

(No Model.)

3 Sheets—Sheet 1.

C. E. POSTLETHWAITE.  
LAMP EXTINGUISHER.

No. 400,789.

Patented Apr. 2, 1889.

Fig. 1.

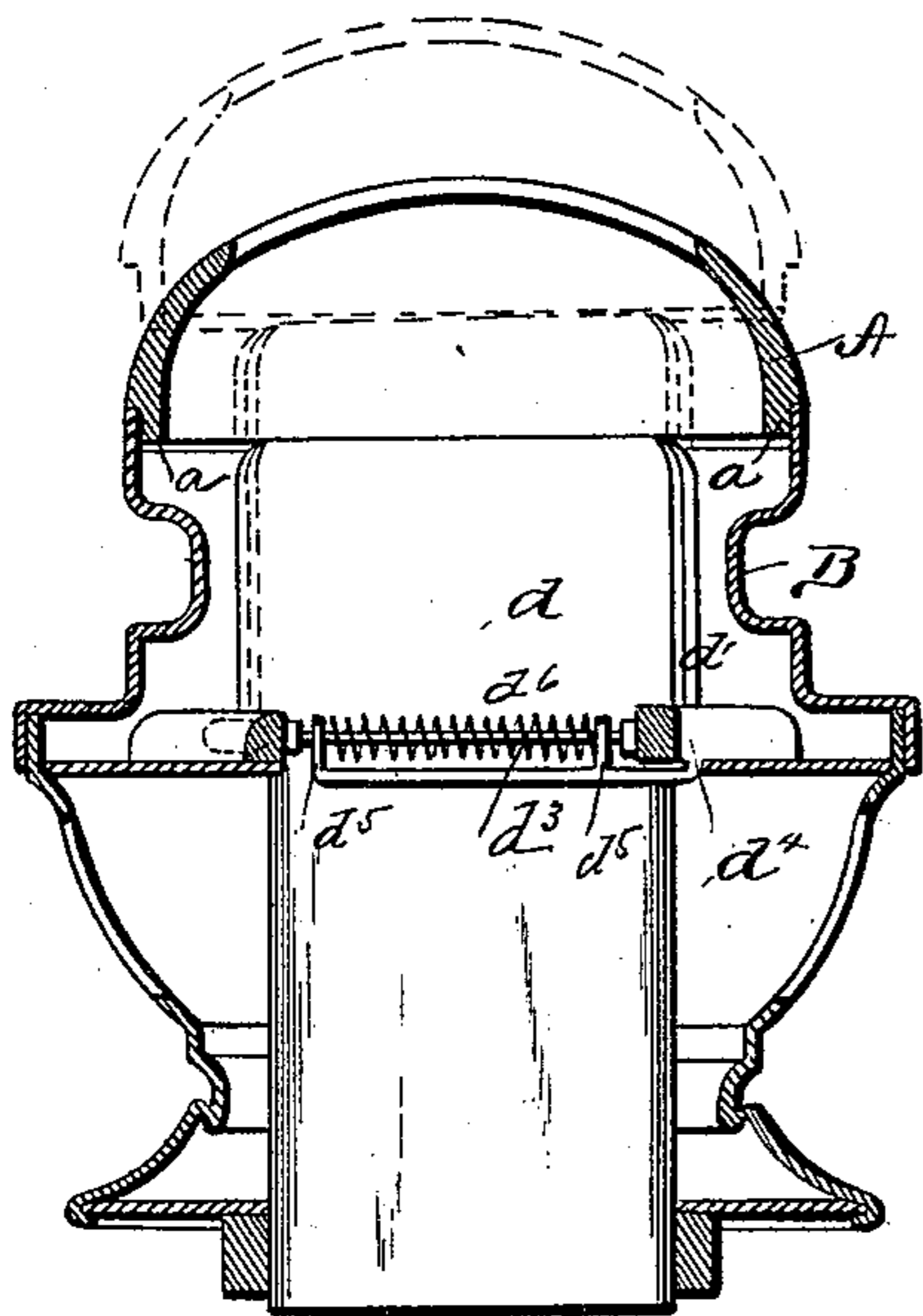


Fig. 2.

