

(No Model.)

M. GOETZE.
LAMP EXTINGUISHER.

No. 484,362.

Patented Oct. 11, 1892.

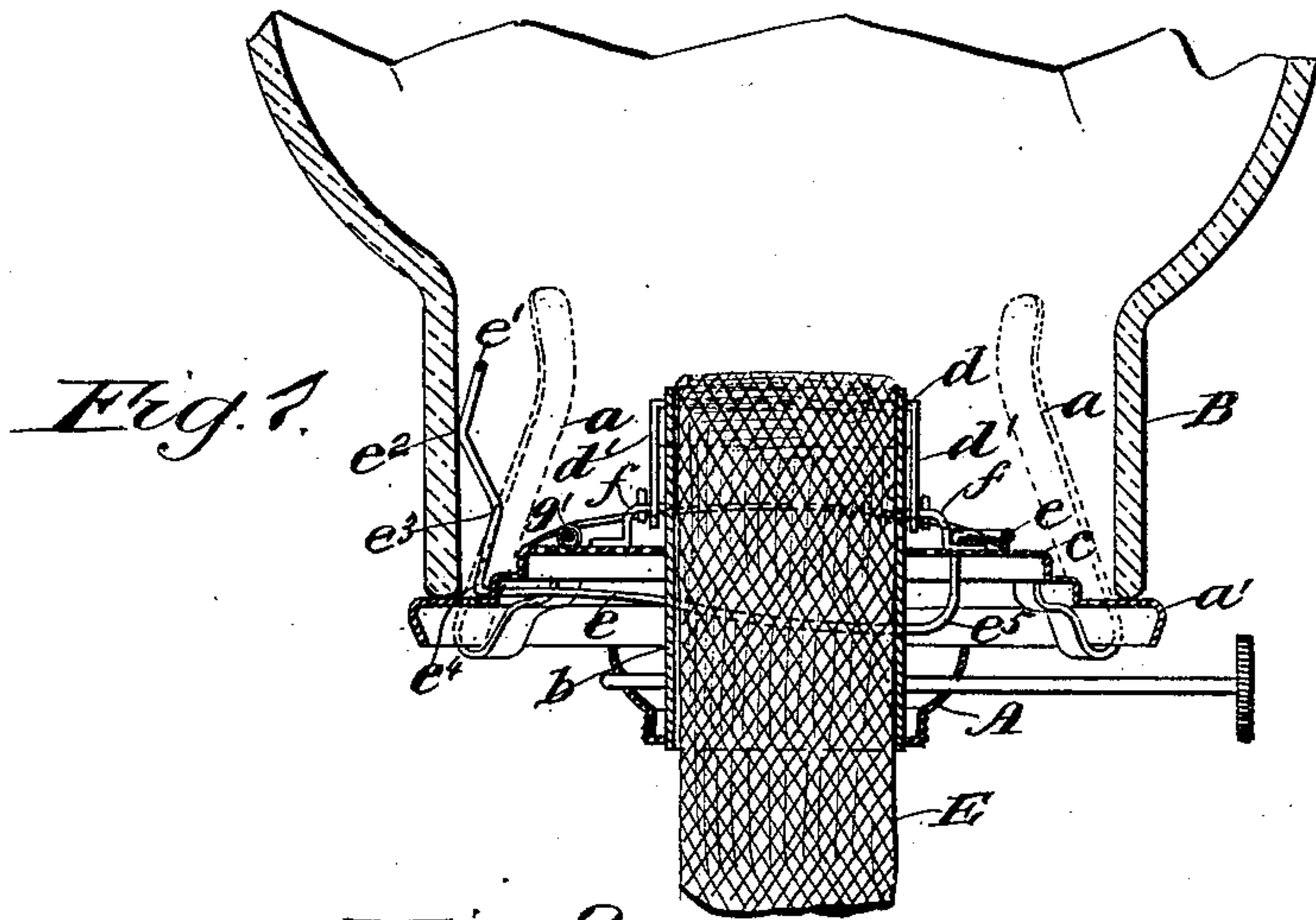


