No. 822,457. PATENTED JUNE 5, 1906.

G. KERR.

LAMP EXTINGUISHER.

APPLICATION FILED OCT. 5, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

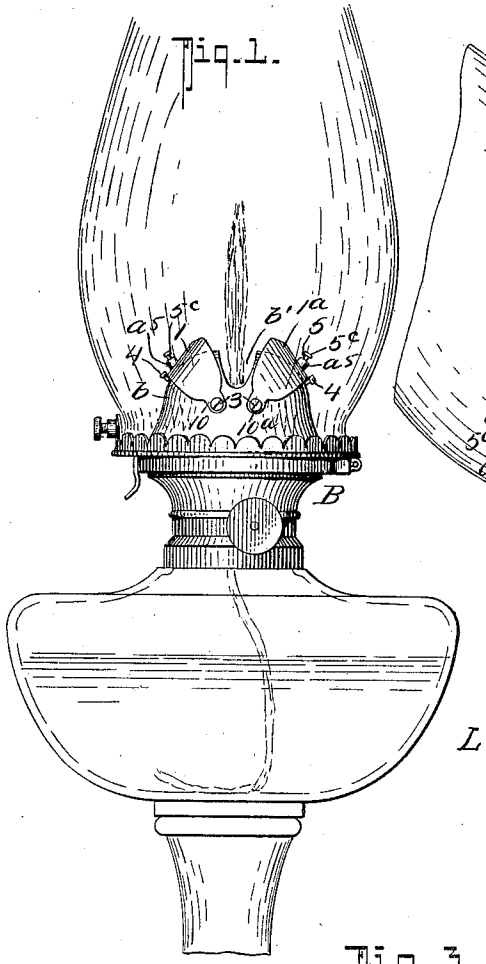


Fig. 2.

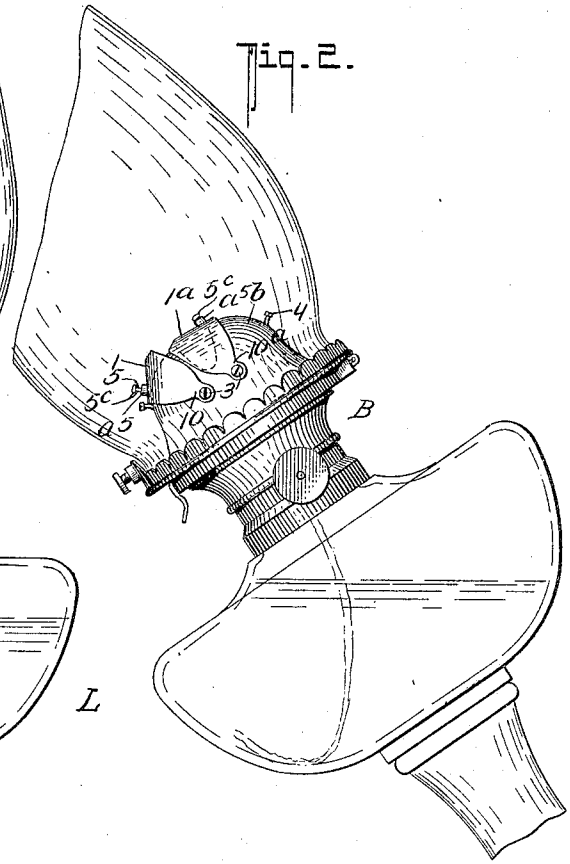
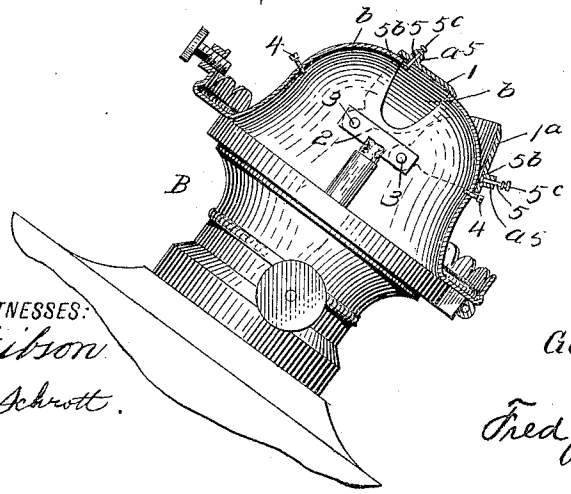


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

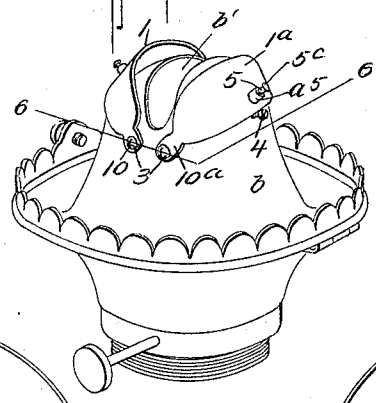


Fig. 5.

