

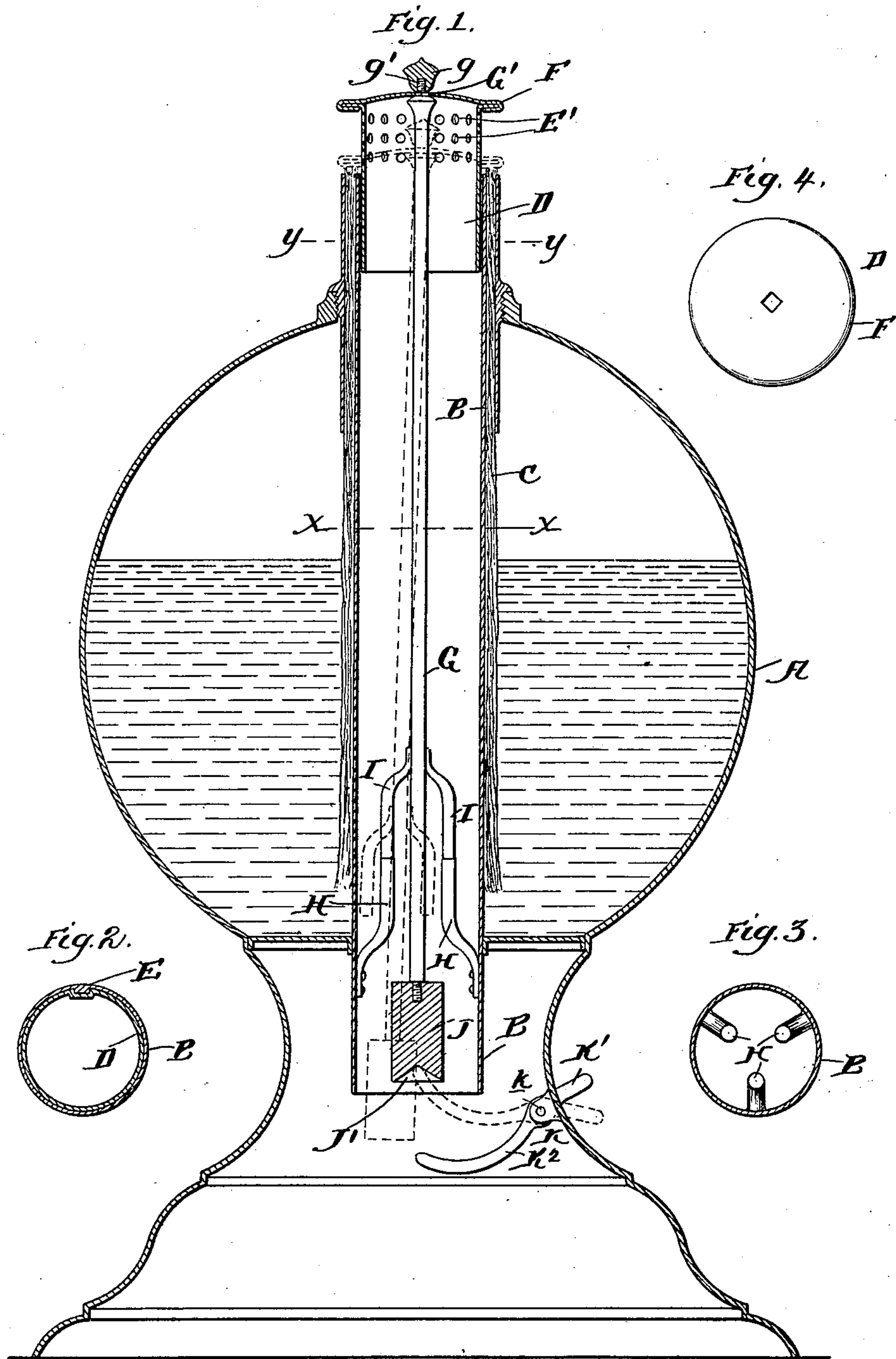
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Patented July 23, 1901.