Fig. 2

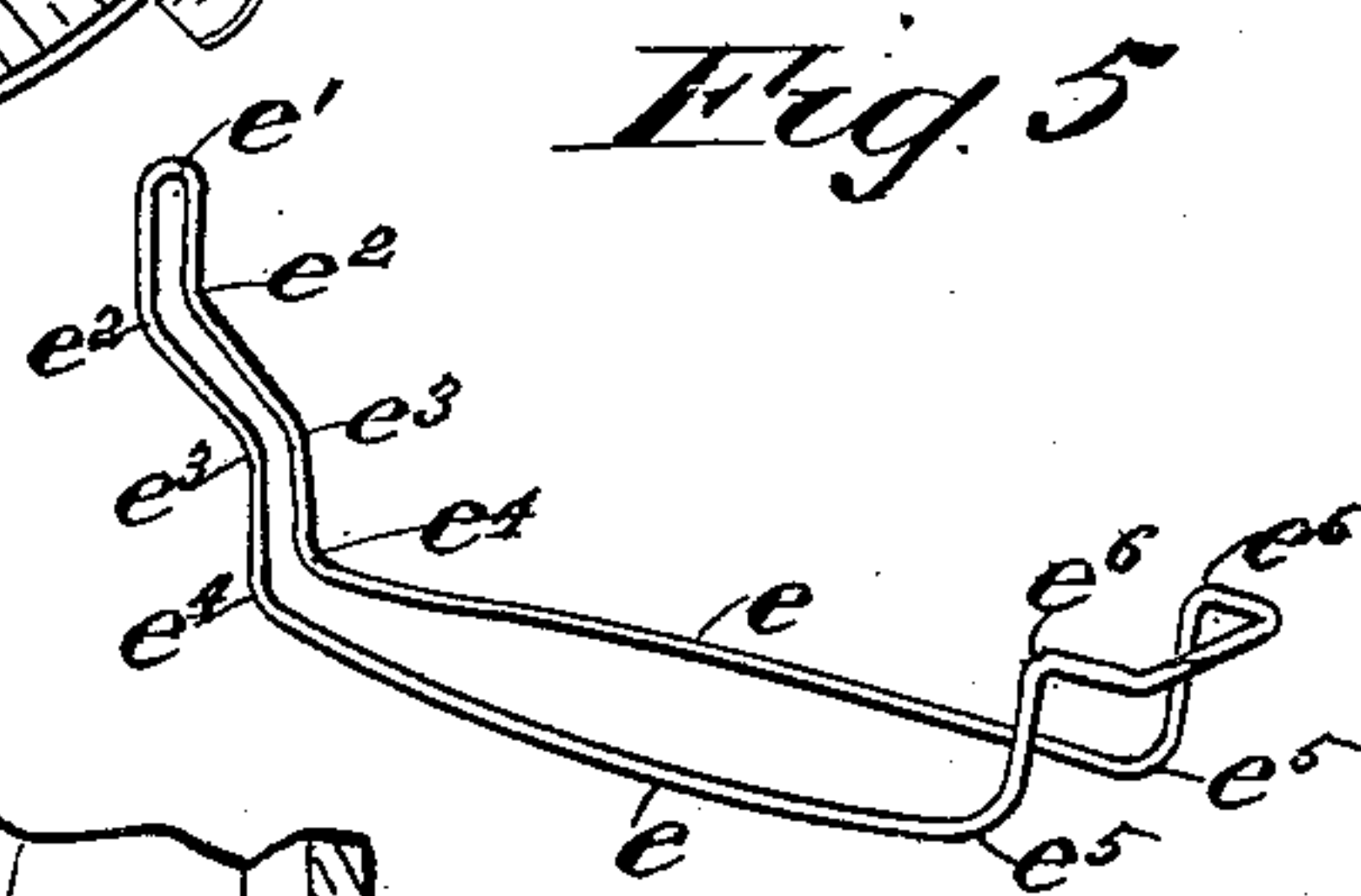