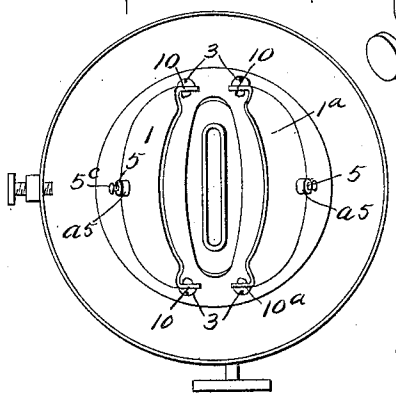


Fig. 6.

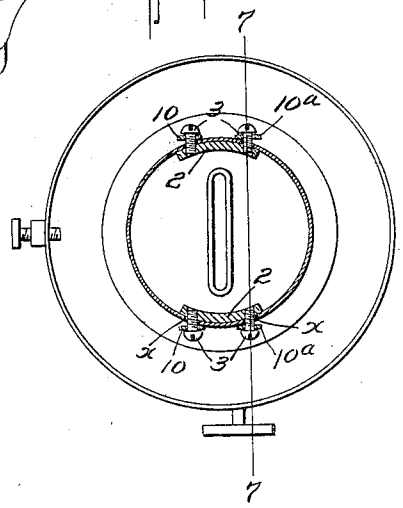


Fig. 9.

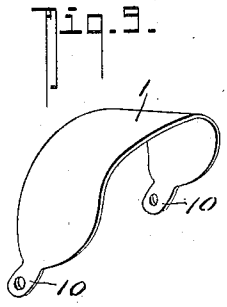


Fig. 7.

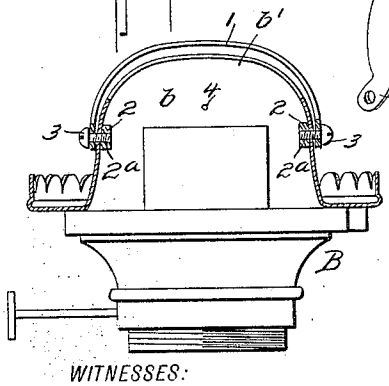
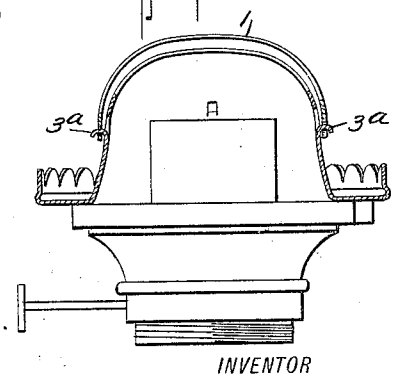


Fig. 8.



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UNITED STATES PATENT OFFICE.

GEORGE KERR, OF DALLAS, OREGON.

LAMP-EXTINGUISHER.

No. 822,457. Specification of Letters Patent. Patented June 5, 1906.

Application filed October 5, 1905. Serial No. 281,488.

To all whom it may concern:

Be it known that I, GEORGE KERR, residing at Dallas, in the county of Polk and State of Oregon, have invented a new and Improved Lamp-Extinguisher, of which the following is a specification.

My invention relates to improvements in that type of lamp-extinguishers in which is embodied a valve or muffler member combined with or forming a part of the burner-body, which becomes automatically operative to extinguish the flame whenever the lamp is tilted during a partial or total upsetting of the lamp, and thereby prevent the ignition of any oil that might flow from the lamp bowl or reservoir.

Primarily my invention seeks to provide an extinguishing means for lamp-burners of the character stated of a simple and inexpensive construction, which can be readily applied to any of the well-known types of oil-lamp burners without modifying the construction thereof, and which will practically operate to effect the choking off of the flame under any of the tilted positions assumed by the lamp in the act of overturning or dropping the same.

