No. 664,167. Patented Dec. 18, 1900.

C. MOEGLING.

NIGHT LAMP.

(Application filed Oct. 15, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

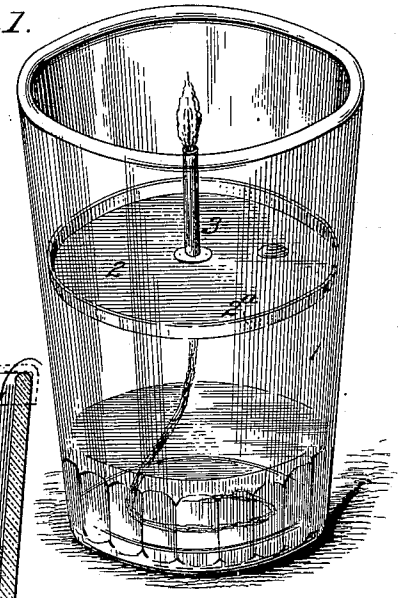


Fig. 2.

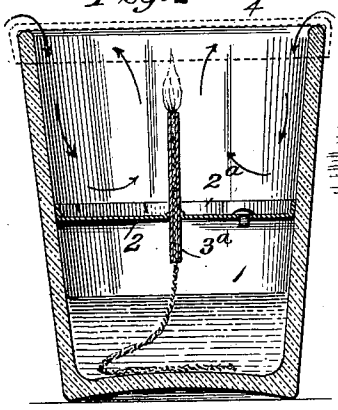


Fig. 3.

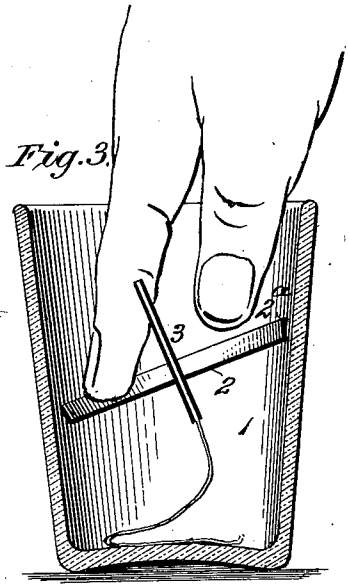


Fig. 4.

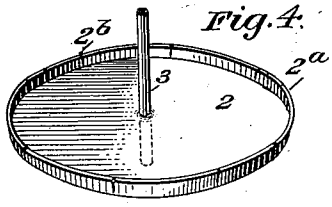


Fig. 5.

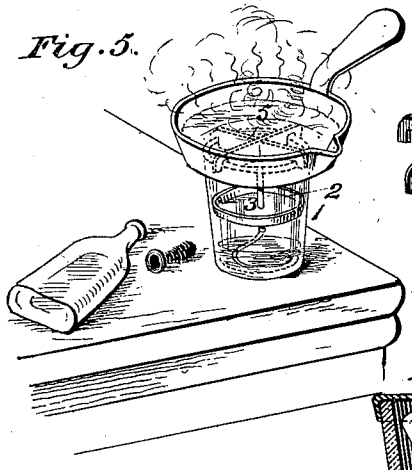


Fig. 7.

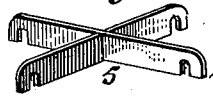
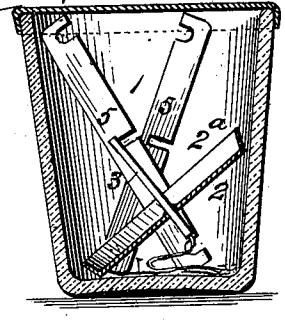


Fig. 6.



Fig. 8.



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(No Model.) 2 Sheets—Sheet 2.

Fig. 9.