R. TATTU.
AUTOMATIC EXTINGUISHER FOR LAMPS.

(Application filed Sept. 8, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

RADU TATTU, OF TRENTON, NEW JERSEY.

AUTOMATIC EXTINGUISHER FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 678,915, dated July 23, 1901.

Application filed September 8, 1900. Serial No. 29,446. (No model.)

To all whom it may concern:

Be it known that I, RADU TATTU, a citizen of the United States, residing at Trenton, county of Mercer, and State of New Jersey, have invented a certain new and useful Improvement in Automatic Extinguishers for Lamps, of which the following is a specification.

My invention relates to a new and useful improvement in automatic extinguishers for lamps, and has for its object to provide an exceedingly simple and effective device of this description which may be so embodied in a lamp as to in no wise interfere with the ordinary functions thereof to detract from its appearance, and yet should the lamp at any time become tipped from the vertical to a dangerous degree the devices will so act as to immediately extinguish the flame, and thereby prevent accident.

With this end in view my invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a central section of the lamp having my improvement embodied therein; Fig. 2, a section of the wick-tube and flame-spreaders, showing them splined together, so as to prevent the latter from turning upon its axis; and Fig. 3, a section at the line $x x$ of Fig. 1 looking downward, showing the supporting-prongs. Fig. 4 is a plan view of the flame-spreaders, all the apparatus removed therefrom.

In carrying out my invention as here embodied, A represents a center-feed lamp, which may be of any suitable design, and B the wick-tube thereof, around which the ordinary tubular wick C is placed in the usual manner.

D is the flame-spreaders, which is fitted within the wick-tube so as to slide vertically therein, but is prevented from rotary movement independent of the wick-tube by the spline E. (Clearly shown in Fig. 2.) This

flame-spreaders, as is usual, is provided with the perforations E' for feeding air to the flame and is also provided with an overhanging flange F for spreading the flame, as is well understood.

G is a rod which is secured to the flame-spreaders D and hangs downward in the wick-tube B. This rod G is secured to the top of the flame-spreaders by means of the nut g , which is adapted to be secured upon the threaded portion g' of the rod G. The portion G' , which extends through the top of the flame-spreaders, is squared and serves the double purpose of a shoulder, against which the nut g is secured, and also on account of it being squared prevents the rod G from turning upon its axis, the purposes of which will be hereinafter described.

In the lower end of the wick-tube B are secured a number of upwardly-extending lugs H, illustrated in the drawings as three in number; but any number could be used from one up. Secured at a predetermined point near the lower end of the rod G are a number of downwardly-extending lugs I. These lugs are in the same relative position as the lugs H, so that when the flame-spreaders is in its highest position, as shown in full lines in Fig. 1, and the lamp is standing upright, so that the rod G is in a vertical position, the lugs I will register with and rest upon the lugs H, and thereby hold the rod, and consequently the flame-spreaders, in its highest position or in the position which it would have to assume for the lamp to be lighted. Upon the extreme lower end of the rod G is secured the weight J. This weight serves the purpose of holding the lugs I and H in close contact, and thereby causing a certain amount of friction therebetween, so that the lugs will not become unseated from one another by jarring or other slight disturbances which would not be dangerous to the lamp; but if the lamp should be tilted to any dangerous angle the weight J will act as a pendulum and cause the lugs to be unseated from one another, and when this occurs the weight of the weight J and the rod G and lugs I will cause the flame-spreaders D to descend and extinguish the flame by reason of a portion of the flange F of the flame-spreaders descending upon the wick C. This position is shown in dotted

lines in Fig. 1. It is obvious that when this has occurred and it is desired to relight the lamp the flame-spreader D will have to be raised and the rod G centered, so that the lugs I and H will register with one another. To accomplish this, I provide the lever K, which is pivoted to the body of the lamp at *k*. A portion K' of this lever K extends through a slot in the body of the lamp, so as to furnish means for operating the lever from the exterior. The portion K² of the lever K is adapted to engage a conical cavity J', formed in the bottom of the weight J. This cavity by reason of its cone shape will cause the weight J to center itself when in its raised position. The lever K is shown in this raised position in dotted lines in Fig. 1. The portion K² of the lever K by reason of its being heavier than the portion K' will cause the lever to normally remain in the position shown in Fig. 1 in full lines.

