

No. 829,798.

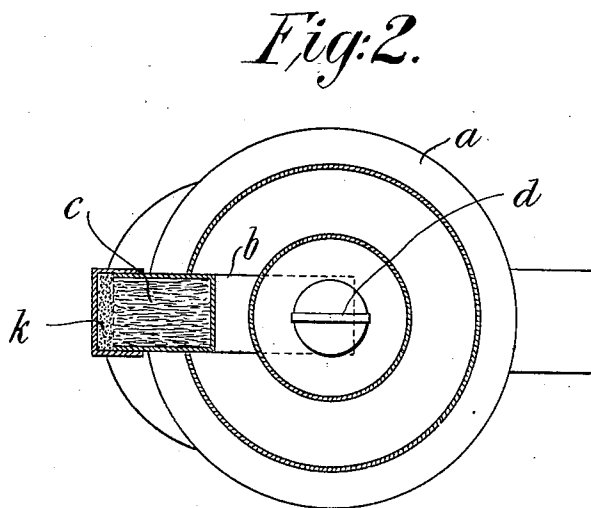
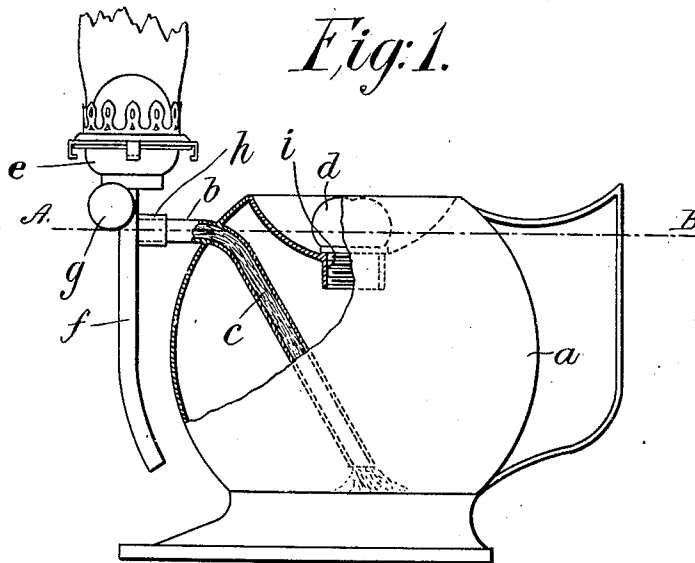
PATENTED AUG. 28, 1906.

L. NISSIM.

LAMP FOR BURNING LIQUID COMBUSTIBLES.

APPLICATION FILED NOV. 2, 1905.

3 SHEETS—SHEET 1.



Witnesses
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Albert W. Leaker.

Inventor.
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3 SHEETS—SHEET 2.

Fig. 3.

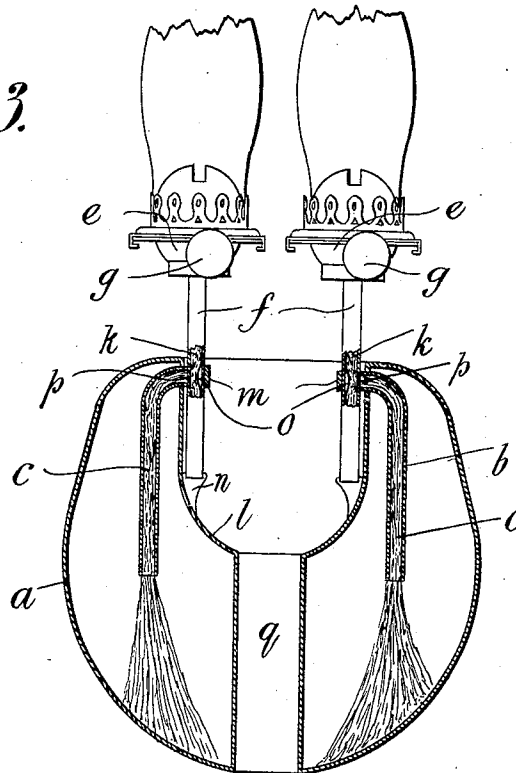
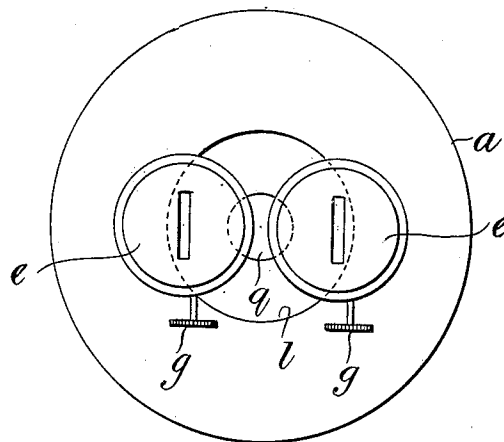