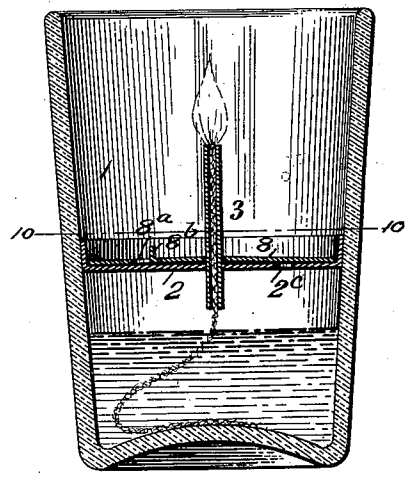


Fig. 11.

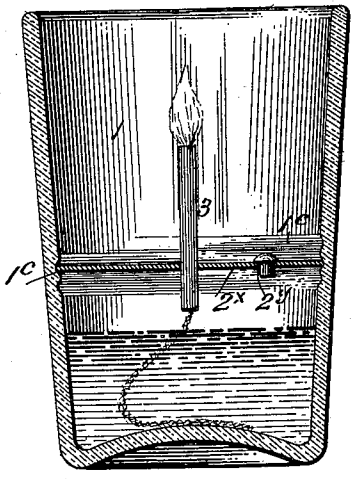


Fig. 10.

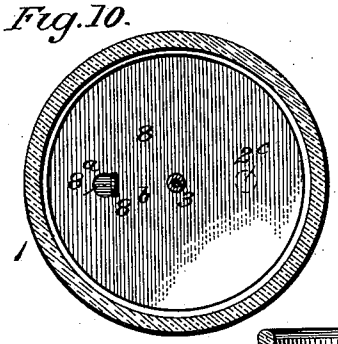


Fig. 12

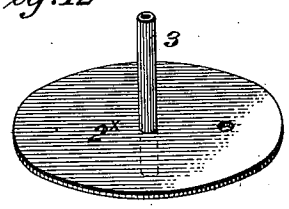
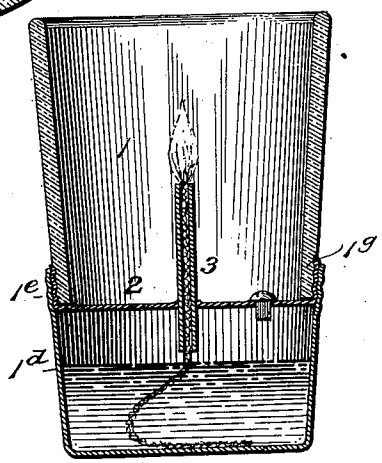


Fig. 13.



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UNITED STATES PATENT OFFICE.

CHRISTOPHER MOEGLING, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF THREE-FOURTHS TO FRED G. DIETERICH, OF SAME PLACE.

NIGHT-LAMP.

SPECIFICATION forming part of Letters Patent No. 664,167, dated December 18, 1900.

Application filed October 15, 1900. Serial No. 33,119. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER MOEGLING, residing at Washington, in the District of Columbia, have invented a new and Improved Night-Lamp, of which the following is a specification.

This invention seeks to provide a very simple, economical, and conveniently-handled night-lamp adapted for all the uses for which lamps of this character are provided and also in a measure to serve as a table-lamp for ordinary use.

Another object of my invention is to provide a very cheap but effective night-lamp, which will also serve for conveniently heating liquids for the nursery, sick-room, &c.

Again, this invention seeks to provide a lamp of the character stated requiring no chimney and especially adapted for burning kerosene and in the use of which all danger of explosion is avoided and flame-smoking and odor reduced to the minimum.

In its simplest and generic nature my improved lamp consists of an ordinary glass tumbler and a diaphragm adapted to loosely fit within the tumbler and frictionally engage the inner walls thereof to maintain a fixed position under ordinary conditions, whereby to divide the lamp-body into a lower oil-receiving compartment and an upper or illuminating portion, the said diaphragm having a wick-tube the top or burner end of which is disposed in a plane below the upper end of the tumbler, whereby the light is protected from side or back draft.