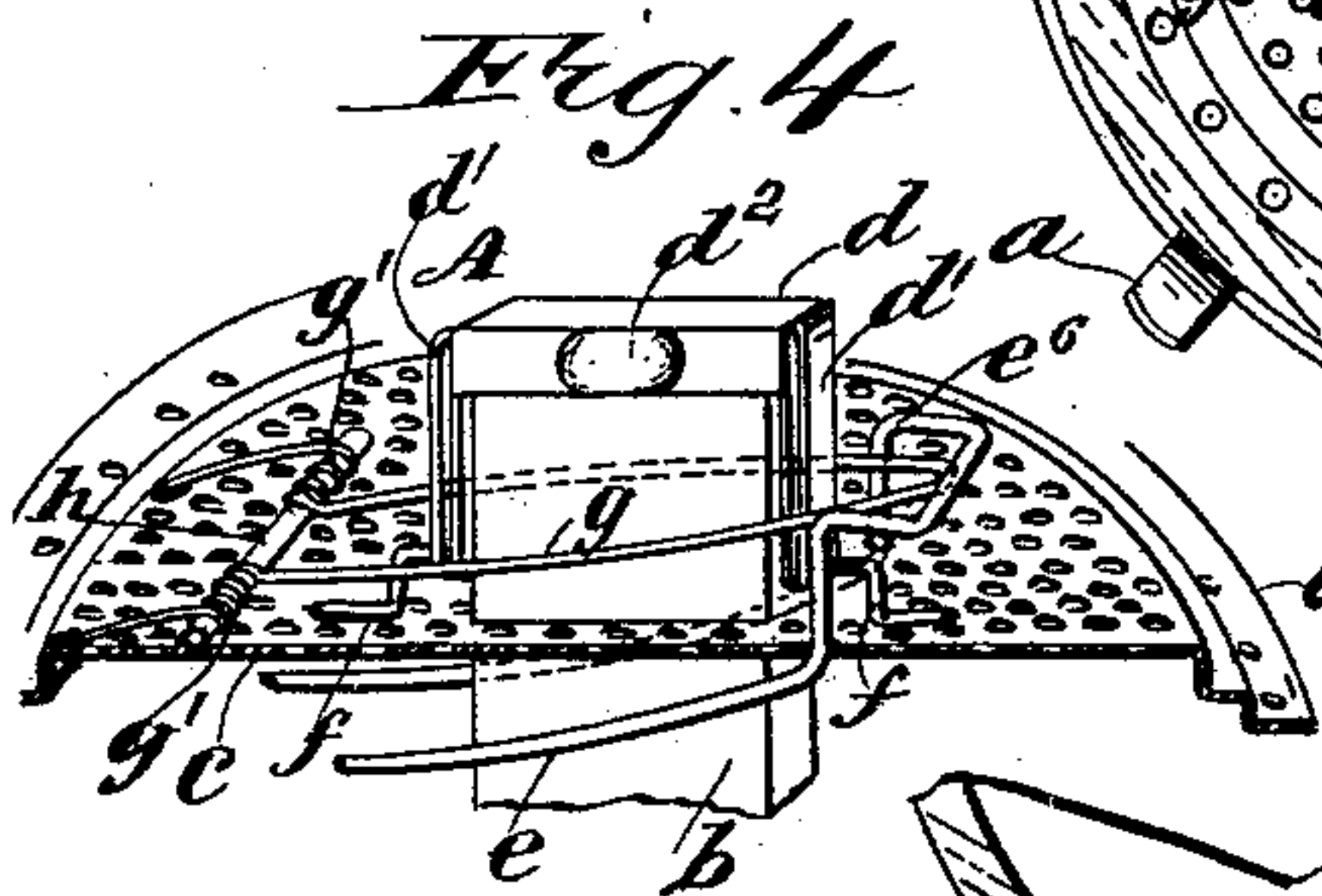
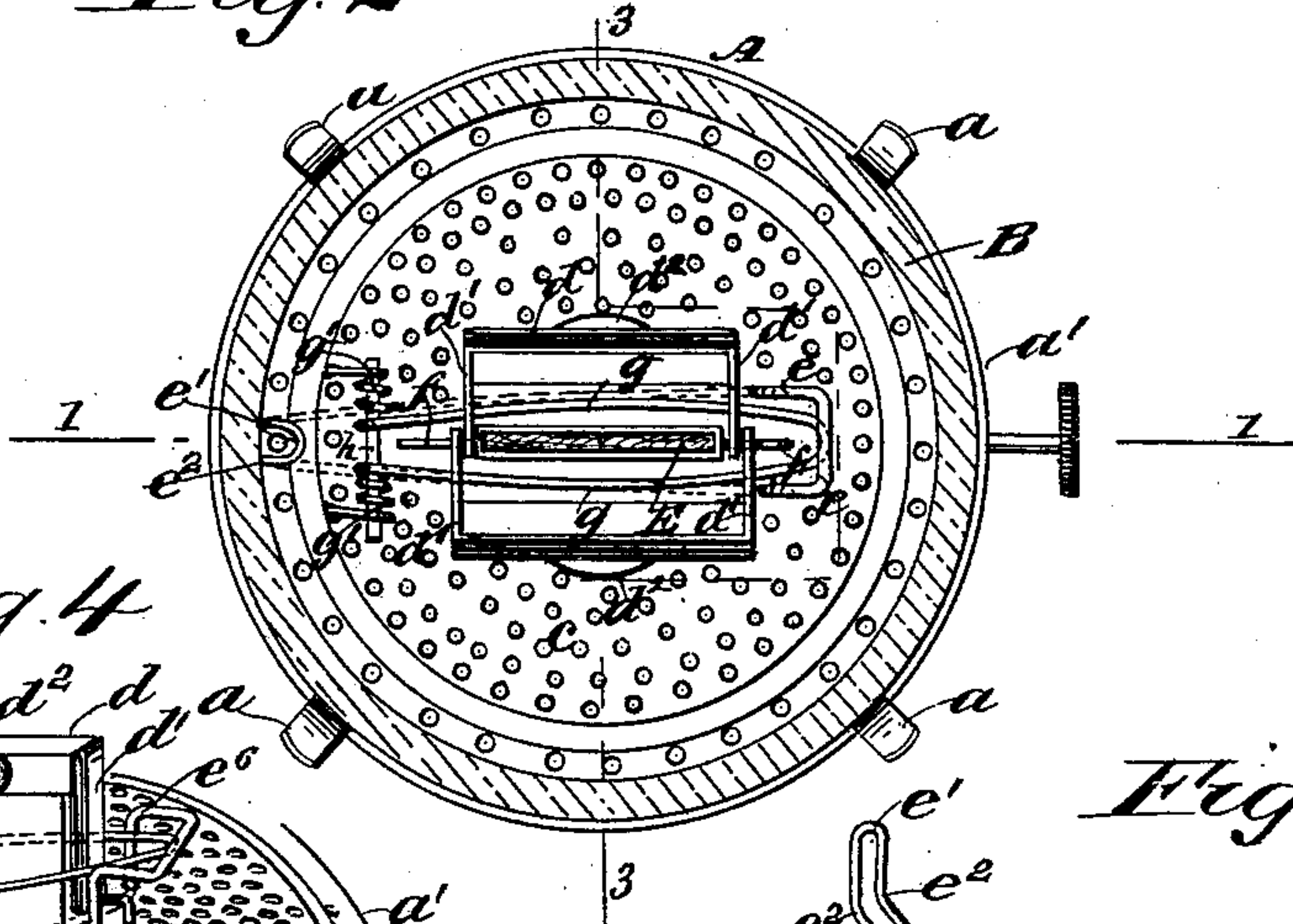