In its generic nature my invention comprehends an extinguishing valve or plate pivotally mounted on the burner, to freely drop back away from the flame-slot under the normal position of the lamp and be so sustained that when the lamp is tilted to a predetermined degree it will automatically swing over the flame-slot and become automatically locked to such position, whereby to positively maintain its desired position over the said lamp-slot when swung thereover.

In its more complete nature my invention embodies a special arrangement or means for attaching my improved extinguishing devices to the well-known types of lamp-burners, and in its still more subordinate features it consists in certain detailed arrangement of parts hereinafter fully described, pointed out in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of an oil-lamp the burner of which is equipped with my improvement. Fig. 2 is a view showing the lamp-body in the act of tipping over and illustrating the manner in which my extinguisher devices act. Fig. 3 is a vertical section of a part of the lamp-body tipped and the burner with my improvement applied. Fig. 4 is a detail perspective view of the ordinary type of burner with the preferred arrangement of my invention applied. Fig. 5 is a plan view thereof, the two cut-off valves being in their open or normal position. Fig. 6 is a horizontal section of the burner on the line 6 6 on Fig. 4. Fig. 7 is a cross-section thereof on the line 7 7 on Fig. 6. Fig. 8 is a similar view showing the manner in which the cut-offs are hinged when manufactured with the burner. Fig. 9 is a detail view of one of the cut-offs.

In the drawings, B designates the lamp-burner of the ordinary type, and L the lamp-reservoir.

In the preferred form of my invention I construct the same so the several parts may be readily attached to the ordinary type of burner B without changing its structure and in a simple and expeditious manner.

The extinguishing devices comprise two muffler-plates or cut-off valves 1 1^a of like construction and each of which is curved to suit the shape of the slotted dome portion *b* of the burner, and each is of a width sufficient to positively cover the flame-slot *b'* when moved thereover in the manner presently described.

The ends of the plates 1 1^a terminate in apertured ears 10 10^a, adapted to engage pintles disposed in the longitudinal plane of the slot *b'* and projected from the opposite sides of the dome portion *b*.

In the preferred form I provide for conveniently attaching the hinge to the burner-dome, and for such purpose I provide a pair of curved metal pieces 2 2, shaped to fit on the inside of the dome-piece portion *b* just below the slot edges, as clearly shown in Figs. 3 and 6, and the said pieces 2 2 at the opposite ends are formed with threaded apertures 2^a 2^a, adapted to receive the threaded ends of the headed pintles 3 3. By this arrangement of parts to fit the pintles to the burner-body it is necessary to puncture the burner-dome portion, as at *x x*, just below the ends of the slot *b'*, to permit of slipping the headed screw-pintles 3 3 through the apertures *x* to engage the threaded apertures in the pieces 2 2, it being understood that in practice the screw-pintles 2 2 pass through the apertured ears 10 10^a on the plates 1 1^a.

When making the extinguisher devices a part of the burner in the manufacture of the burner, the pieces 2 2 need not be used, since the dome portion at the proper points can be

slotted and the slotted members bent down and outwardly to form pintles 3^a 3^a to hinge the plates 1 1^a on, as shown in Fig. 8.

When fitted upon the burner-dome, the plates 1 1^a are so shaped and pivotally mounted that they normally rest with relation to the slot b' in such manner that the tipping over of the lamp in either direction will serve to cause either one or the other of the plates to swing by gravity over the slot b' and positively close off the draft through the burner-dome, and thus extinguish the flame, and to effect such action of the plates 1 1^a I provide for sustaining them at approximately an angle somewhat less than forty-five degrees with respect to the burner-slot by forming a stop 4 4 on each side of the dome b, which stop may be a small screw-stud, as shown in Figs. 1 to 7, or a lip bent out from the body of the dome part b, as shown in Fig. 8.

I am aware that swinging muffler-plates have been heretofore provided for extinguishing the flame of lamp-burners when the lamp is tipped or dropped. So far as I know the extinguisher-plates have been attached either direct to the wick-tube or at points under the slotted dome. Such method of applying extinguisher-plates is not always reliable, since if the plates do not completely close over the wick, which is often impossible when the wick is high or irregularly trimmed, the flame does not become quickly extinguished, as the air-draft thereto is not closed off properly.