In its complete nature my invention comprehends a body portion in the nature of an ordinary glass tumbler, a metallic bridge-piece adapted to fit upon the upper end thereof, a metallic diaphragm for dividing the tumbler into upper and lower compartments, said diaphragm having a central wick-tube the upper end of which ends at a point below the upper end of the tumbler, the said diaphragm also having a bearing-rim inclined substantially in a plane with the tapering walls of the tumbler, whereby it will engage the tumbler-walls with sufficient friction to remain in a substantially tight closure position for the purposes intended.

Another and essential purpose of this invention is to provide a lamp including a simple construction of diaphragm, which when operatively connected with the tumbler will remain in frictional contact therewith to form a horizontal division member within the tumbler, but held sufficiently loose that in case of a possible collection of gases under it said diaphragm by reason of the slightest pressure from below will blow out, and thereby avoid any possibility of the tumbler or body of the lamp bursting from explosion of the said gas.

Again, my invention includes a novel construction of diaphragm for the purposes stated having, besides a wick-tube aperture, an opening which serves a double function—first, as a means for continually exhausting any gases that might collect under the diaphragm, and, secondly, as a filling-opening through which the oil can be poured into the oil-receiving compartment without removing the diaphragm, a supplemental disk being also provided rotatable upon the said diaphragm, which serves as a covering for closing off the aperture in the said diaphragm, said disk also having a hole adapted to register with the filling-opening in the diaphragm when it is desired to pour oil into the lamp through the diaphragm, the opening in the said disk also serving as an escape-port for the gases that pass up through the hole in the diaphragm and under the rotatable disk, said disk being slightly convexed to facilitate the escape of the gases.

Furthermore, an essential feature of this invention is to provide a new article in the nature of a novel construction of diaphragm adapted to be fitted within an ordinary glass tumbler, whereby in case of dropping the complete lamp and breaking the tumbler the diaphragm can be again used by inserting the same in another one of the ordinary household tumblers.

Subordinately my invention consists in certain details and arrangement of parts, all of which will hereinafter be fully explained and particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view illustrating

the simplest form of my invention. Fig. 2 is a vertical section of the same. Fig. 3 illustrates the manner in which the diaphragm may be removed when it is desired to pour oil into the tumbler. Fig. 4 is a detail view of the diaphragm. Fig. 5 illustrates the lamp used as a heater for nursery purposes. Fig. 6 illustrates how the lamp may be utilized for reading. Fig. 7 illustrates the bridge member for the lamp when the same is to be used for heating. Fig. 8 shows the lamp with the bridge-piece, together with the cover, packed for shipping. Fig. 9 is a detail section of a slightly-modified construction of my lamp. Fig. 10 is a horizontal section of the same on the line 10 10 of Fig. 9. Fig. 11 illustrates a further modification hereinafter referred to. Fig. 12 shows the form of diaphragm used in the lamp shown in Fig. 11; and Fig. 13 is a vertical section of a further modification, also hereinafter explained.

In the drawings, 1 indicates the body of the lamp, which in the simplest and preferred form is an ordinary glass tumbler which may have its sides perfectly vertical, but for reasons hereinafter explained a tumbler having its sides diverging, as shown, is employed.

2 designates a diaphragm constructed of any non-combustible material, sheet-tin being preferable on account of economy and ease of manufacture. This diaphragm is of a diameter substantially that of the tumbler at a point midway its upper and lower ends. In the practical manufacture of my lamp various ways may be employed for holding the diaphragm in the tumbler, so that it may maintain its position therein for ordinary uses, but to be held sufficiently loose that it can be readily removed when desired or blow out in case of any gaseous pressure accumulating below it. As a convenient and simple means for securing the diaphragm within the tumbler the same is provided with an upturned rim 2^a, inclined on the angle of the walls of the tumbler, so as to frictionally engage the said walls, as indicated in Fig. 2, and by reason of the spring of the metal bind against the tumbler-walls, so as to remain sufficiently clamped in place, and to increase the clamping action of the rim 2^a it may be slitted at intervals, as indicated by 2^b.