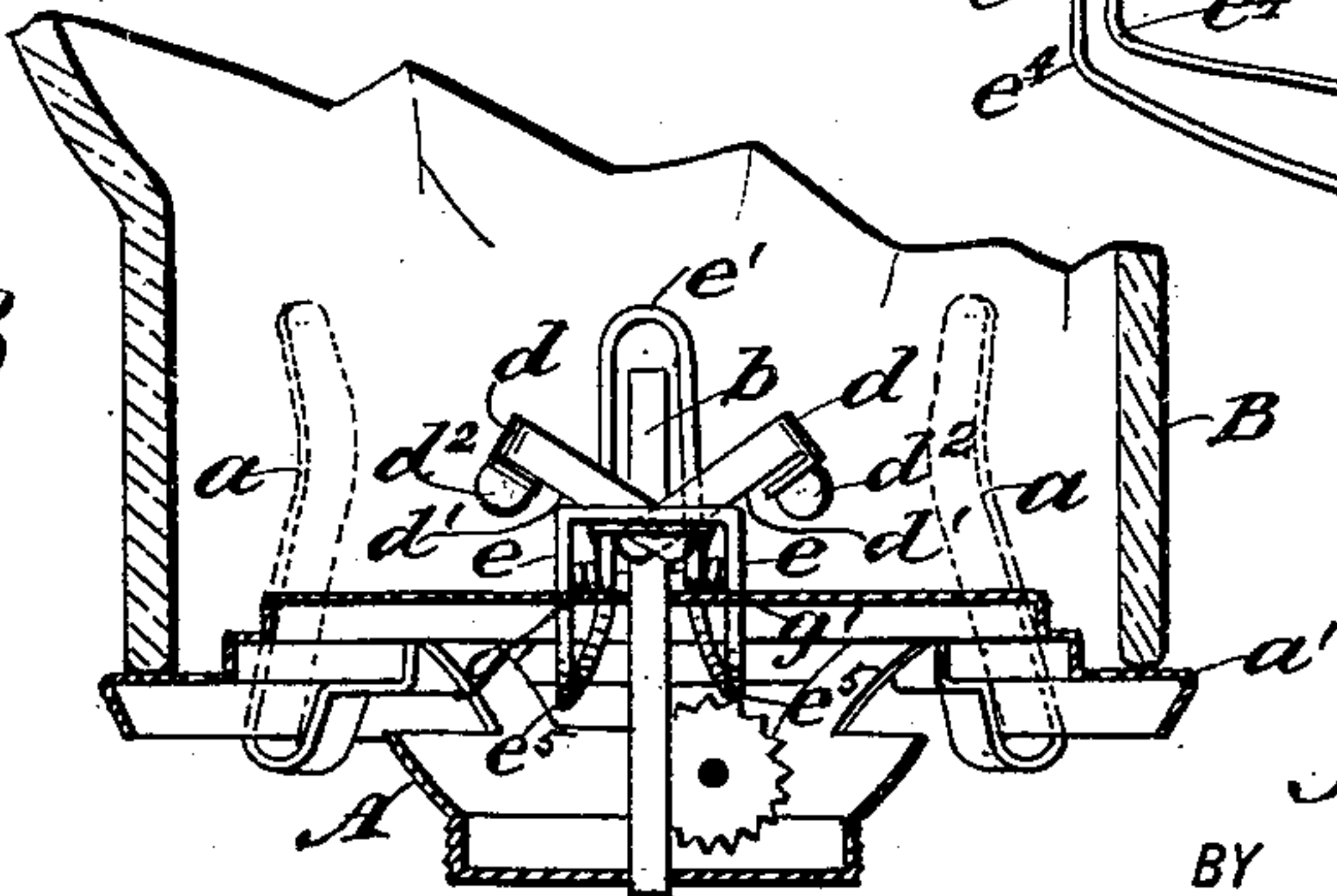


