I have also lettered certain accessories in the drawings as follows:

H is the oil-reservoir of an oil-lamp.

I is the burner of an ordinary kerosene-lamp.

J is the tube that forms the interior air-channel (indicated J′) which usually passes up through and constitutes part of the reservoir H and the oil-burner I. K is the wick-tube in the said burner I.

K′ is a short tube supplementary to the air-tube J, designed to catch surplus oil from the wick and return it to the reservoir, this short tube surrounding the neck or narrowed upper end of the said air-tube and resting on the circular shoulder or receding part thereof.

K″ is an annular offset formed by the sudden upward contraction or downward expansion at this point of the air-channel J′, or rather its passage-tube J, and L is the exterior or shade glass of an oil-lamp, D′ representing the vacuum-glass of the incandescent burner D. Both L and D′ are seen broken away at the top.

It will be understood that I could adopt an indefinite variety of methods for securely connecting electric burners with oil-lamps, which I clearly anticipate in connection with my invention with the intent of obviating interference; but I have preferred to employ the means illustrated in the drawings.

In Figs. 1 and 3 the steadier A is seen functionally within the upper or contracted portion of the air-tube J of an oil-lamp as one of my means for firmly holding the electric burner D in connection with the oil-burner I, and a like cylindrical part A is seen in Fig. 2. The evident effect of thus placing a stopper or plug-shaped object, as the steadier A, within the central air-tube of a lamp or the socket of an ordinary oil-burner would be to hold or steady other parts attached thereto. To prevent the plug or steadier A from sinking too deeply within the air-tube or socket, I have provided at or near its upper end the expansion or flange B, which manifestly supplements the steadying function of the plug A. This flange B is rigid or integral with the plug A or may be in threaded connection therewith and is adapted to rest upon the central air-tube or burner-socket of the oil-lamp. As shown in Fig. 1, the said flange B

is more or less hood-shaped to cover the air-tube and adjoining parts of the oil-burner thereunder and snugly fitted and set within and between the chimney springs or claws, (marked M,) with which the oil-burner is usually provided. It will be observed that this hood-shaped part B could be used alone or without the plug A as a steadying means for the electric burner, and therefore I reserve all rights to any such use. To further maintain the electric burner in firm connection with the central air-tube of oil-lamps, I employ other means, such as I have illustrated in Figs. 2, 3, and 4, which I will proceed to explain.

In Fig. 2 the wire-conveying pipe E, which, as in Fig. 1, may be either a contracted or inserted lower part of the plug A, is added to or elongated, so that the subtended insulator G is seen at or below the bottom of the reservoir H. I have threaded exteriorly the lower end of this continuation E′ of the pipe E, as shown at E^2, and I have provided it with an upwardly-convexed disk N, having a corresponding interiorly-threaded central perforation to adjust by its convexity against and partly within the bottom of the air-tube J. I have also externally threaded the upper end of the said pipe continuation E′, as seen at E^3, and internally the pipe E or lower contracted or inserted part of the plug A. Now by fixing E′ to E with a set-screw, as E^4, and turning the disk N one way to move it upward, or by twisting the plug A or its flange B in a contrary direction, or by both such adjusting modes, the disk N and the flange B will be drawn toward each other and will impinge against opposite ends of the central air-tube J, and thus hold my improvement and its superconnected electric burner in firm combination with the oil-lamp and with each other. This arrangement will be found particularly useful in odd-sized lamps, wherein the tube J and chimney-springs M will not afford suitable seating facilities for the plug A and its flange B. The proper stability of the electric burner will invariably be insured in any such contingency by merely providing a disk N of suitable size and applying it as just described. The threading of both ends of the pipe-section E′, as illustrated at E^2 and E^3, Fig. 2, will also provide for adjustment to oil-lamps of any height. To adjust to the desired height, I first screw the upper threaded portion E E^3 to accommodate the lamp, and I secure this thread connection in position by the set-screw E^4. The device is then inserted into the oil-lamp and firmly secured therewith by means of the lower thread and disk connection E^2 N. As before suggested, the flange B may be in threaded connection with the plug A, which will afford further means of such adjustment.

