

C. ST. JOHN.
Lamp Burner.

No. 71,242.

Patented Nov. 19, 1867.

FIG. 1

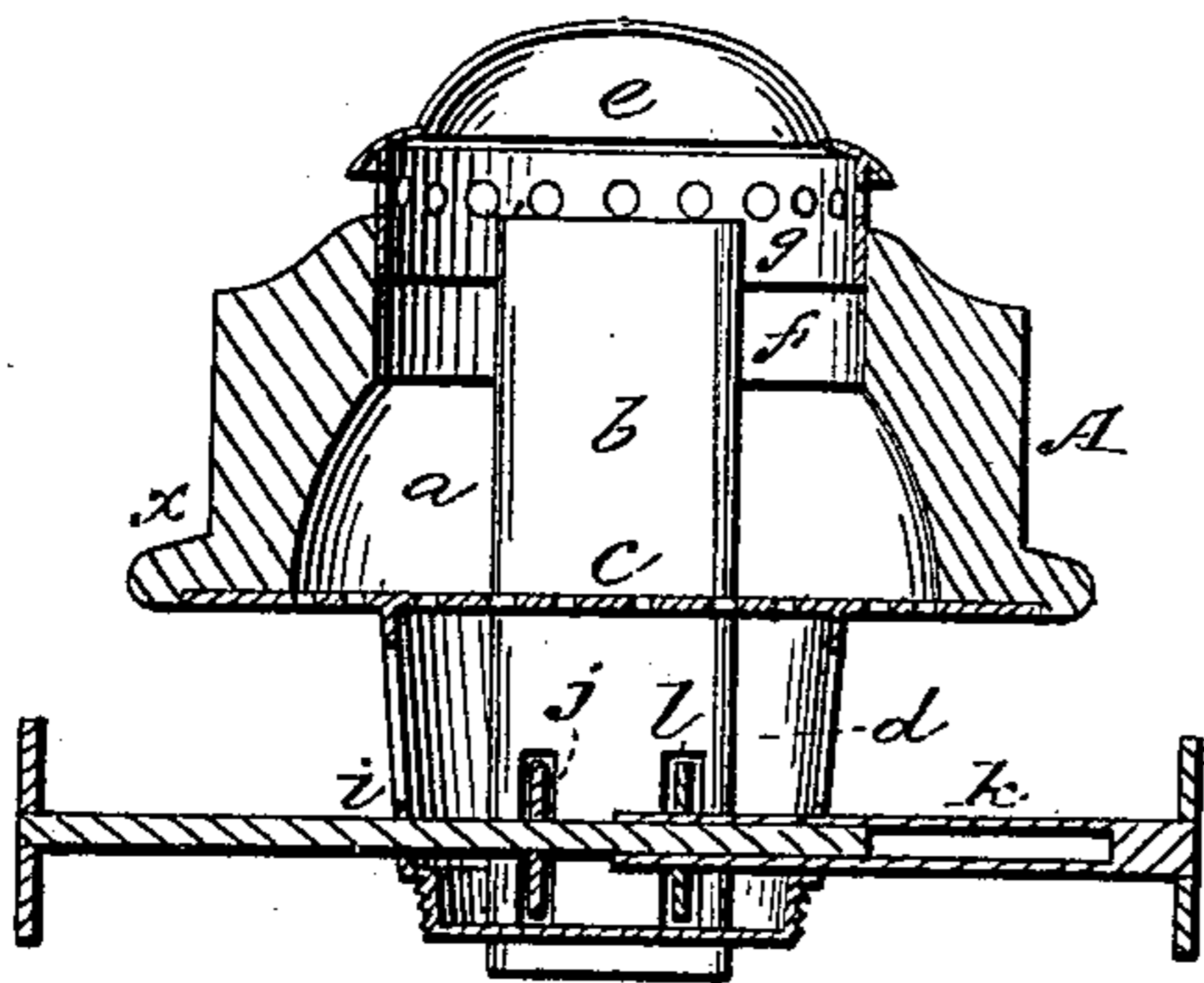


FIG. 2