Fig. 3



WITNESSES:

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MAX GOETZE, OF STURGIS, SOUTH DAKOTA.

LAMP-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 484,362, dated October 11, 1892.

Application filed May 5, 1892. Serial No. 431,943. (No model.)

To all whom it may concern:

Be it known that I, MAX GOETZE, of Sturgis, in the county of Meade and State of South Dakota, have invented a new and useful
5 Lamp-Extinguisher, of which the following is a full, clear, and exact description.

This invention relates to an improved safety-extinguisher for hand and stand lamps, and has for its object to provide a novel, simple
10 attachment for a lamp having a flat wick-tube which will automatically cover the top of such a wick-tube in the lamp and extinguish a lighted wick therein if the lamp is overturned or dropped and its chimney dis-
15 placed or broken.

To this end my invention consists in the peculiar construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying
20 drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view in section of a lamp-burner, a chimney broken away above, and
25 the improvement in place on the burner in section, taken on the line 1 1 in Fig. 2. Fig. 2 is a plan view of the lamp-burner, a chimney in section, and the extinguisher on the burner. Fig. 3 is a side view in section of the
30 lamp-burner, chimney broken, and extinguisher, taken on the line 3 3 in Fig. 2. Fig. 4 is a broken detail view in perspective of part of the lamp-burner and the improved extinguisher thereon broken away below and
35 in closed adjustment, and Fig 5 is a detached perspective view of an essential feature of the improvement.

The lamp-burner A is of ordinary approved construction adapted to retain the glass chimney B in place on it by the stress of the bow
40 springs *a*, that bear upon the exterior surface and lower part of the chimney when it is located properly upon the gallery *a'* of the burner. A flat wick-tube *b* is a necessary
45 part of the lamp-burner whereon the improvement is applied, and projects in the usual manner above and below the perforated diaphragm *c* of the burner, whereon a cone deflector (not shown) of common construction
50 is seated so as to inclose the wick-tube laterally above the diaphragm when the burner is ready for service, said cone deflector being

omitted from the drawings to avoid obscuring the features of improvement.

The wick-extinguisher that embodies the
55 improvement consists, essentially, of two rocking gates *d* that are substantially alike, each gate having at its ends depending limbs *d'*, which in one gate overlap the limbs of the other gate, each pair of these lapped members
60 being pivoted upon a small pintle-arm, which arms *f* are affixed to the diaphragm-plate *c* opposite the edge walls of the flat wick-tube *b*, so that the boxed top portions of the gates when
65 rocked together will inclose the top of the wick-tube, one gate sliding within the other when so adjusted. There is a peculiarly-bent lever *e* provided for the automatic working of the
extinguisher-gates *d*, which is shown detached
70 in Fig. 5, and comprises a pair of similarly bent wire portions joined at each end after
the lever is in position on the burner A. The wire strand forming the lever *e* is first bent
near its center so as to fold the same at *e'*
75 and produce parallel members. These are bent laterally at *e²* and then again in a reverse
direction at *e³* so as to dispose the spaced strands in a plane nearly parallel with
the portions near the bend *e'*. At *e⁴* the two
80 strands of the lever are bent nearly at a right angle away from the parts between this bend
and the folding-bend *e'*.

There is such a proportionate length given to the portions of the lever *e* which extend
beyond the bends *e⁴* as compared to the
85 width of the gallery and diaphragm-plate *c* of the burner A that these strands when inserted through adjacent holes in the raised edge of the gallery *a'*, until the bends *e⁴* are
nearly in contact with this circular edge, will
90 extend across below the diaphragm-plate on each side of the wick-tube *b*, and at *e⁵*, where
upwardly bent, project through spaced holes in said diaphragm, as shown in Fig. 1.