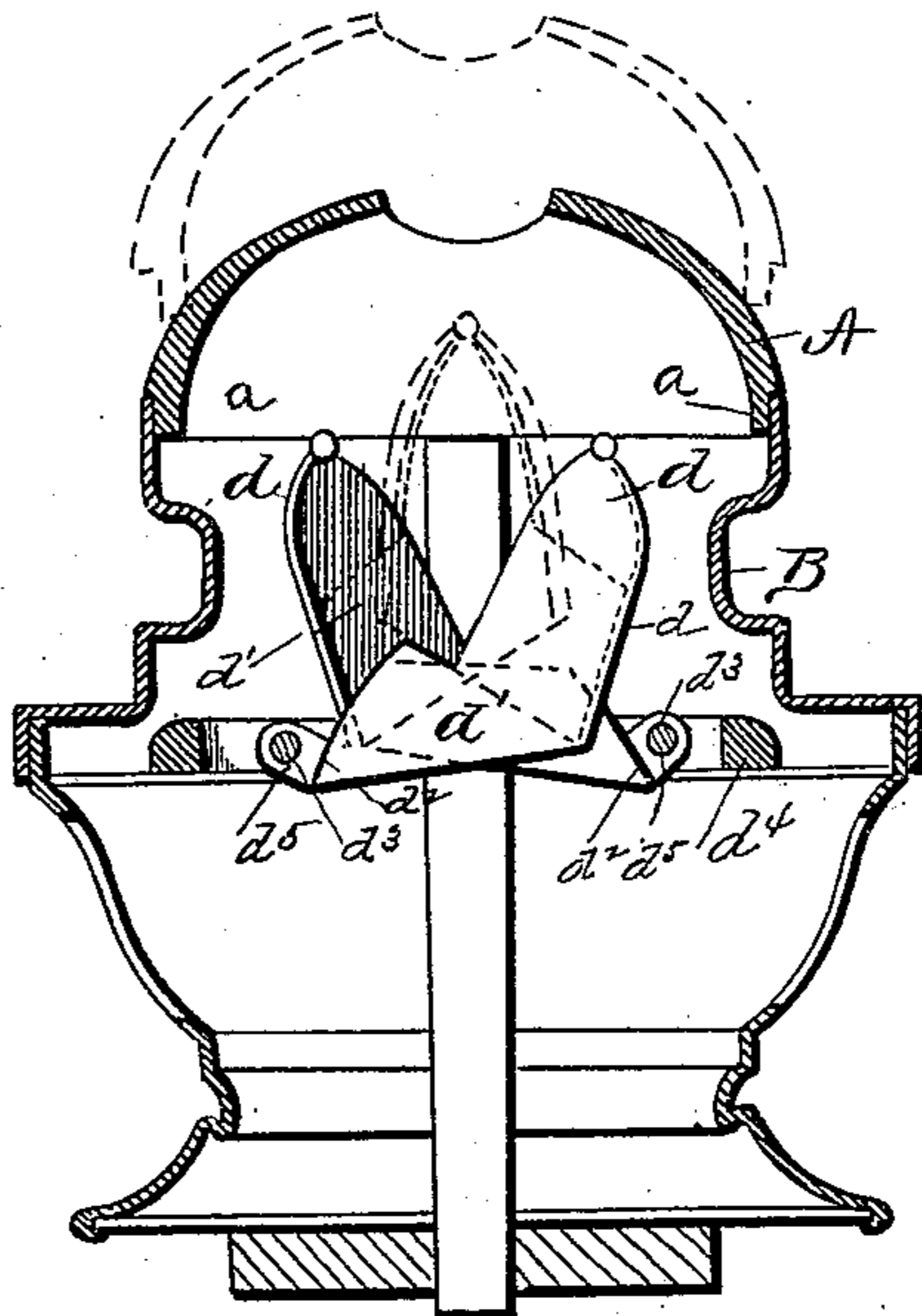


Fig. 3.

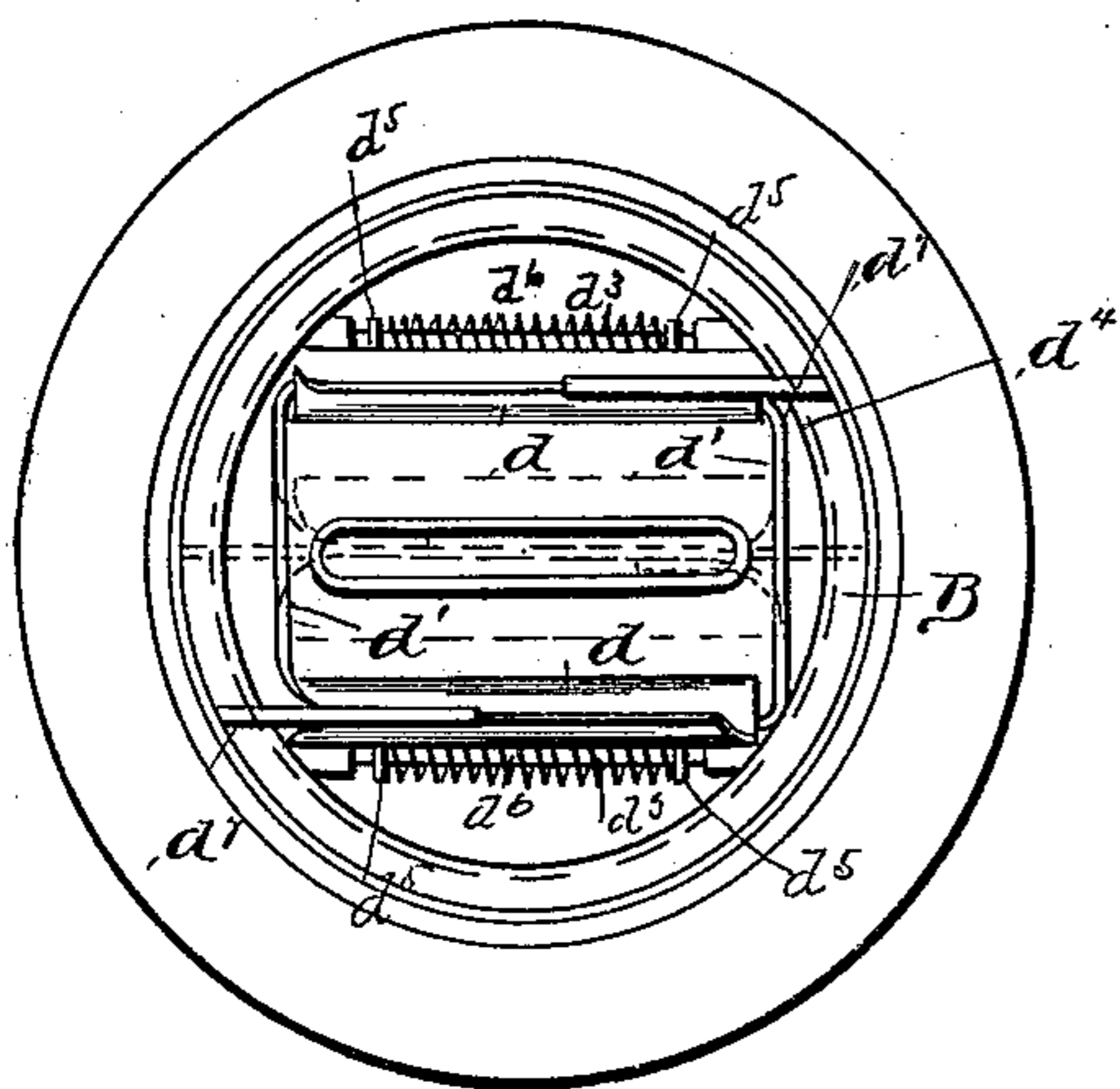
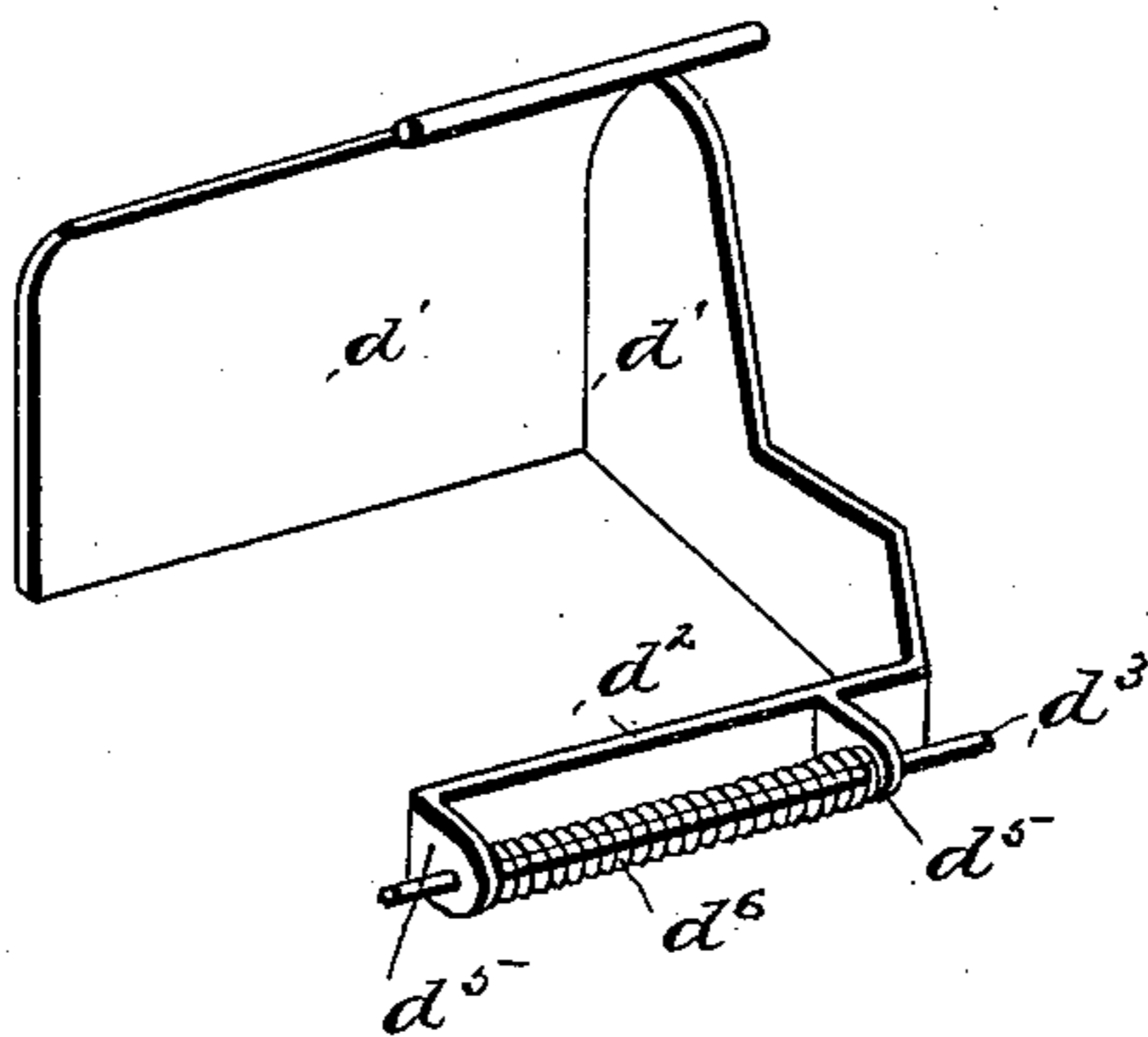


