

J. HINKS.  
EXTINGUISHING MECHANISM FOR LAMPS.

No. 442,761.

Patented Dec. 16. 1890.

FIG 1

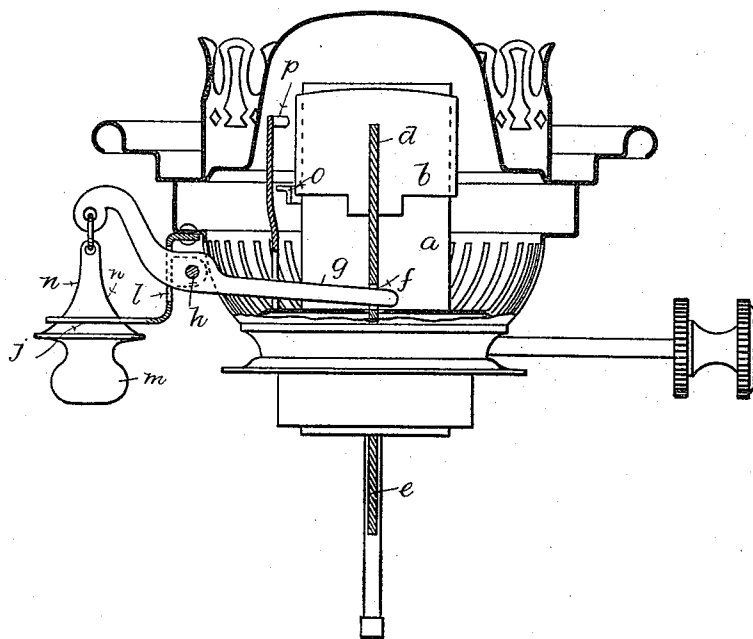
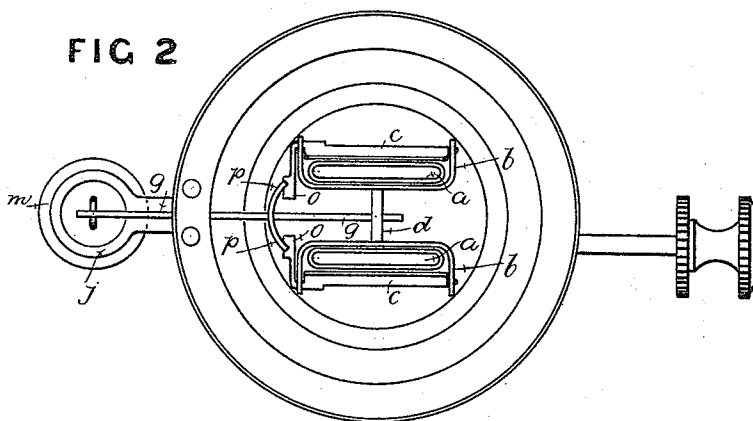


FIG 2



Witnesses.

*Geo. W. Jones.*  
*Alfred S. Johnson*

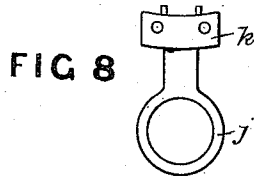
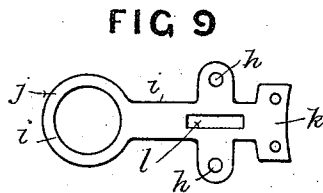
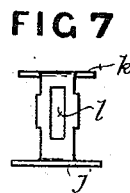
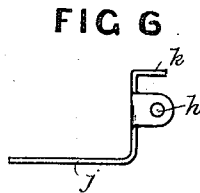
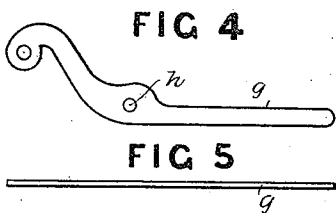
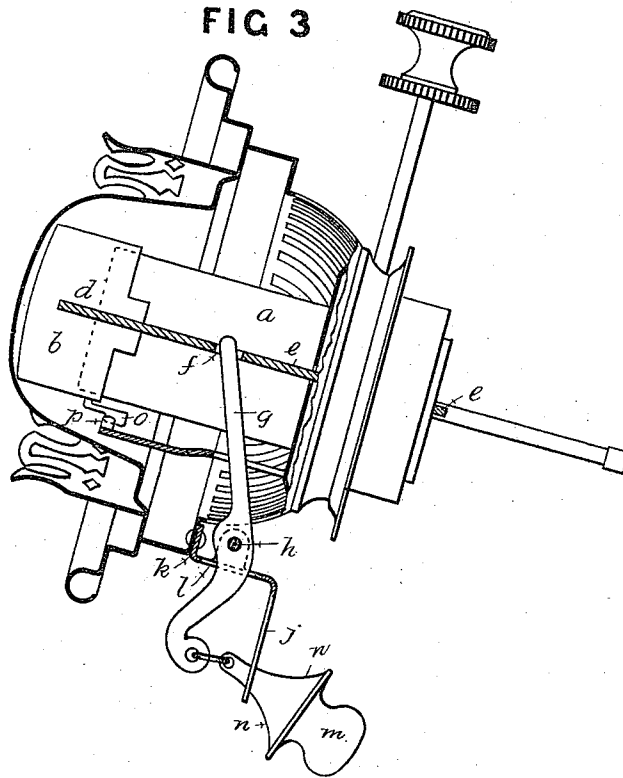
Inventor.