The rod G is allowed to swing freely from the top of the flame-spreader and will not cause the said flame-spreader to bind within the tube when the rod is out of its vertical position, for the reason that the top of the rod G where it comes in contact with the top of the flame-spreader D is rounded, and the under side of the nut *g* where it comes in contact with the upper surface of the top of the flame-spreader is also rounded, and the squared portion G', which fits in the corresponding square hole in the top of the flame-spreader, is given sufficient room in said hole to allow for the movement of the rod without communicating said movement to the flame-spreader.

The advantages of my invention are that I provide an apparatus which will effectually extinguish the flame when the lamp is tilted so that in ordinary cases it would cause an explosion or fire, and the mechanism being of few parts and simple construction and having no springs therein, but depending entirely upon the wick, will prevent the same from getting out of order under ordinary uses. A further advantage is that the mechanism being all in a central tube will not detract from the appearance of the lamp and be out of sight entirely.

Of course I do not wish to be limited to the exact construction here shown, as it is obvious that slight modifications could be made without departing from the spirit of my invention—as, for instance, while I have shown three upwardly-extending lugs and three downwardly-extending lugs there might be any number used from one up to a number which would only be limited by the practical operation of my device.

Having thus fully described my invention, what I claim as new and useful is—

1. In an extinguishing device for lamps, of

a flame-spreader adapted to reciprocate vertically in a wick-tube, and having a flange adapted to extinguish the flame, a pendulum depending from said flame-spreader, lugs secured upon the shank of the pendulum, lugs secured upon the interior of the wick-tube with which the first-named lugs are adapted to register and rest upon when the lamp is in an upright position, substantially as and for the purpose specified.

2. In combination with a lamp-extinguishing device, a flame-spreader adapted to reciprocate vertically in a wick-tube, means for preventing said flame-spreader from rotating upon its axis, a flange secured to said flame-spreader and adapted to extinguish the flame when said flame-spreader is caused to descend, a rod depending from the flame-spreader and adapted to swing freely within the wick-tube, means for preventing said rod from rotating upon its axis, downwardly-extending lugs secured to said rod, upwardly-extending lugs secured to the interior of the wick-tube with which the downwardly-extending lugs are adapted to register and rest upon when the lamp is in an upright position, a weight secured to the lower end of said rod, means operated from the exterior of the lamp for the purpose of returning the different parts of the mechanism to their normal position after the same have been displaced, substantially as and for the purpose specified.

3. In an extinguishing device for lamps, the combination of a flame-spreader adapted to reciprocate vertically in a wick-tube, a flange F secured to said flame-spreader, a spline E upon the wick-tube adapted to prevent the flame-spreader from rotating upon its axis, a rod G depending from the flame-spreader and adapted to swing freely within the wick-tube, a squared portion G' upon the rod G to prevent said rod from rotating upon its axis, a weight J secured to the lower end of said rod G, downwardly-extending lugs I secured upon the rod G, upwardly-extending lugs H secured upon the wick-tube on which the lugs I are adapted to rest when in their normal position, a lever K pivoted to the body of the lamp and adapted to be operated from the exterior thereof, a conical cavity J' formed in the bottom of the weight J into which the end of the lever K is adapted to enter for the purpose of centering and returning the mechanism to its normal position, substantially as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

RADU TATTU.

Witnesses:

SHIRLEY TODD,
FREDERIC L. HULME.