Fig. 4.



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Fig. 5.

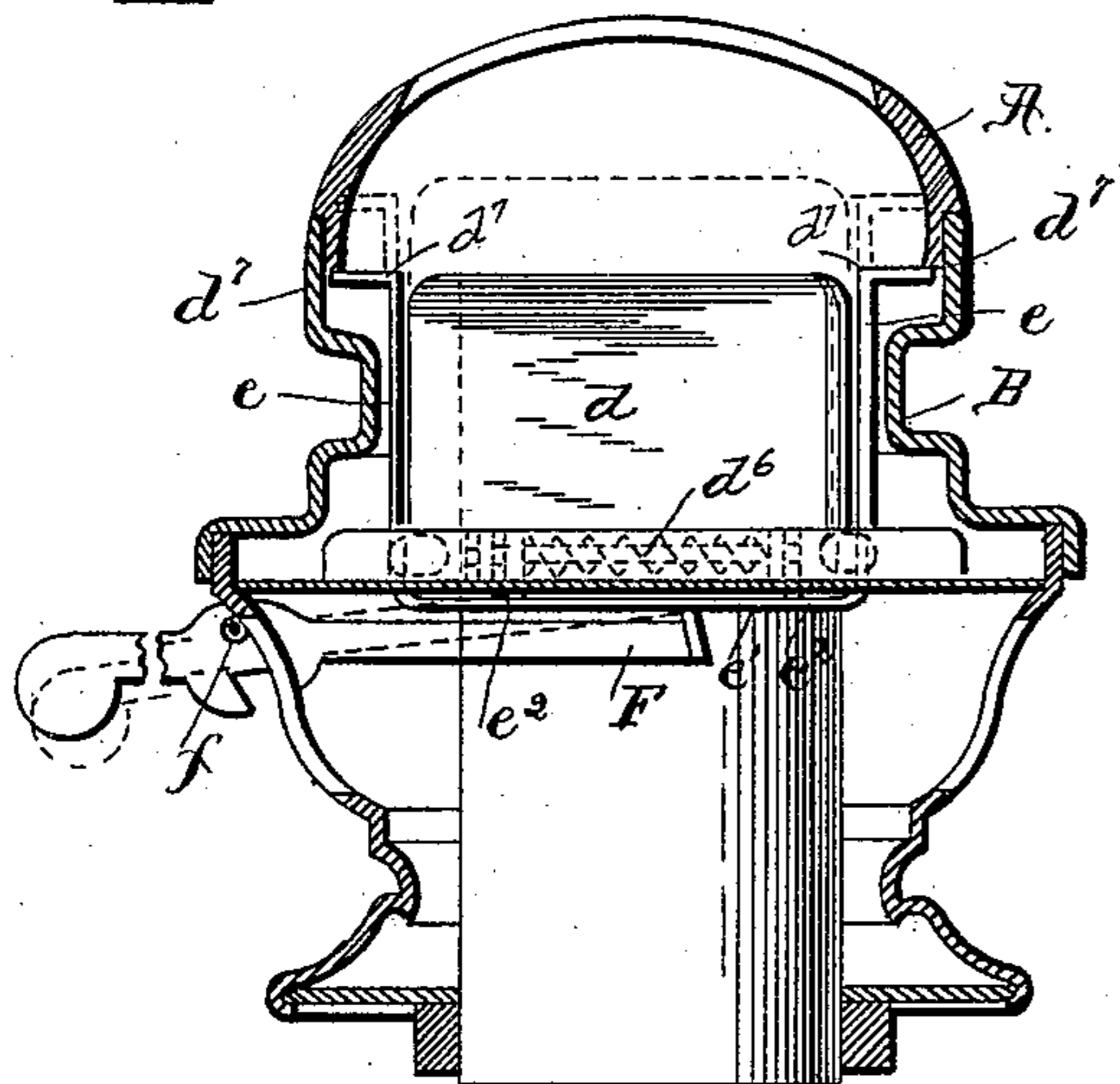


Fig. 6.