The modification illustrated by Figs. 3 and 4 provides means of self-adjusting springs for combining the invention with oil-lamps, wherewith it will simply be necessary to press the device within the burner-socket or the central air-tube of the oil-lamp, and the connection will be practically automatic. In these latter figures blade-springs O are connected each by one of their ends to a nut P, which is in threaded adjustment and connection interiorly upon and with a pipe E^5, similar to E′, while their other ends are free to expand outwardly and impinge upwardly against the offset or inward annular shoulder K″ of the central air-tube J of the lamps or any similar expansion, abutment, or socket within lamps furnished with commoner oil-burners. To hold the nut P in any adjusted position on the pipe E^5, I have provided a set-screw P′. (Seen in Fig. 4.) In this modification the pipe is screwed through the top or central upper part of the steadier A or B, and its upper end serves as a retaining means for the socket-piece of the electric burner D in place of the threaded part C. (Shown in Fig. 1.) To still further insure perfect stability in the connection of the electric with the oil lamp, so as to obviate possibility of recoil under ordinary conditions and to force the springs O into strong frictional contact with the walls of the air-tube J in lamps that have a slanting offset, as in Figs. 1 and 3, I interpose a square-edged ring Q between the under side of the said offset and the expanded free ends of the said springs. This provision will hold the invention in sufficiently firm connection with the oil-lamp after the pipe E^5 is suitably drawn up by the steadier A or B. Whenever the ring Q is used, the pipe E^5 and thereto-attached nut P and springs O, it is needless to say, are inserted through the bottom end of the air-tube J. It is also superflous to say that the elevation of the springs with relation to the plug A or the flange B is first adjusted upon the pipe E^5 by the nut P in its threaded connection with this pipe and there made fast by the set-screw P′. It will be observed by a glance at Fig. 3 that the plug A is shown shorter than in Figs. 1 and 2, or that it does not extend below the offset K″ for obvious reasons, and that the pipe E^5 is sufficiently elongated to admit of the nut P, with its springs O, being adjusted to accommodate any oil-lamp. In this Fig. 3 I have shown the hood-shaped flange B as provided with an under flange B′ of cylindrical form, adapted to fit over the wick-tube of the "Royal" or other similar Argand oil-lamp. This flange B′, it will be noticed, can be used as supplementary to or in place of the plug A and flange B or either of them for steadying an electric burner within or upon an oil-lamp, and in this respect the said flange B′ simply represents one more of the many forms which my invention can assume. In all other respects the form of device shown in Figs. 3 and 4 is the same as or analogous to those illustrated in Figs. 1 and 2.

In the drawings I have shown the connection of the electric burner with my device by the exterior threading of thepart C or of the

upper end of the pipe E^5; but this connection may be made with the plug A or the flange B either by exterior or interior threading.

Although I have illustrated my invention in connection with a particular type of oil-lamps and the wires F conveyed upwardly through the central air-tube thereof, yet enough has been said to clearly show that the invention is quite as applicable to other styles of oil-lamps.

In connecting my device with lamps not having the central air-tube J, I simply unscrew the burner from its tubular socket, pass the wires F through the oil-charging aperture of the reservoir of the lamp and then up through the burner-socket, and the remainder of the connection is manifest. In case the lamp has no such oil-charging aperture I drill a hole laterally through the burner-socket and pass the wires therethrough.

It is now clear that this invention provides a convenient and portable electric lamp without any expense for fixtures and as elegant as the oil-lamp employed without any alteration to the oil-lamp beyond the drilling of the small hole for the wires just mentioned only for the commonest oil-lamps not having an oil-charging aperture. In the modern styles of burners all that is necessary is to remove an air-distributer and flame-deflector, (not shown in the drawings,) which loosely fits over the upper end of the air-tube J, the wick and even the oil remaining within the lamp, if desired, ready for use in an emergency. Even in the commonest lamps where it is immaterial whether the wires be exposed or not the insulator could be a part of the upper end of the plug A or the flange B, and as in that case the wires would pass above the oil-lamp altogether the aforesaid hole in the burner-socket would not be necessary.

As to the practical character of my invention it need only be observed that there are thousands of elegant old lamps that have become unsafe as kerosene-lamps or which have lost their usefulness as oil-lamps or have otherwise become undesirable as such that would by my simple device be made to yield a safe portable light of any desired candle-power. There are among such many an heir-loom too historic to be cast away as junk and too capacious or otherwise unsuitable to occupy a place among the bric-a-brac that can now become most desirable objects of especial utility and that would beam with a new or their customary effulgence, recalling sacred reminiscences. The requisite alterations, as seen, if any, are practically *nil*, a simple conduit, once for all, conveyed to the room being the sole trouble and additional essential in making any oil-lamp a most serviceable and convenient medium of any desired quantity or quality of light obedient by the mere twist of a button to the will of the user. Moreover, oil-charging, chimney-cleaning, undesirable odor, danger, &c., would be obviated.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A lamp of the character described comprising a font-like support having a flange at its upper end, an electric burner, a steadying-block carried by said burner and adapted to be inserted into a suitable opening in the support, a flange at the upper end of the steadying-block adapted to rest upon the flange of the support, and means at the lower end of said block coöperating with said flanges for securing the burner against removal from the support; substantially as described.

2. A lamp of the character described having a font-like support provided with a supporting-flange at its upper end, an electric burner, a steadying-block carried by the burner and adapted to be removably inserted into a suitable opening in the support, and a flange secured to the upper end of the block and projecting outwardly therefrom to rest upon the upper surface of the flange of the support to suspend the block in place; substantially as described.

3. A lamp of the character described comprising a font-like support having a supporting-flange at its upper end, an electric burner, a steadying-block carried by the burner and adapted to be inserted into a suitable opening in the support, a flange secured to the upper end of the block and projecting outwardly therefrom to rest upon the upper surface of the flange of the support to suspend the block in place, and means for retaining the block within the support; substantially as described.

4. A lamp of the character described comprising a font-like support having an opening therein, an electric burner, a steadying-block carried by said burner and adapted to be inserted into the opening in the support, said block having a flange resting upon the upper surface of the support, and means extending through the base of the holder coöperating with said flange for securing the block in place; substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MILTON S. HUFSCHMIDT. [L. S.]

Witnesses:
A. H. STE. MARIE,
L. MEININGER.