*Joseph Hinks*  
*Per Charles S. Powell*  
Attorney.

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 Alfred Johnson

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 Per. Charles J. Powell  
 Attorney.

# UNITED STATES PATENT OFFICE.

JOSEPH HINKS, OF BIRMINGHAM, ENGLAND.

## EXTINGUISHING MECHANISM FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 442,761, dated December 16, 1890.

Application filed April 25, 1890. Serial No. 349,558. (No model.) Patented in England March 8, 1890, No. 3,682, and in France June 3, 1890, No. 206,082.

To all whom it may concern:

Be it known that I, JOSEPH HINKS, a subject of the Queen of Great Britain, and a resident of Great Hampton Street, Birmingham, in the county of Warwick, England, have invented certain new and useful Improvements in the Extinguishing Mechanism for Lamps, (for which I have applied for a patent in Great Britain, No. 3,682, bearing date March 8, 1890, and in France, No. 206,082, dated June 3, 1890,) of which the following is a specification.

My invention relates to improvements in the extinguishing mechanism of lamps which are intended to be automatically extinguished when overturned or upset, or which may be extinguished at will by hand; and the objects of my improvements are, first, to provide that the automatically-acting pendent weight shall be suspended from the operating-lever, to which latter it also gives motion; second, to provide a fixed ring whereon the gravitating action of the pendent weight is made to act, in order to pull down the operating-lever, and, third, to provide upon the arm carrying the gravitation-ring a fulcrum-joint for carrying the operating-lever. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the entire lamp-burner, showing the extinguishing mechanism; Fig. 2, a top view of the burner as it appears after the removal of the dome; Fig. 3, a vertical section of the burner when overturned or upset; Figs. 4 and 5, detailed views of the operating-lever; and Figs. 6, 7, and 8 are detailed side, front, and top views of the arm, ring, and lever fulcrum-joint. Fig. 9 is a view of the plate as cut out to form the arm, ring, and fulcrum-joint before being bent into shape.

Similar letters refer to similar parts throughout the several views.

*a a* are the wick-tubes, upon which slide the shutter-boxes *b b* and shutters or flaps *c c*. These shutter-boxes *b b* are connected to each other by the cross-bar *d*, the lower part of which is formed into a leg *e*, which slides in a guideway formed in the lower part of the burner. In this leg at *f* is a hole, into which the inner end of the lever *g* enters and engages.

The lever *g* is carried upon a fulcrum-joint formed at *h*. This fulcrum-joint is formed as follows: A piece of metal *i*, Fig. 9, is stamped out, having the holes *h*, Fig. 9, pierced therein, also having the ring *j* and attachment part *k*, with holes for rivets formed in the same piece. This piece *i* is then bent and shaped as shown, Figs. 1, 3, 6, 7, and 8, and riveted to the burner-body, the fore part of the lever *g* passing through the hole *l*. This method of carrying the lever obviates all interference with the perforations of the body of the burner. To the outer end of the lever *g* is suspended the pendent weight *m*, whose surface at *n* is curved in shape, so that it may readily slide upon the inner surface of the ring *j* when thrown out of the perpendicular. The weight of the pendant *m* is a little less than sufficient to pull down the lever *g* while the lamp is in its normal vertical position.

Upon the lower part of the flaps *c* are provided arms *o o*, which, when the shutter-boxes are raised a certain height, come in contact with a stop-piece *p*, which arrests their progress; but by reason of the shutter-boxes themselves being carried a little farther forward the flaps *c c* thereon are turned over the wicks and extinguish the flames.

Thus the action of this my invention is as follows: Upon the lamp being upset or overturned, the pendant *m* changes its position relative to the lever *g* and acts as a weighted lever, its preponderating weight upon the one side of the ring *j* pulling it therethrough and with it the lever *g*, thus putting out the light. By reason of the ring *j* being circular it matters not in which direction the lamp is overturned. To extinguish at will, it is simply necessary to pull down the pendant *m* directly or to push it to one side.

I am aware that prior to this my invention extinguishing mechanism for lamps has been made in which the flaps or shutters have been tripped or turned over when reaching the top of the wick-tubes similar to that shown and described, and also that a pendent weight has been used to effect the automatic extinguishing of lamps, and therefore I do not claim these parts in combination, broadly, and have only described the flap-trip action in order to explain this my invention; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

- 5 1. In extinguishing mechanism for lamps, the combination, with the sliding shutter-boxes *b b*, flaps *c c*, and cross-bar *d* and direct-operating lever *g*, of the inclined-shaped pendent weight *m* and fixed annular ring *j*, substantially as set forth, and for the purpose specified.
- 10 2. The combination, in extinguishing mech-

anism for lamps, of the burner-body, operating-lever *g*, sliding extinguishers *b b*, and pendent weight *m*, with the fixed arm or bracket *i*, having the fulcrum-joint *h* formed thereon, substantially as described and shown. 75

JOSEPH HINKS.

Witnesses:

AFFRED T. JOHNSON,  
ERN. W. JONES.