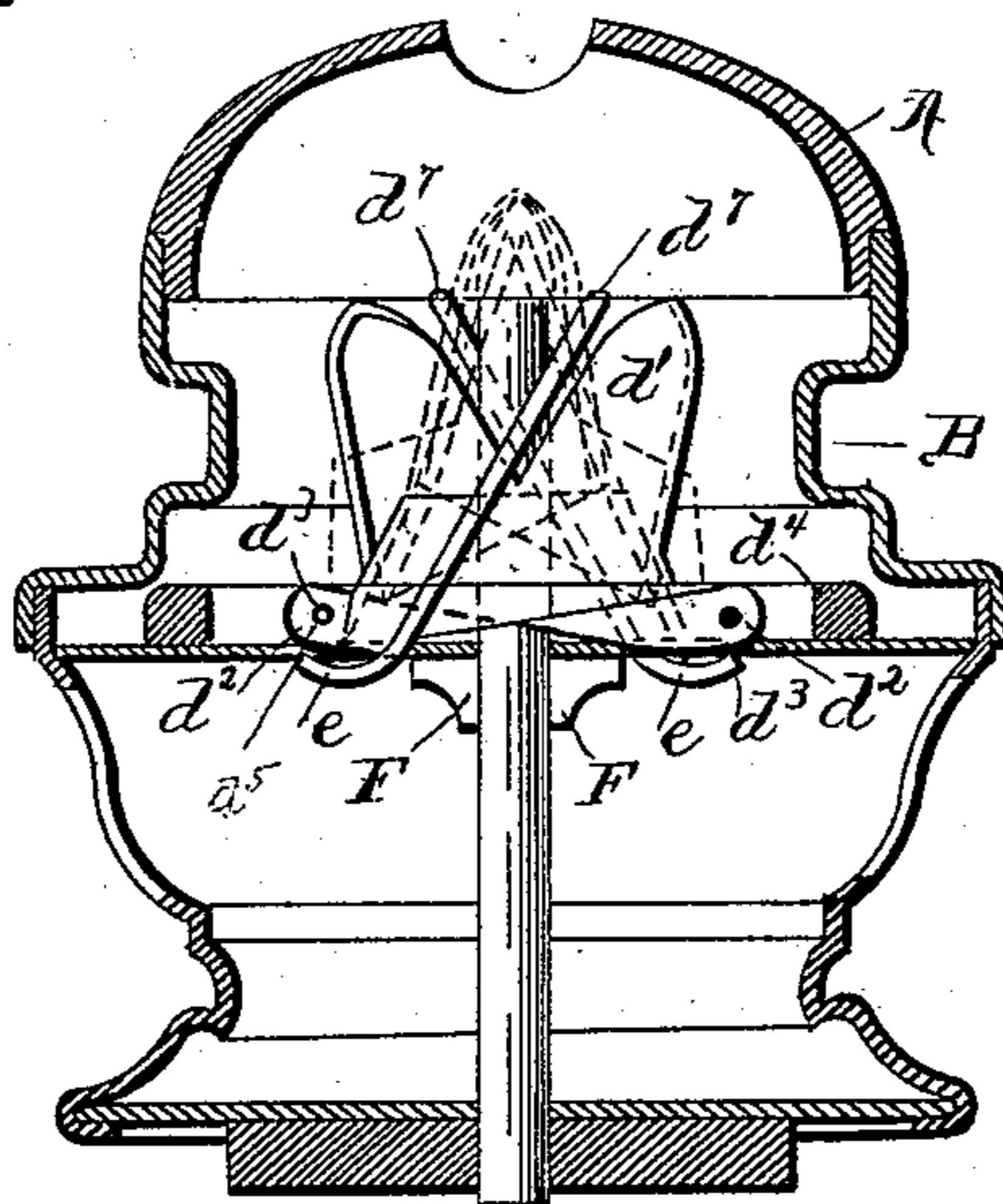


Fig. 7.

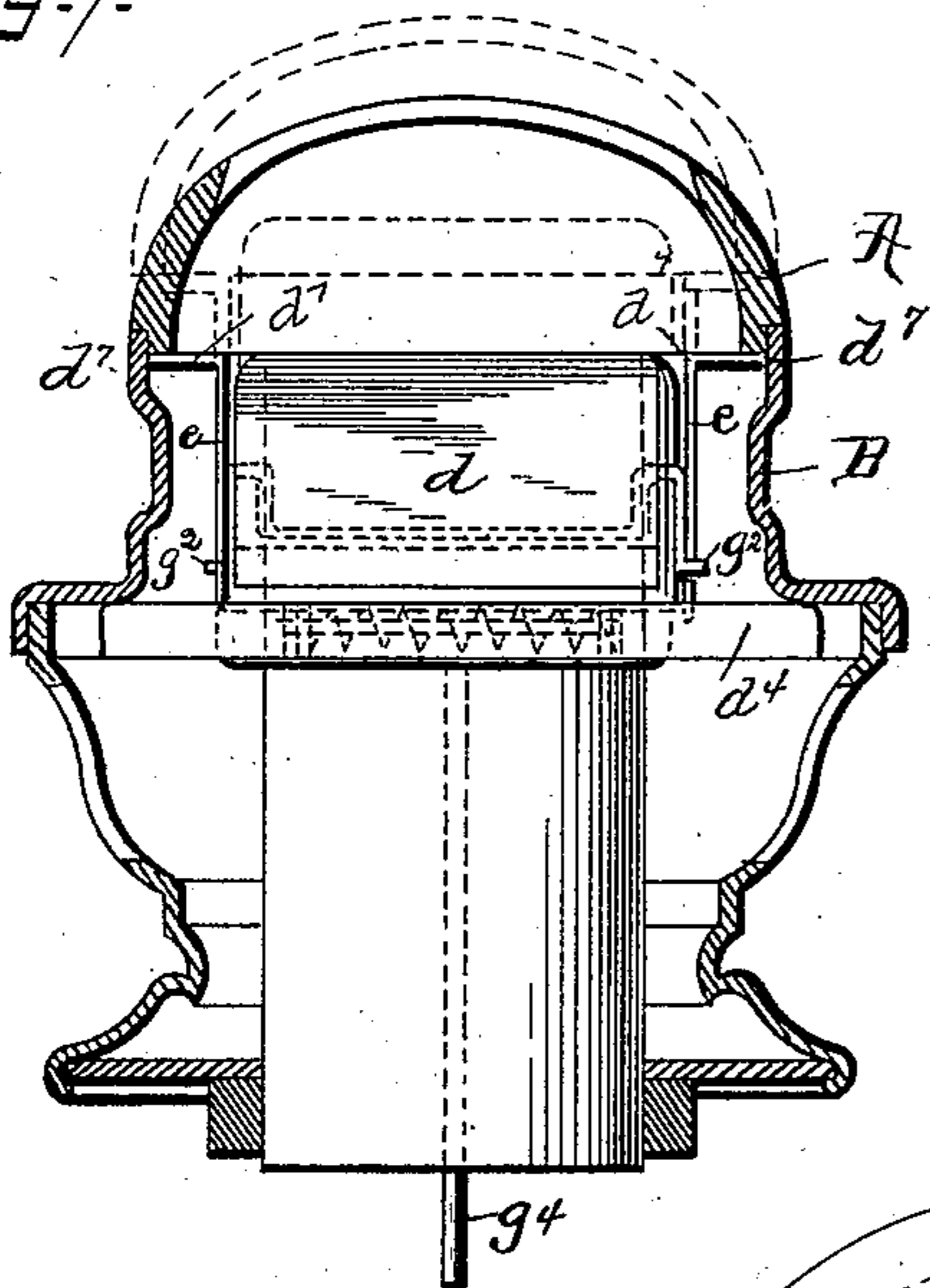


Fig. 8.