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

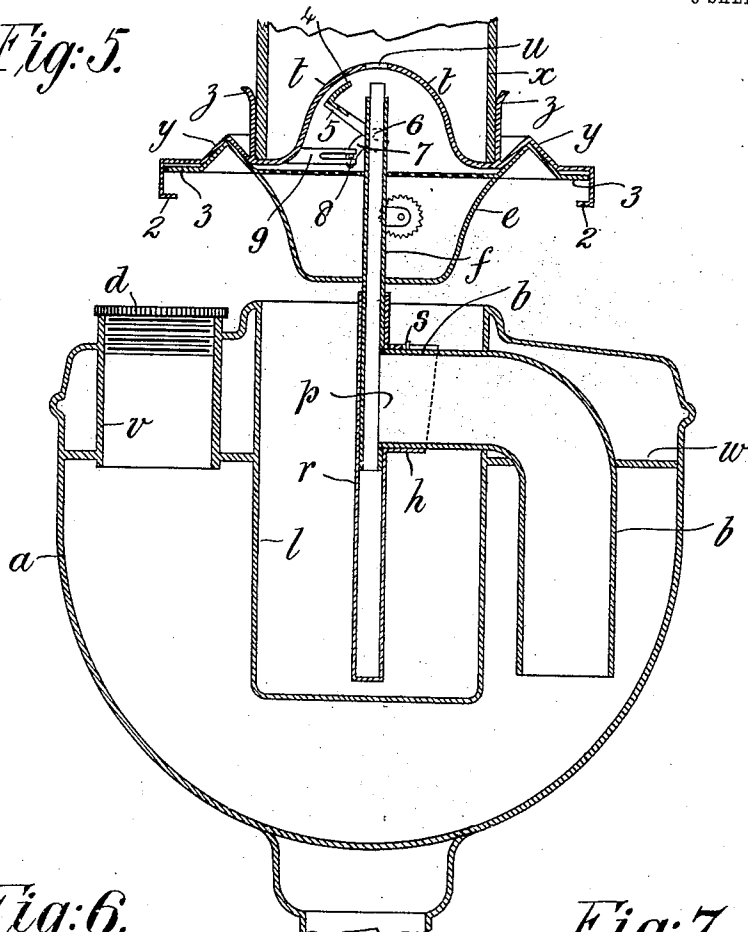
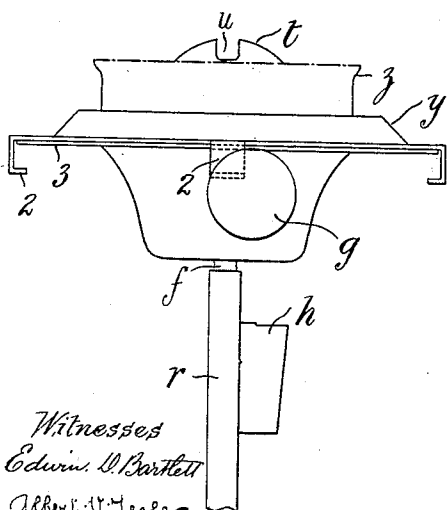
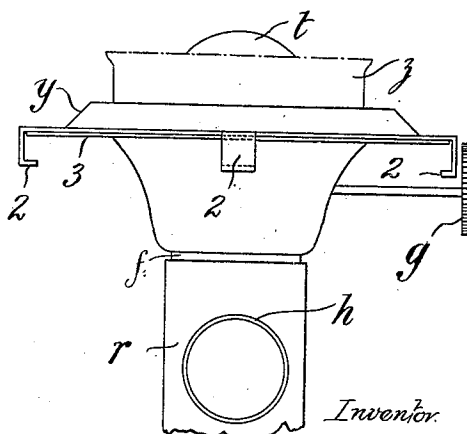


Fig. 6.



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Fig. 7.



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UNITED STATES PATENT OFFICE.

LOUIS NISSIM, OF WESTCLIFF-ON-SEA, ENGLAND.

LAMP FOR BURNING LIQUID COMBUSTIBLES.

No. 829,798.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed November 2, 1905. Serial No. 285,597.

To all whom it may concern:

Be it known that I, LOUIS NISSIM, mechanician, a subject of the King of Great Britain, residing at Mayfield, Rochford avenue, Westcliff-on-Sea, in the county of Essex, England, have invented new and useful Improvements in Lamps for Burning Liquid Combustibles, of which the following is a specification.