The diaphragm 2 has a central aperture to receive a wick-tube 3, the lower end 3^a of which extends slightly below the diaphragm to act as a guide to indicate the point above which it is not best to have the oil rise. The purpose of keeping the oil at a point below the disk is to prevent its percolating between the edges of the diaphragm and the tumbler-walls during careless handling of the lamp. The upper end of the tube 3 stops at a point about midway between the diaphragm and the top of the tumbler for two reasons—first, it keeps the flame about central of the upper or illuminating part of the tumbler, and, secondly, the said flame is kept sufficiently below the top of the tumbler so that the side walls thereof will act as a chimney to prevent side draft from blowing out the light.

So far as described it is manifest that by combining with the tumbler the wick-holding diaphragm in the manner described a simple, economical, and absolutely safe lamp is produced which can be handled more freely than it is possible to handle the ordinary type of night-lamps, especially those having the ordinary glass chimney. By using a tumbler having tapering sides all danger of the said sides becoming overheated and breaking is overcome, for the reason that cold air is constantly drawn into the tumbler over the sides thereof and by induction carried toward the flame, the hot air by reason of the cold-air currents (see arrows in Fig. 2) being concentrated and escaping centrally through the top of the tumbler, this latter result rendering the lamp particularly advantageous for the heating purposes hereinafter referred to. The diaphragm being substantially loosely held, explosion of gases that might collect under it will be impossible, as any pressure from below will positively force the diaphragm up out of the tumbler and blow out the light. Again, by reason of the non-heating of the body of the lamp the same can be safely handled, even by a child, and should the lamp fall and the tumbler break the said diaphragm can be readily again used in another tumbler.

Numerous modifications in structure may be made under the scope of the appended claims, it being understood that the diaphragm and the tube 3, if desired, may be made of a single member—for example, as shown in Fig. 3.

When arranged as shown in Figs. 1 and 2, a small quantity of oil is placed in the body of the tumbler, after which the diaphragm is forced into a tight frictional engagement therewith, as shown in Figs. 1 and 2. The wick may be adjusted to make a small or large flame by picking it out of or pressing it back into the tube, which may be accomplished by a pin or other sharp-pointed article. The lamp is then complete, and as the entire body 1 is transparent a maximum illuminating power is obtained from the wick, and as the flame and oil are in sight the condition of the lamp is always apparent. While I have not so shown it, it is obvious that the body of the diaphragm may also be made of glass, which would render the illuminating quality of the lamp still more effective. To refill when the oil is burned out, the diaphragm can readily be loosened by pressing down one side thereof in the manner indicated in Fig. 3.

When not in use, the lamp may be closed by a tin cap 4, (see dotted lines in Fig. 2 and full lines, Fig. 8,) said cap also being useful as a closure member when the several parts constituting the complete lamp are packed for shipping, as shown in Fig. 8.

Fig. 5 illustrates how my lamp may readily be used in a sick-room or nursery for heating purposes. When thus used, a bridge-piece 5, (shown in Fig. 7,) of sheet or cast metal, is employed, adapted to rest upon the top of the lamp-body 1 and hold the pan having the liquid or other matter to be heated sufficiently above the tumbler-top so as not to interfere with the necessary air circulation around the flame.

By combining with my lamp a reflector 6, as indicated in Fig. 6, the same may be used for reading purposes.

In Fig. 9 is indicated a slight modification of my invention, such construction being especially desirable for large-sized lamps. In this form the diaphragm is fixedly secured to the sides of the glass body by a suitable cement and the said diaphragm provided with an opening 2^c, which normally is held closely by a disk 8, rotatable upon the diaphragm and which is also formed with an opening 8^a and a turning-lip 8^b, said disk turning around the wick-tube. By turning the disk 8 until its opening registers with the opening 2^c in the diaphragm the lamp may be filled through the two openings, and after being filled the disk 8 is turned to cover the opening 2^c to keep out dirt, the two openings 2^c and 8^a also serving as a means for the escape of any gases that may collect in the oil-chamber, and to facilitate such escapement of the gas the disk 8 is made slightly convexed, as shown.