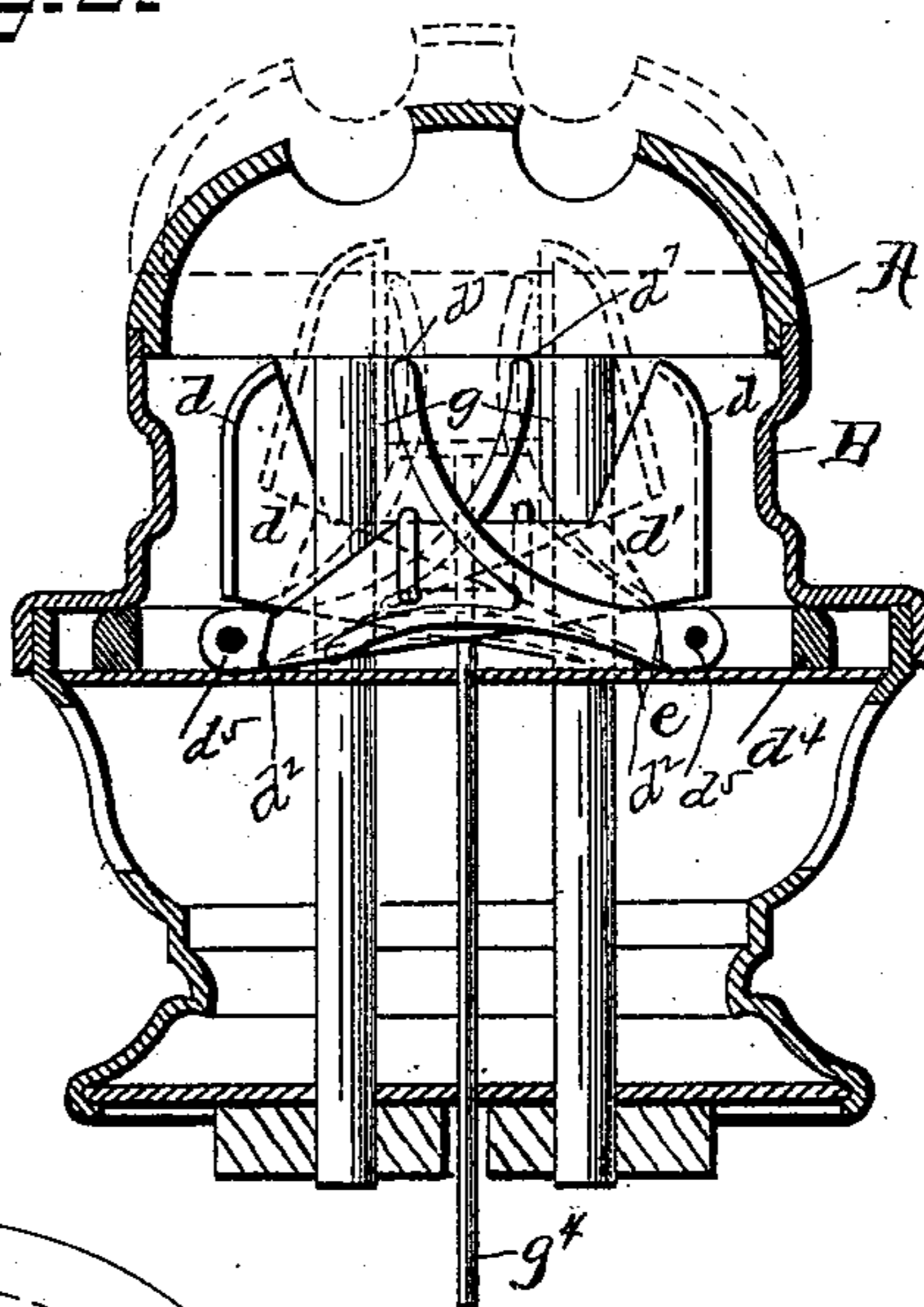
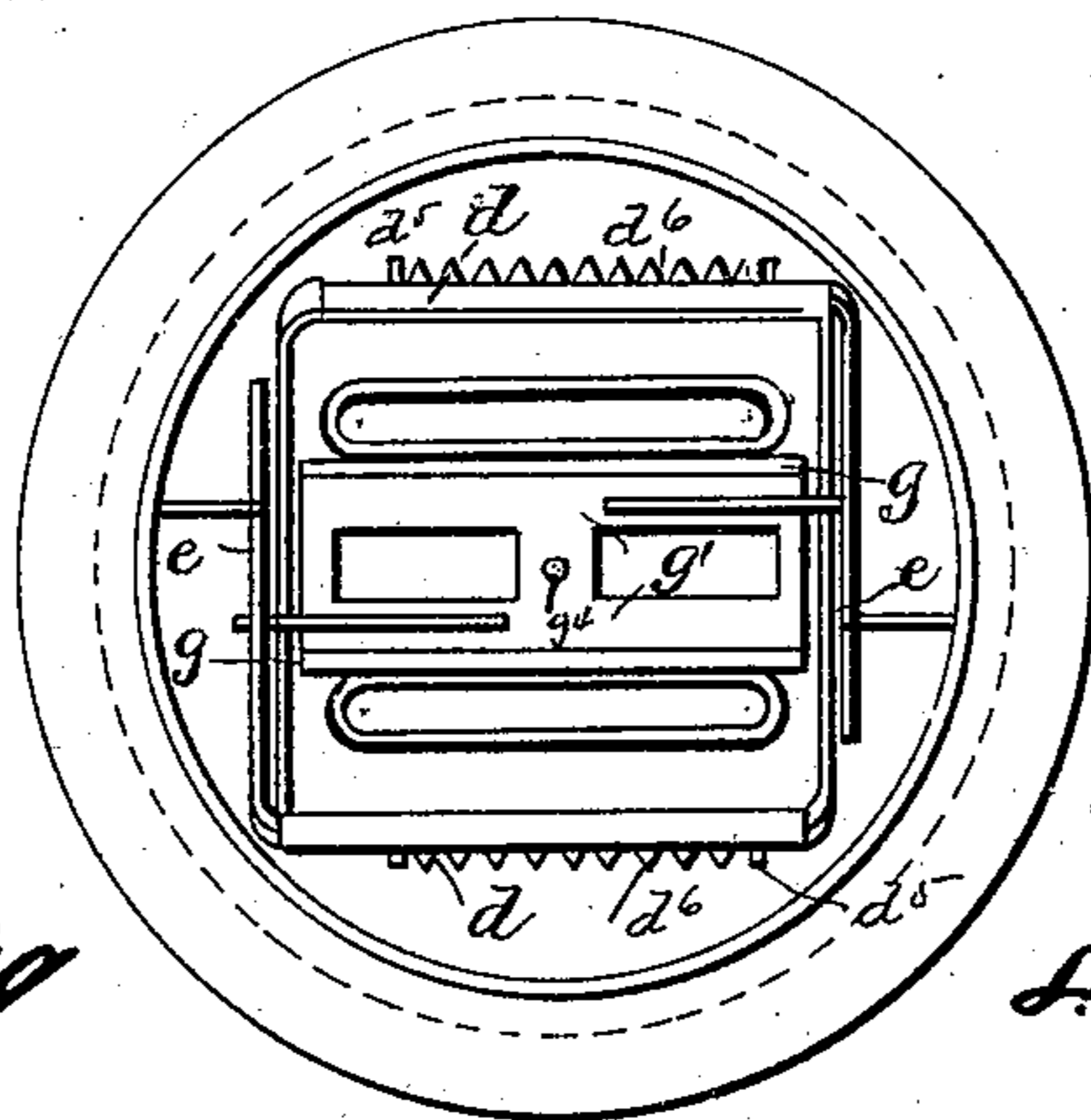