This invention relates to lamps adapted to burn oil or other liquid combustibles.

It is the object of this invention to increase the efficiency of such lamps, to make them as safe in use as is practically possible, and to improve the construction in the manner hereinafter set forth.

According to this invention the lamps are made with burner portions which are capable of being completely removed from the oil-containers, while the containers have one or more feeder-wicks adapted to supply the combustible by capillary action to separate burner-wicks in the removable burner portions. The burner portions are then provided, when desired, with extinguishers which will operate to put out the flames of the lamps when these are overturned or are tilted through a dangerous angle.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows one form of construction of lamp in accordance with this invention, the view being an elevation partly in section. Fig. 2 shows a plan view of the lamp in section on the line A B of Fig. 1. Fig. 3 is a sectional elevation and Fig. 4 a plan view, of the upper portion of another form of lamp constructed in accordance with this invention. Fig. 5 is a sectional elevation showing another construction of lamp in accordance with the invention. Figs. 6 and 7 show details of the burner-tube seen in two positions at right angles to one another.

The invention consists, essentially, in mounting the burner-tube as a separate part upon the end of a feeder-wick tube. The feeder-wick in each case has one end in the reservoir for oil or the like, while its other end is in contact with the burner-wick, which latter works in an entirely separate tube.

In the arrangement shown in Figs. 1 and 2, *a* is the oil-reservoir. *b* is the feeder-wick tube; *c*, the feeder-wick therein; *d*, a screw-cap which may be removed for filling the oil-reservoir; *e*, the burner, preferably provided with an extinguisher, as hereinafter ex-

plained. *f* is the wick-tube, in which the burner-wick *k* is raised and lowered by the usual handle *g*, and *h* is a socket on the side of the wick-tube *f*, adapted to fit over the end of the feeder-wick tube *b*, as shown. The wick-tube *b* and the wick therein are shown here as of flat section; but any other suitable section might be used. The feeder-wick *c* must be of loose material capable of readily feeding up the oil or the like by capillary action. This wick does not become burned and therefore usually requires no means of adjustment. In Fig. 1 the opening *i*, in which the cap *d* fits, is arranged below the level of the wick-tube *b*. With this arrangement it is impossible for the lamp to be so overfilled that the oil tends to flow out of the wick-tube without being drawn up the same by the capillary action of the wicks. The filling-cap might be arranged below the level of the wick-tube in any construction of lamp in accordance with this invention, although it is not necessarily so arranged.

With the lamp made as in Figs. 1 and 2 of the drawings the feeder-wick *c* projects against the burner-wick *k*, as appears in Fig. 2. The lamp burns in a normal manner, and as the burner-wick *k* tends to become dried, owing to vaporization and burning of oil at the top of said wick, more oil is drawn up through the feeder-wick *c* by capillary action, and thus the burner-wick is always kept supplied with the requisite oil for burning purposes. It will be seen that the reservoir remains closed under all circumstances. The burner-wick tube, with the burner thereon, may be removed entirely from the lamp and will continue to burn for some minutes as a rule after such removal. Hence the burner portion may be used as a light in filling the reservoir, if this should be necessary at night-time, and no danger will result. Further, if the lamp is upset the oil cannot run out at any point, as the capillary feeder-wick *c* forms the only outlet, and therefore even if the burner had no extinguishing arrangement applied thereto no serious damage would be done by the upsetting of the lamp. It has been found in practice that it is unnecessary to form a hole in the cap *d* to allow air to enter the reservoir. A small hole, however, may be provided, if desired.

The lamp shown in Fig. 1 may be modified by making the container *a* of any suitable shape. Further, two or more burners may be arranged on a single reservoir, one wick-

tube being arranged to supply each burner, as will be readily understood.

Figs. 3 and 4 illustrate a type of lamp wherein the reservoir *a* has a well *l* at the center thereof, into which the feeder-wick tubes *b* of two burners project and over which the burners stand. In the example of construction shown the burner-wick tubes *f* are inserted by being pushed vertically downward in front of the ends of the feeder-wicks *c* behind brackets *m* and onto supporting-brackets *n*, and holes are provided at *p* in the sides of the tubes *f* to allow the feeder-wicks to come in contact with the burner-wicks. In this case small springs *o* may be arranged in the wick-tubes *f*, tending to push the burner-wicks outward at the holes *p* and against the ends of the feeder-wicks. Two burners are shown in this construction; but evidently if the well *l* were large enough any desired number of burners could be arranged therein. A passage *q* may be left through the reservoir at the bottom of the well *l* in order to facilitate cleaning out said reservoir and to give a good supply of air through the same to the burners.

