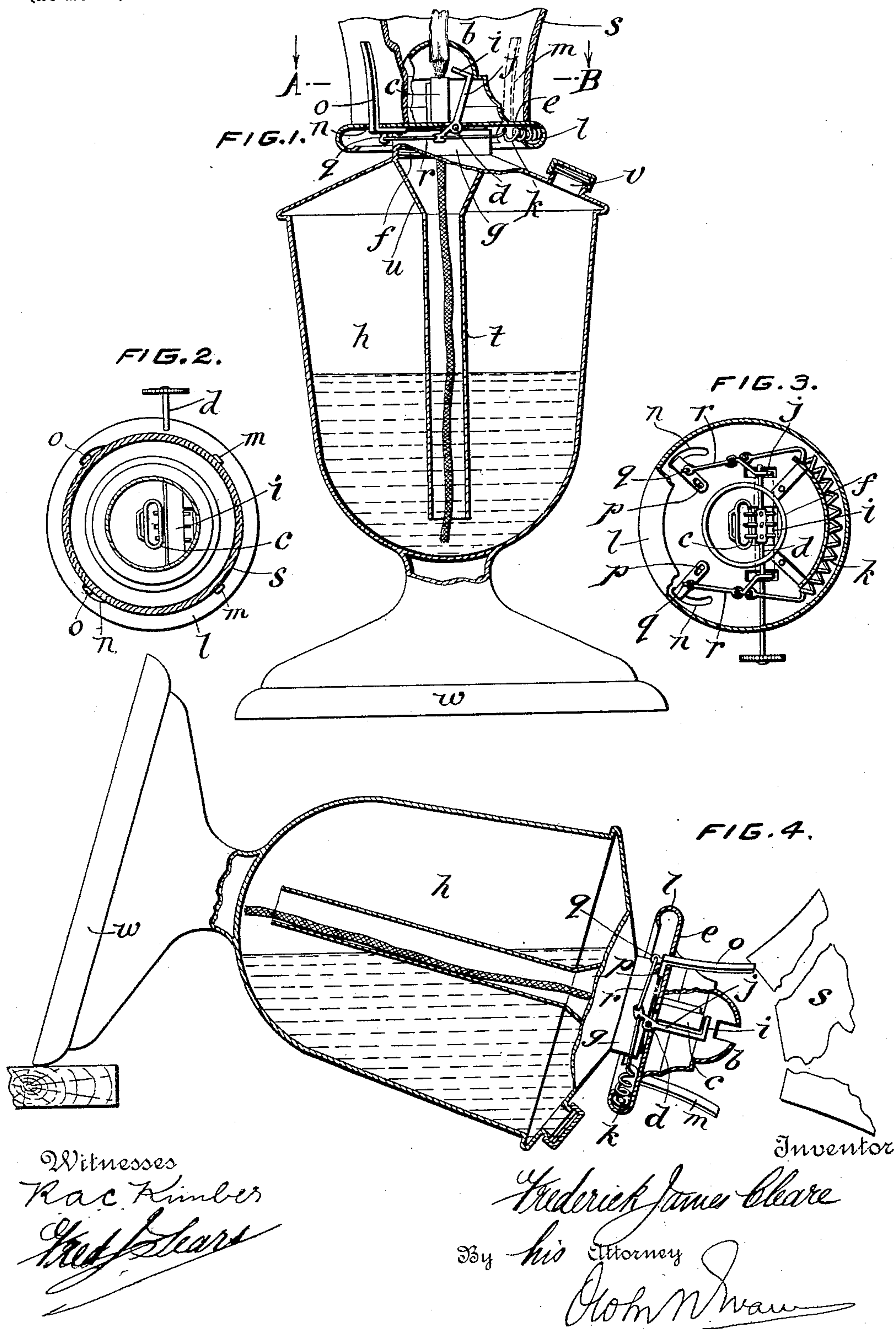


F. J. CLEARE.
LAMP.

(Application filed Feb. 10, 1902.)

(No Model.)



Witnesses
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Fred Cleare

Inventor
Frederick James Cleare
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UNITED STATES PATENT OFFICE.

FREDERICK JAMES CLEARE, OF MONTREAL, CANADA.

LAMP.

SPECIFICATION forming part of Letters Patent No. 704,299, dated July 8, 1902.

Application filed February 19, 1902. Serial No. 94,849. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK JAMES CLEARE, machinist, of the city of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates particularly to safety-lamps; and it has for its object to adapt a hand-lamp to be self-extinguishing upon the reversal or breaking thereof.

The invention may be said, briefly, to consist in mounting a movable device adjacent to the exit end of the wick-passage of a hand-lamp and providing means whereby said device will at times be automatically moved across said exit end of the wick-passage, thereby extinguishing, if lighted, the protruding end of the wick.