Fig. 11 shows another modification of my invention, which embodies substantially the type of lamp shown in Figs. 1 and 2, with the exception that the body 1 has a special construction that differs from the ordinary tumbler in that it has a spiral or screw rib 1^c formed integrally on its inner face, into which the diaphragm 2^x, which in this last construction has no upturned rim, can be turned to cause it to properly seat itself within the tumbler. When thus secured to the body 1, the diaphragm cannot be readily blown out, and to provide for the escape of any gases that may collect in the oil-chamber said diaphragm has a small opening 2^y, normally provided with a loosely-held plug which will blow out by any unusual pressure that may collect in the oil-chamber. This latter form of my invention provides for readily turning the diaphragm so that it can be quickly lifted out of the tumbler when it is desired to pour in the oil.

Fig. 13 indicates a still further modification coming under the generic principle of my invention, said construction being especially provided for producing my type of lamp in a more expensive and ornamental manner. In this latter form the body of the lamp comprises an oil-cup 1^d, which may be made of metal, (either silver, bronze, or plated ware,) the upper end of which terminates in a coarse screw-thread 1^e. The diaphragm in this latter form has its upturned rim terminating in a coarse thread and into the threaded end of the cup 1^d. The upper end of the body of the lamp is made of glass and has the shape of a tapering cylinder, the lower end of which is molded with an external thread 1^g to engage the inner side of the threaded rim of the diaphragm. In this latter form to refill the lamp the cup end of the body is unscrewed and removed from the remainder of the lamp-body. The diaphragm, however, remains attached to the glass top.

From the foregoing, taken in connection with the accompanying drawings, the advantages of my invention are thought to be readily apparent. The same is adapted for all the uses which the ordinary form of night-lamps are adapted, can be made at a much less cost, and used with greater safety, as there are no chimneys to break, no flimsy wick-holder employed, and can be readily packed in a grip and used by travelers, sportsmen, &c.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A lamp of the character described, comprising a body portion, the upper end of which is transparent and open at the top, a diaphragm dividing the body into an upper and lower compartment, said diaphragm being detachably held on the said body, and having a wick-tube, the flame end of which is held in a plane below the upper end of the body portion.

2. A lamp of the character described, comprising a tumbler-like body formed of a transparent material, and a metallic diaphragm, having a wick-tube, and means for detachably holding the said diaphragm in the tumbler, whereby to divide the tumbler into an upper and a lower compartment, said wick-tube being of such length that its flame end stops at a point below the open top of the body, as set forth.

3. As a new article, a combined lamp and heater, comprising a body portion formed of an ordinary glass tumbler, a metallic diaphragm held in said tumbler, having its burner end disposed in a plane below the top of the tumbler, and a bridge member adapted to rest on the rim of the tumbler, substantially as shown and for the purposes described.

4. In a lamp as described, a metallic diaphragm having an upturned rim for frictionally engaging the inner wall of a tumbler, and having a central wick-tube, for the purposes specified.

5. In a lamp as described, the combination with the body having a tumbler shape with the side walls diverging, a diaphragm adapted to slip into the top of the tumbler, and having its peripheral edge arranged to frictionally engage the internal wall of the body when pushed down into the same, said diaphragm having a vertically-extending wick-tube, as set forth.

6. In a lamp as described, the combination

with the tumbler-shaped body; of the diaphragm held within the said body, said diaphragm having a wick-tube extending through it and a filling-hole, and a disk rotatable on the diaphragm, said disk having an aperture arranged to be brought into register with the diaphragm-filling hole, for the purposes specified.

7. As a new article, a night-lamp comprising a body portion, formed of an ordinary glass tumbler, a diaphragm having its peripheral edge arranged to frictionally engage the inner wall of the tumbler, whereby it will be held in position to divide the tumbler into an upper and a lower compartment and close off the compartments from each other, a wick-tube extending through the diaphragm, said diaphragm, its tube and the tumbler being relatively so arranged that when the diaphragm is fitted in the tumbler the upper end of the wick-tube will be in a plane below the top rim of the tumbler, for the purposes specified.

CHRISTOPHER MOEGLING.

Witnesses:
JOHN L. FLETCHER,
FRED G. DIETERICH.