Fig. 5 shows the upper part of a stand-lamp having a single burner arranged over a central well, the construction being such that the lamp is barely distinguishable from an ordinary lamp of this type. The feeder-wick tube *b* is shown here round in section. Burner *e* stands centrally above the well *l* when in use. In order to prevent overfilling, the reservoir may have a diaphragm *w* therein below the level of the wick-tube *b*, and the tube *v* may be provided extending downward from the filling-opening to said diaphragm. In this case the lamp will only be filled until the oil reaches the diaphragm, and it will be evident that the lamp is being overfilled if the oil begins to rise in the tube *v*.

In Fig. 5 is illustrated the special form of burner-wick tube. (Shown also in Figs. 6 and 7.) The tube *f*, projecting downward from the burner, is short and has an opening *p* (circular in this case) at the side thereof. An outer tube *r* is arranged to be slipped over the tube *f* from beneath until the socket *h* on said outer tube registers with the hole *p* in the inner tube. The burner is applied to the feeder-wick tube *b* by slipping the socket *h* over the end of this latter until the feeder-wick comes fully into contact with the burner-wick. A pin *s* on the end of the tube *b* enters a slot in the socket *h*, preventing this latter from turning on the tube *b*, and so insuring that the burner shall always stand vertically. The well *l* may be closed at the bottom, as shown, or it may have a passage leading through to the base of the lamp, as in Fig. 3.

A suitable extinguishing device for the single flat-wick lamp is seen in detail in Fig. 5. This serves to put out the flame if the lamp is

upset or is tilted through a dangerous angle or if the burner portion alone when removed from the lamp is upset. The upper part or cap *t*, wherein is the slot *u* for the flame, is made separate from the lower part *e* and is mounted on such lower part in such a way as to allow of a limited movement relative thereto. In the example shown the two parts have V-shaped ridges formed around the same at *y*, while the edge of the upper part *t* is bent over at 2 to engage under the edge of the rim 3 of the part *e*. *x* is the chimney, fitting into a suitable holder *z* on the part *t*. This chimney may of course be replaced by a globe or any other form of shade or flame tube used upon lamps.

It will be seen that when the upper part or cap *t* is resting upon the lower part *e* the ridges *y*, fitting together, keep said parts in their proper relative positions. If, however, the lamp becomes tilted or thrown sideways, the cap *t* can move relative to the part *e* within the limits allowed by the flanges 2. This movement is utilized for actuating the extinguisher. The extinguisher-plate 4 is mounted on arms 5, pivoted at 6 upon the wick-tube *f*, and a tailpiece 7 is provided on said arm *m*, the tailpiece having a pin 8 engaged by a forked projection 9, attached to the upper part *e* of the burner. With this device when the edge of the cap or upper part of the burner rises at any point the projecting piece 9 will also rise, lifting the pin 8, and so turning the arms 7 5 and bringing the extinguisher 4 over the top of the wick projecting from the wick-tube *f*. The movement allowed to the cap by the flanges 3 must be such that in whichever direction the cap tilts the end of the projecting arm 9 will rise sufficiently to operate the extinguisher. It will be seen, therefore, that the lamp will be extinguished at any time when the upper portion becomes tilted relative to the body portion of the lamp. Such tilting does not take place during the normal working or normal carrying of the lamp; but if the lamp begins to fall sideways, owing to a shock or the like which it receives, the upper portion will tend to fall more quickly than the lower portion of the lamp, especially if there is a chimney upon the upper portion, and the required tilting action will take place.

What I claim is—

1. In a lamp for burning liquid combustibles the combination of a container for the combustible, a feeder-wick tube inside the container and projecting outside the same adapted to contain a feeder-wick, a burner portion having a tube in the under part of the same adapted to contain a burner-wick, and means whereby the burner portion is removably affixed at the end of the feeder-wick tube.

2. In a lamp for burning liquid combustibles the combination of a container for the

combustible, a feeder-wick tube adapted to contain a feeder-wick inside said container and projecting through the wall of the container, a burner adapted to contain a separate burner-wick and means for mounting the burner on the feeder-wick tube in such manner that the feeder-wick comes in contact with the face of the burner-wick.

3. In a lamp for burning liquid combustibles, the combination of a container for the combustible having a well therein separated from the interior of the said container by a wall, a feeder-wick tube adapted to contain a

feeder-wick arranged in the container and projecting therefrom through the said wall into the well, a burner adapted to contain a burner-wick, and means for mounting the burner at the end of the feeder-wick tube, substantially as described.

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

LOUIS NISSIM.

Witnesses:

HUBERT A. GILL,
LEON E. HAYNES.