The strands of the lever *e*, that loosely pass
95 through the diaphragm-plate *c*, are at a proper distance from the bends *e⁵* again bent outwardly from the wick-tube into a plane parallel with the diaphragm-plate, as at *e⁶*, and
near said bends the end portions of the lever-
100 strands are bent toward each other and united, thereby completing the lever and locating it in a proper position on the burner-body.

A spring-wire lifter-arm *g* is furnished as a means to raise the gates *d* and close their boxed upper portions above and near to the upper terminal of the wick *E* in the wick-tube *b*, which arm is in the form of an elongated loop that encompasses the wick-tube, and has its end portions *g'* wrapped spirally upon a transverse rod *h*, the outer terminals of these springs being affixed to the diaphragm *c*, as shown in Figs. 1 and 4. The bow portion of the looped-wire arm projecting toward the adjacent cross-piece of the lever *e*, that is embraced between the bends *e'*, is thereto secured so as to adapt the force of the spring to lift this end portion of the lever *e* and simultaneously elevate the gates *d* by a sliding contact of the looped arm upon the limbs *d'* of the gates.

The boxed gates *d* are weighted on their sides, as at *d'*, said weights being sufficient to quickly rock the gates outward and downward when they are released, and to effect their liberation from the embrace of the looped lifter-arm *g* it is only necessary to press the upright portion inwardly where looped at *e'*, which will rock the other end portion of the lever downwardly, and the attached end portion of the arm *g* also, thereby disposing the spaced members of said arm, which lie each side of the wick-tube, in a horizontal position near to the top surface of the diaphragm-plate *c* and below the limbs *d'* of the gates, so that the gravity of the latter will throw them into the position shown in Fig. 3.

In use the placing of the chimney *B* upon the lamp-burner *A* will cause its inner surface to press the bent upright portion of the lever *e* at *e'*, thus causing the opposite end of said lever to be rocked downwardly and effecting a release of the weighted gates *d*, that fall open and permit the wick *E* to be lighted.

If by accident the lamp having the improvement is overturned so as to remove the chimney *B* or break it in a manner that will release the engaged end portion of the lever *e*, said lever will be thrown into the position shown in Fig. 3 at its opposite end by the stress of the coiled springs on the arm *g*, which arm by its elevation will instantly close the boxed gates *d* and extinguish the lamp-wick *E*.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A lamp-extinguisher comprising two pivotally-supported and weighted gates that will inclose the upper end of a wick-tube, a bowed arm one end of which is adapted to lift the gates and close them, and a bent lever extended across the burner-body that when depressed at one end will hold the bowed arm away from the gates, substantially as described.

2. The combination, with a lamp-burner having a flat wick-tube, of two weighted pivoted gates boxed at their upper ends and adapted to inclose the top of the wick-tube, a bowed spring-arm embracing limbs of the gates and holding said gates normally elevated, and a bent lever holding the spring-arm depressed when pressed by a lamp-chimney at one end, substantially as described.

3. The combination, with the body of a lamp-burner and a flat wick-tube therein, of two gates boxed at their upper ends and each having two depending limbs at their lower ends, weights on the gates, a loop-shaped arm spring-pressed upwardly and embracing the limbs of the gates, and a lever bent double from a wire strand and embracing the wick-tube, one end portion of said lever projecting to impinge upon a lamp-chimney seated on the burner-body and its other end engaging the end of the spring-arm, substantially as described.

4. The combination, with the body of a lamp-burner and a flat wick-tube therein, of two boxed gates, weights on the gates, two depending limbs for each gate lap folded in pairs at their lower terminals, pintle-arms loosely engaging the perforated lower ends of the gates, a looped lifter-arm embracing the wick-tube and gate-limbs, spiral springs on the limbs of the lifter-arm, having their terminals secured to the burner-body, and a double-strand lever passing across the burner-body and fulcrumed therein near one upright end portion of the lever, which end portion is adapted to impinge upon the inner face of a seated lamp-chimney and elevate the other end of the lever that is attached to the spring-pressed arm, substantially as described.

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Witnesses:

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