Fig. 9.



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Fig 10.

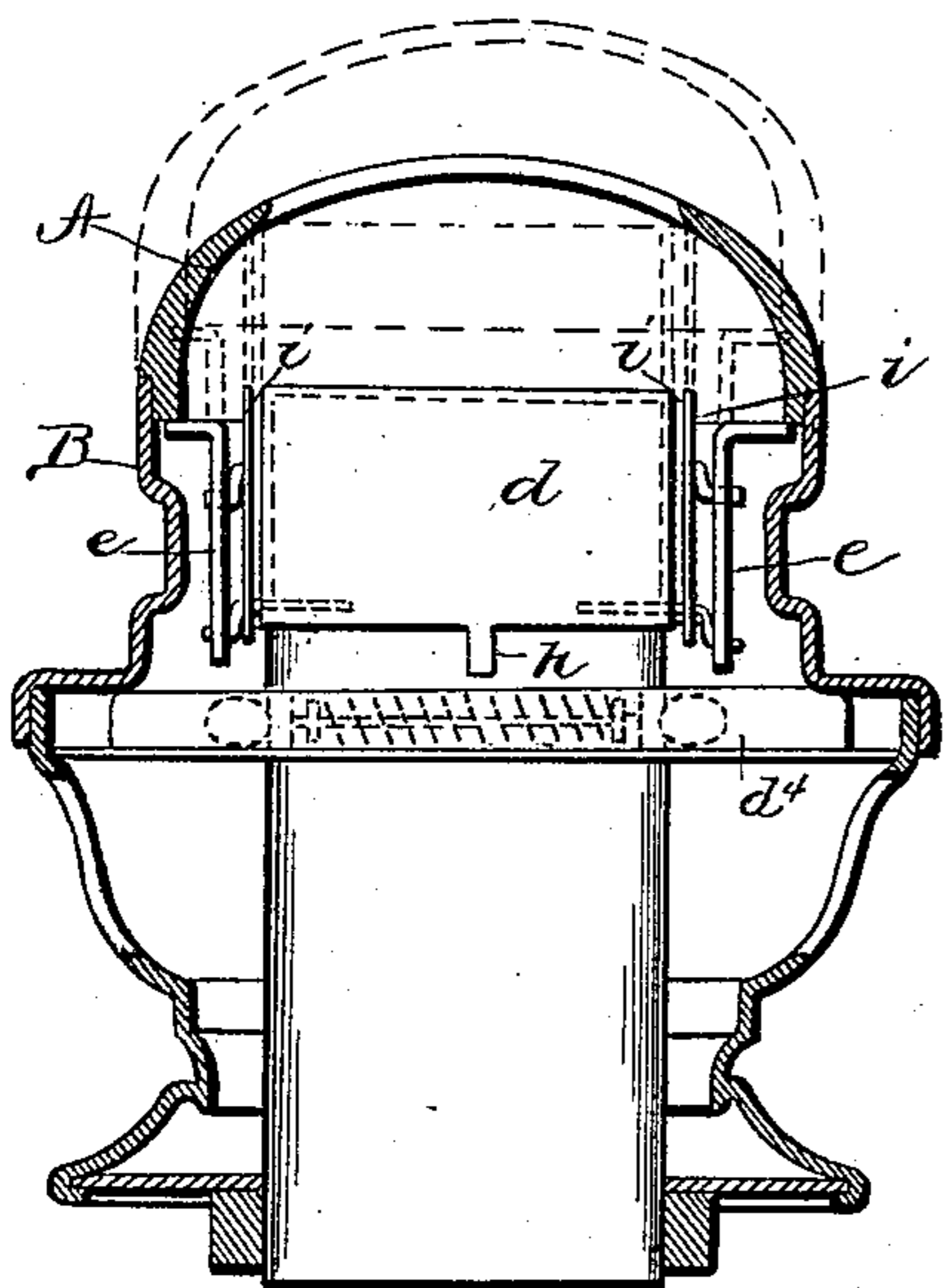


Fig 11.