In my arrangement of extinguishing devices the valves or extinguisher-plates do not coact directly with the wick-tube or close over the wick *per se*, but close off the flame-slot, and since the dome b of the burner is solid it follows the draft to the flame is instantly cut off and the flame extinguished.

Another and serious objection in the practical use of extinguishers when the hinged plates swing over the wick is that while under a tipping of the lamp in one direction they swing over the flame and wick, and a quick change of the position or direction of tipping or fall of the lamp after the plate has started to swing over the flame causes said plate to move back away from the flame and fail to properly extinguish the same.

My invention in its complete form provides for positively holding the plate locked to its extinguishing position after it has been swung to such position, and for such purposes each of the plates 1 1^a has a locking device in the nature of a stud 5, mounted for vertical movement in an apertured socket a^5, that projects up from the plate at right angles thereto, and each stud has its lower end slightly enlarged, as at 5^b, which prevents the stud dropping out of the socket and also adds weight to the lower end thereof to cause the stud to automatically drop to its lowermost position when it comes over the slot b' in the burner, it also having a head 5^c to prevent its dropping out of the socket a^5.

From the foregoing, taken in connection with the drawings, the complete arrangement of my invention and the manner of its operation will be readily understood.

It will be noticed that when the lamp tips over (see Fig. 2) the plate in the upper side of the dome b automatically swings over the slot b' to a distance sufficient to entirely cover the said slot and to bring the locking-stud in line with the slot, which then drops down into the slot and locks the plate 1 from swinging back away from the slot even when the lamp is returned to its upright position.

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

1. A lamp-extinguisher comprising a pair of oppositely-disposed plates, and means for mounting said plates on the slotted dome of an ordinary lamp-burner whereby either one of said plates will move over the slot in the dome when the lamp is tipped, said plate being adapted to automatically interlock with the slotted dome when moved over the slot therein.

2. A lamp-extinguisher comprising a plate shaped to swing over the flame-slot in the dome of an ordinary lamp-burner and means for pivotally mounting said plate on the slotted dome, said plate having a portion adapted to automatically interlock with the slotted dome when closed thereover, as set forth.

3. As an improvement in lamp-extinguishers, the combination with a lamp-burner having a slotted dome, of a pair of oppositely-disposed plates, each of said plates being independently hinged on the outside of the dome whereby either of said plates is adapted to automatically swing over the dome when the lamp is tipped in either direction, each plate having a gravity-drop member adapted to move into the slot in the dome when either of the said plates is swung over the said slot.

4. As an improvement in lamp-extinguishers, the combination with a lamp-burner having a slotted dome; of a pair of oppositely-disposed plates pivotally mounted on the outside of the slotted dome one of which is arranged to swing over the slot in the dome when the lamp is tipped in one direction and the other plate arranged to swing over the dome when the lamp is tipped in the other direction and means on the dome for normally sustaining the plates at a point adjacent the slot, a means on the plates for automatically interlocking with the slotted dome when the plates close thereover.

5. A lamp-burner of the character described; a pair of oppositely-disposed plates pivotally mounted on the slotted dome portion whereby either of said plates is adapted to close the slot when the lamp is tipped over,

and to become automatically interlocked with the said slot.

6. In combination with the slotted dome of the burner; two plates, each of which is independently and pivotally mounted on the top of the dome and held to swing over the dome-slot when the lamp is tipped, and means on the plates that automatically lock the plates to their closure position when swung over the dome-slot, as set forth.

7. The combination with the burner having a slotted dome; of the curved plates adapted to fit on the inside of the dome under the ends of the slot therein, said plates each having a pair of threaded apertures, the two oppositely-disposed slot-cut-off plates having their ends apertured, and the screw-pintles for engaging the apertured ends of the cut-off plates, and the threaded apertures in the curved plates as set forth.

8. The combination with the burner having the slotted dome, of the oppositely-disposed plates each plate being pivotally mounted on the top of the said slotted dome to swing over the slot when tipped and a drop-pin mounted in each of the plates adapted to lower into the dome-slot when the plates are swung thereover for the purposes described.

9. As an improvment in lamp-burners, of the character described; in combination with the slotted dome of the burner-body; the two oppositely-disposed plates shaped so that either plate will swing over the top of the burner-body independently, means for pivotally sustaining such plates normally adjacent the slot in the burner-dome, and a means mounted on each of the plates for automatically locking the plates to their slot-closing position as set forth.

GEORGE KERR.

Witnesses:
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