For full comprehension, however, of my invention reference must be had to the accompanying drawings, forming a part of this specification, in which like symbols indicate the same parts, and wherein—

Figure 1 is a longitudinal vertical sectional view of a hand-lamp furnished with my invention. Fig. 2 is a horizontal sectional view taken on line A B, Fig. 1. Fig. 3 is a plan view of the under side of the burner removed; and Fig. 4 is a similar view to Fig. 1, but illustrating the lamp in the act of falling from a table with my improved extinguisher performing its function.

The burner *b*, which may be in the main of ordinary construction, comprises the usual tubular wick-passage *c*, wick raising and lowering spindle *d*, and chimney-supporting tray *e*, while a downwardly-projecting exteriorly-screw-threaded collar *f* screws into an interiorly-screw-threaded collar *g*, constituting the mouth of the reservoir *h*, to be presently described.

My improved extinguishing device consists of a plate *i*, carried rigidly upon the upper ends of a pair of levers *j*, fulcrumed about midway of their length upon the spindle *d*, one a short distance from each end of the wick-passage *c*. The lower ends of the levers are connected to the ends of a retractile helical spring *k*, located in a casing constituted by a curved bead *l*, projecting downwardly from

the periphery of the tray *e*. Two stationary chimney-retaining fingers *m* are secured upon the tray, and said tray is formed with a pair of eccentric slots *n*, converging toward the center of the tray, through which a pair of angular strips project, the upper portion of each constituting chimney-retaining fingers, while the lower horizontal portion is slotted near its end and adjustably secured to the under side of the tray by pins *p*. Each of these angular strips has a lug *q* upon its under side, which is connected by a link *r* to the lower end of one of the levers *j*. The normal condition of these parts will be with the lower ends of the levers yieldingly held in a position to cause the plate *i* to extend across the exit end of the wick-passage, which will of course prevent the protruding end of the wick being lighted.

In order to set a chimney upon the tray, the fingers *o* should be drawn toward one another and away from the stationary fingers *n* a sufficient distance to allow said chimney, which is indicated at *s*, to be set in place. Upon the fingers *o* being then released the spring *k* will draw them in against the chimney, thus holding it firmly, while the chimney in turn prevents the return of the fingers *o* under the influence of the spring, thus also retaining the extinguisher away from the lighted wick.

It is obvious that upon the removal of the chimney the extinguishing device will extinguish the wick if lighted, and the same will take place if the lamp should be accidentally tipped over, as shown in Fig. 4, or allowed to fall.

What I claim is as follows:

1. In a lamp comprising a wick-passage and a chimney-support, the combination with said wick-passage, of a movable device consisting of a plate, a pair of levers fulcrumed between their ends one at each end of said wick-passage and carrying said plate at their upper ends, a retractile spring connected to the lower end of said levers for retaining the same yieldingly in a position with said plate across the exit end of said wick-passage, a movable device bearing upon the chimney carried upon the chimney-support and moving when said chimney is removed, and a link connection between said movable device and

the lower end of said levers, whereby said plate will be caused to move to a position across said wick-passage upon the removal of said chimney, substantially as described and for the purpose set forth.

2. In a lamp the combination with a wick-passage and a chimney-supporting tray having a pair of stationary chimney-retaining fingers, of a movable device consisting of a plate, a pair of levers fulcrumed one at each end of said wick-passage and carrying said plate at their upper ends, a spring connected to the lower ends of said levers for retaining same yieldingly in a position with said plate across the exit end of said wick-passage, a pair of yielding fingers bearing upon the chimney carried by the tray, means for movably connecting said fingers to said tray and a pair of links connecting said movable fingers to the lower ends of said levers, substantially as described and for the purpose set forth.

3. The combination with a burner comprising a passage for the illuminant to be burned and a tray for supporting a chimney said tray having a pair of eccentric slots converging toward the center thereof, of a movable device, yielding means for retaining said device across said passage, a pair of angular strips each having a portion projecting upwardly

through said slots, the other portion of each being slidably connected to the under side of the tray and means for operatively connecting said angular strips to said movable device, substantially as described and for the purpose set forth.

4. In a lamp the combination with a chimney-supporting tray having a pair of chimney-retaining fingers, a wick-passage; a wick raising and lowering spindle; of a plate; a pair of levers fulcrumed upon said spindle one at each side of said wick-passage and carrying said plate at their upper ends; an annular flange of rounded cross-section integral with and depending from the periphery of said tray; a retractile helical spring located in said rounded flange and connected at its opposite ends to the lower ends of said levers; a pair of movable chimney-retaining fingers carried upon said tray, and link connections between said movable fingers and the lower ends of said levers, substantially as described and for the purpose set forth.

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

FREDERICK JAMES CLEARE.

Witnesses:

WILLIAM S. McFEAT,
FRED J. SEARS.