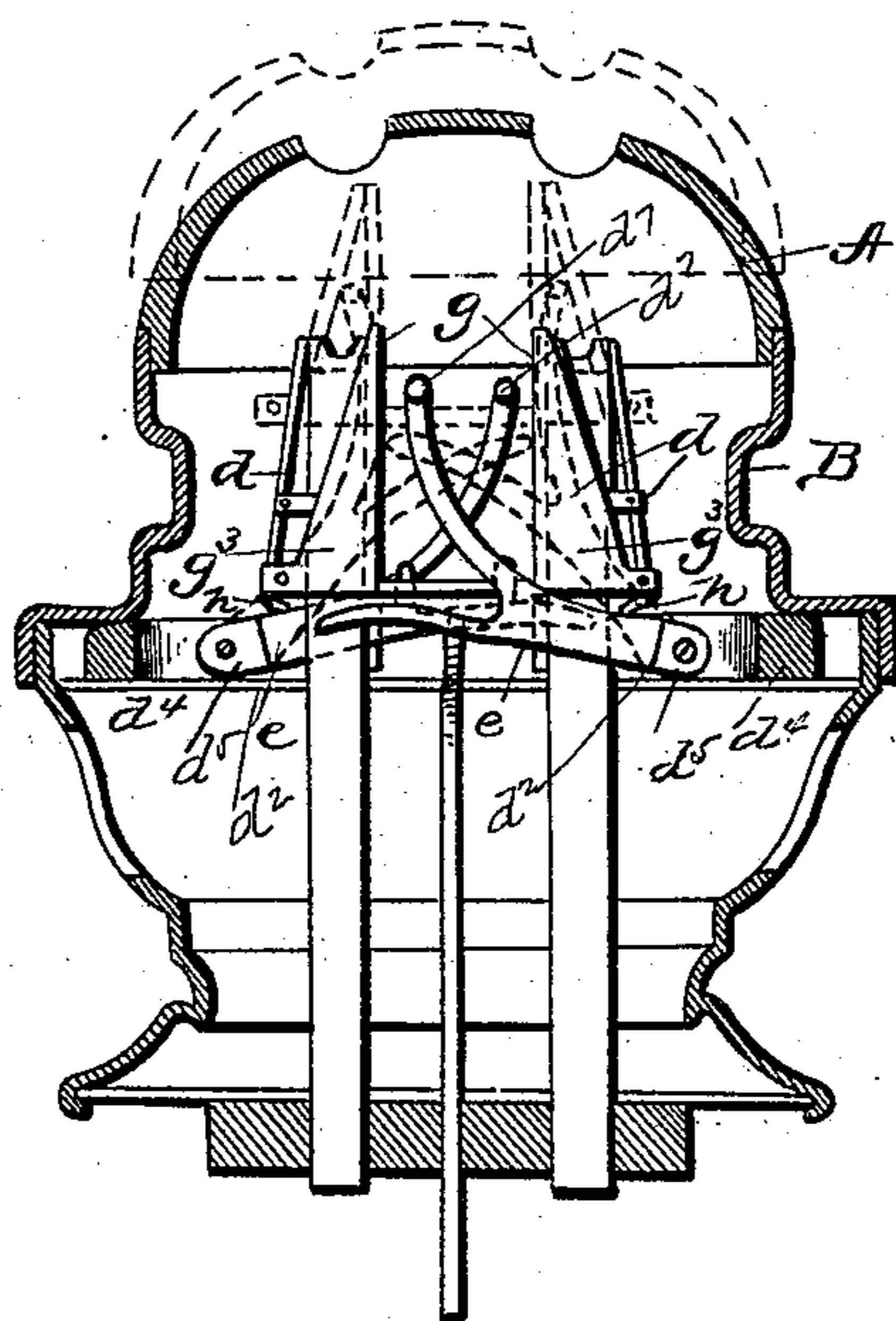
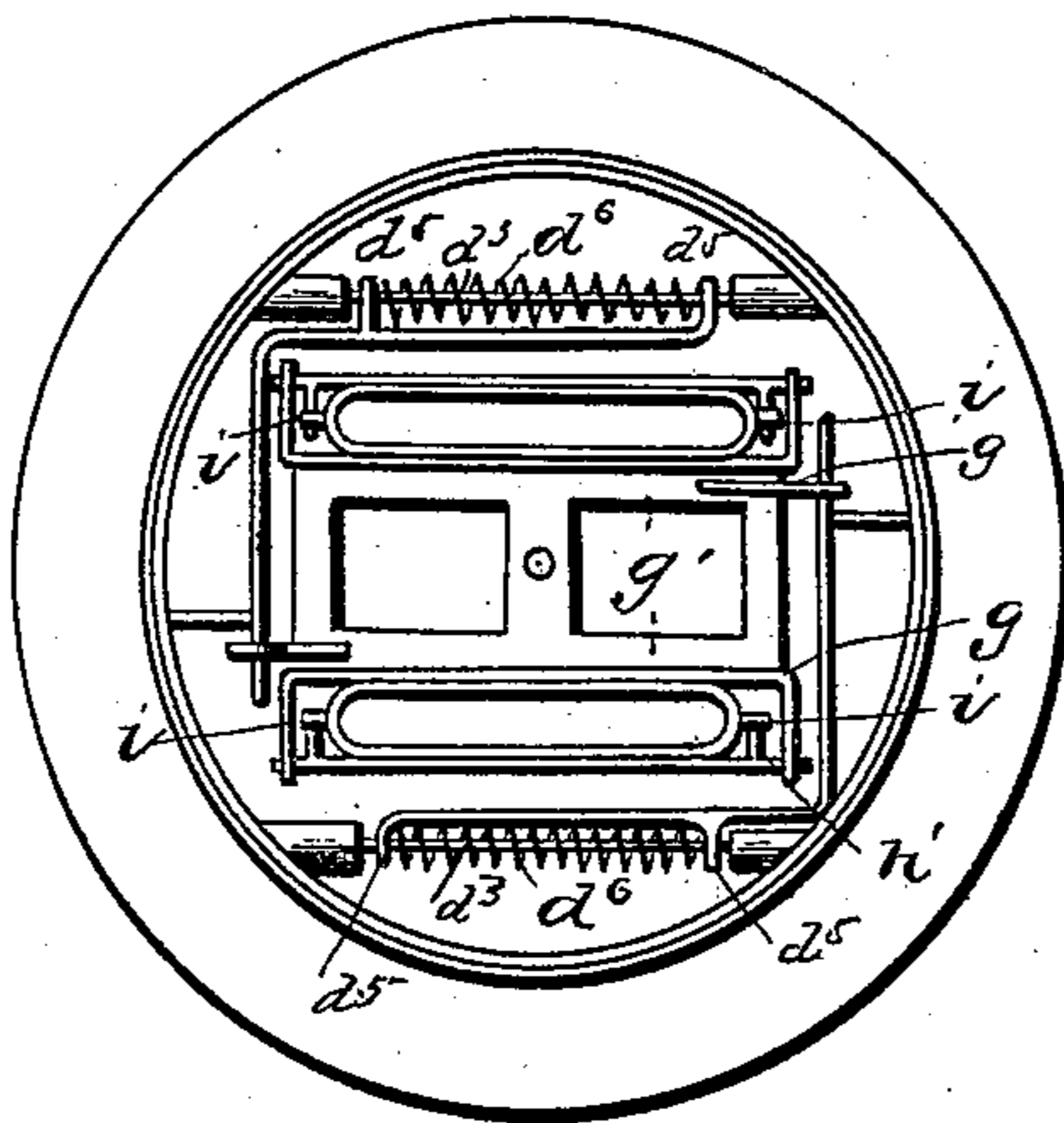


Fig 12.



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# UNITED STATES PATENT OFFICE.

CHARLES EUGENE POSTLETHWAITE, OF SOUTH HACKNEY, ENGLAND.

## LAMP-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 400,789, dated April 2, 1889.

Application filed May 14, 1888. Serial No. 273,896. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES EUGENE POSTLETHWAITE, a subject of the Queen of Great Britain, residing at 30 Cawley Road, South Hackney, England, oil-refiner, have invented new and useful Improvements in Lamp-Extinguishers, of which the following is a specification.

This invention relates to improvements in the construction and arrangement of extinguishing mechanism to be employed with lamps, the principal object of such improvement being to effect the automatic extinguishing of the flame or flames of the lamp when the same is subjected to a sudden or violent jerk or other irregular movement, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figures 1, 2, and 3 are respectively side, end, and top views of the extinguishing mechanism, dome, and burner, the cap of the dome being removed in the last figure. In Figs. 2 and 3 the dome is in section. Fig. 4 is a detached view of one of the extinguishing-shutters. Figs. 5 and 6 show a lever arranged in connection with the extinguishing mechanism, by means of which the flame can be extinguished without moving the detached portion. Figs. 7, 8, and 9 are respectively side, end, and top views of the invention as applied to duplex burners. Figs. 10, 11, and 12 are respectively side, end, and top views of the invention shown applied to a duplex burner and showing a modification in the form of the extinguisher.

I will now describe the said extinguishing mechanism as applied to a single-burner lamp in which the dome is preferably constructed in two parts, in which A represents the detachable portion of the dome, provided with a rim,  $a$ , which rim, when the said detachable portion is in position, fits within the upper part, B, of the dome.

The extinguishing mechanism consists of the two shutters  $d$ , which are each provided at one side with the arm  $d'$ , to which is attached the bar  $d^2$ . This bar is mounted on a pin,  $d^3$ , secured to the frame  $d^4$ , which pin passes through eyes in the projections  $d^5$  on the said bar, and between the said projections is a spring,  $d^6$ , one end of which presses against

or is fixed to the frame, and the opposite end presses against or is fixed to the bar  $d^2$ , so that when the spring is not restrained by the weight consisting of the movable drum portion, as will now be described, it raises the shutter to the closed position. From the upper part of one side of each shutter projects a pin,  $d^7$ . When the detached portion of the dome is in position, it bears on the pins  $d^7$ , and the shutters  $d$  are folded back, whereby the springs  $d^6$  are compressed; but immediately the said detached portion is removed by any unusual jar the springs, being freed from restraint, raise the shutters and cause them to close over the wick, whereby the flame is extinguished. In Figs. 1, 2, and 3 the extinguishing mechanism is shown open in full lines and the reverse position is shown in dotted lines.

In Figs. 5 and 6 is shown a lever arranged in connection with the extinguishing mechanism, by means of which the shutters can be raised and the flame extinguished. In this case the pins  $d^7$  are mounted on the upper ends of levers  $e$ , to the lower ends of which are attached the bars  $e'$ , each bar having projections  $e^2$  through eyes in which the pin  $d^3$  passes. One end of the spring  $d^6$  presses against or is fixed to the frame  $d^4$ , and the opposite end presses against or is fixed to the bar  $e'$ . The bar  $d^2$  is mounted on the pin  $d^3$  independently of the springs. When the detached portion of the dome is in position, the levers  $e$  are depressed and the shutters fall back by reason of their own weight, and on it being desired to extinguish the flame the outer end of the lever F, which is pivoted at  $f$ , is depressed, and the arms of the forked inner end being thereby brought against the lower portions of the shutters the latter are raised into their closed positions. If, when the shutters are open, the detached portion of the dome is displaced, the pins  $d^7$  are freed from the weight thereof, the springs  $d^6$  extend and raise the levers  $e$ , and the projections  $e^2$  come into contact with the bars  $d^2$  and close the shutters. In Figs. 5 and 6 the extinguishing mechanism is shown open, and the reverse position of the shutters when closed by the action of the lever F is shown in dotted lines.

Figs. 7, 8, and 9, as before stated, are re-

spectively side, end, and top views of this invention applied to a duplex burner. The shutters  $d$ , one of which is arranged on the outside of each wick-holder, the levers  $e$ , and parts connected therewith are arranged substantially as shown in Figs. 5 and 6, and the sliding plates  $g$ , attached to the frame  $g'$ , (which is guided by the pin  $g^1$ ), are arranged between the two wick-holders, the said frame being raised when the detached portion of the dome is displaced by the levers  $e$  or the arms  $d'$  coming into contact with the pins  $g^2$ . When the mechanism lastly described is provided with a lever for closing the shutters at will, the said lever may be forked, as hereinbefore described. When closed, the sliding plates  $g$  meet the shutters  $d$ , as shown in dotted lines. In Figs. 7 and 8 the extinguishing mechanism is shown open in full lines and closed in dotted lines.

Figs. 10, 11, and 12 are respectively side, end, and top views of this invention applied to a duplex burner, in which a modified form of extinguishing mechanism is employed. The levers  $e$  are constructed and arranged as hereinbefore described, and the frame  $g'$  and sliding plates  $g$  are substantially the same as shown in Figs. 7, 8, and 9; but the shutter  $d$  consists of a plate which is pivoted to the ends of the arms  $g^3$  of the sliding plates  $g$ . At the lower portion of the plate  $d$  is a projection,  $h$ , which, when the extinguishing mechanism is open, comes into contact with the wick-holder and prevents the said plate from falling back. At the side of the plate  $d$  is a projection,  $h'$ , which in the upward movement of the plate  $d$  comes into contact with the pin  $i$ , projecting from the side of the top of the wick-holder and thereby causes the plate  $d$  to be folded over the top of the wick. When a lever—such as F—is arranged in connection with the modified extinguishing mechanism lastly described, the inner end thereof bears against the frame  $g'$ .

In Figs. 10 and 11 the open position of the extinguishing mechanism is shown in full

lines and the closed position in dotted lines. In Fig. 12 the said mechanism is illustrated in the open position.

The object in making the dome in two parts, as before described, when combined with the automatic extinguishing mechanism is that said extinguishing mechanism may be held open by the detached portion when the same is in position and may be free to automatically close over the flame or flames when said detached portion is displaced.

What I claim is—

1. The automatic extinguisher consisting of the pivoted shutters provided with pins, and the detachable weighted dome to rest upon said pins, and the springs, substantially as described, whereby, when the dome is in place, it serves by its weight upon the pins to hold the shutters open against the action of the springs, as set forth.

2. The extinguishing mechanism for single-burner flat-wick oil-lamps, consisting of the combination of the shutters  $d$  with pins  $d^1$  arms  $d'$ , and bars  $d^2$ , the springs  $d^6$ , and the pins  $d^3$ , and the movable weight supported on the pins  $d^1$ , substantially as described.

3. The extinguishing mechanism for single-burner flat-wick oil-lamps, consisting of the combination of the shutters  $d$ , with arms  $d'$  and bars  $d^2$ , the spring  $d^6$ , the pins  $d^3$ , the levers  $e$ , with bars  $e'$ , pins  $d^1$ , projection  $e$  and the lever F, and movable weight supported on the pins  $d^1$ , substantially as described.

4. The extinguishing mechanism of duplex flat-wick oil-lamps, consisting of the shutters  $d$ , with arms  $d'$  and bars  $d^2$ , the springs  $d^6$ , the pins  $d^3$ , the levers  $e$ , with bars  $e'$ , pins  $d^1$ , and projections  $e^2$ , the frame  $g'$ , and movable weight supported on the pins  $d^1$ , substantially as described.

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