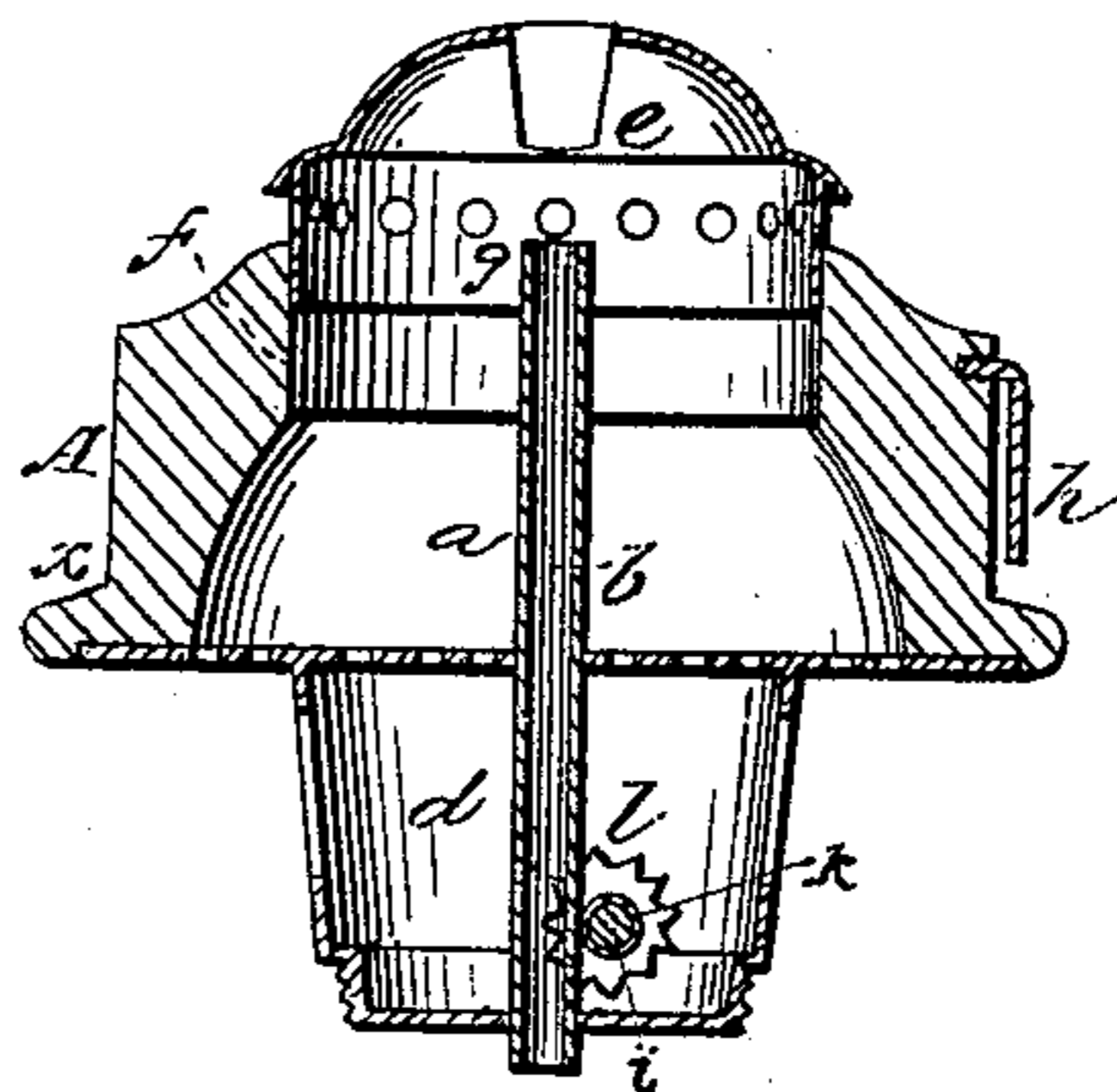


FIG. 3

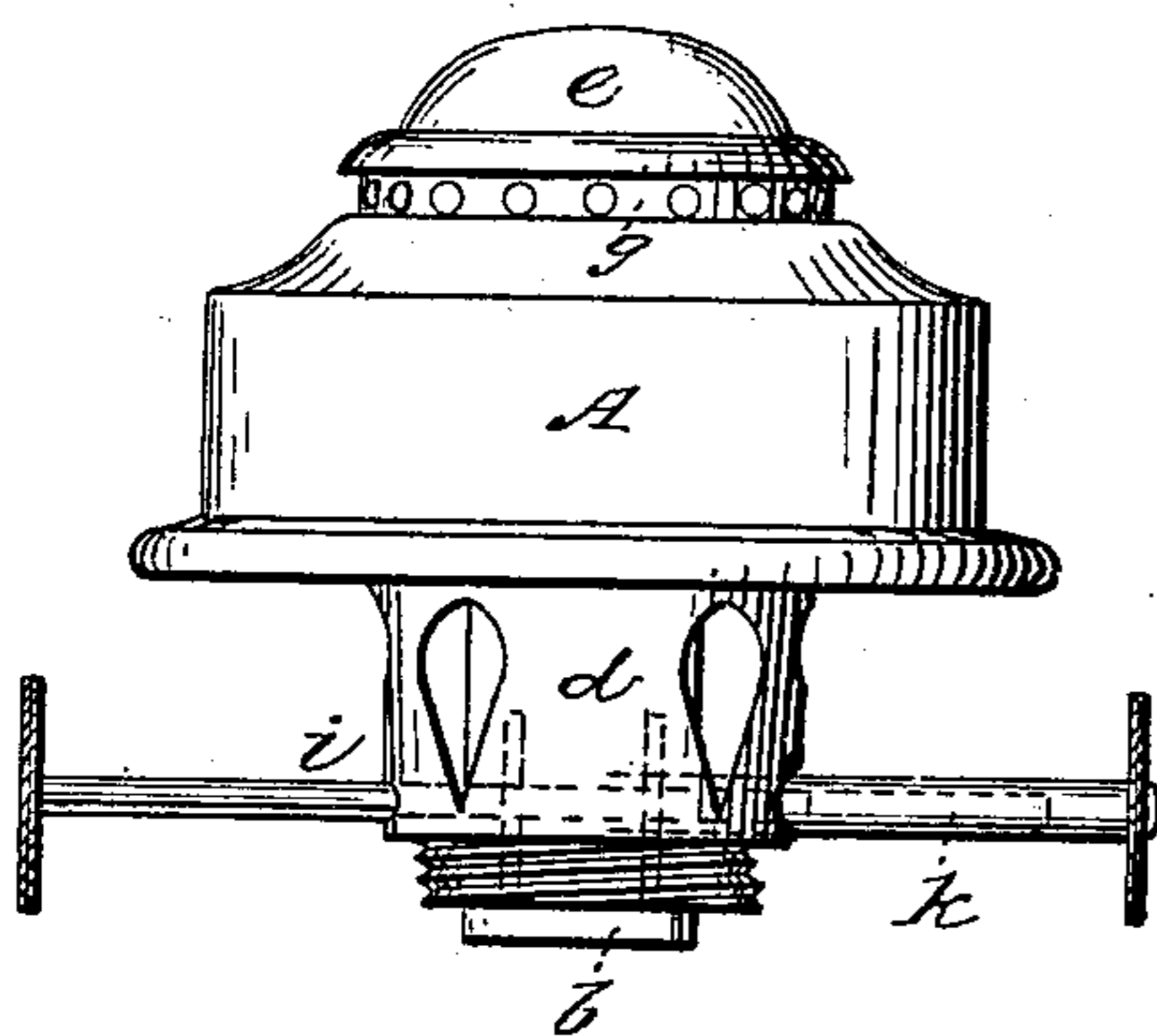
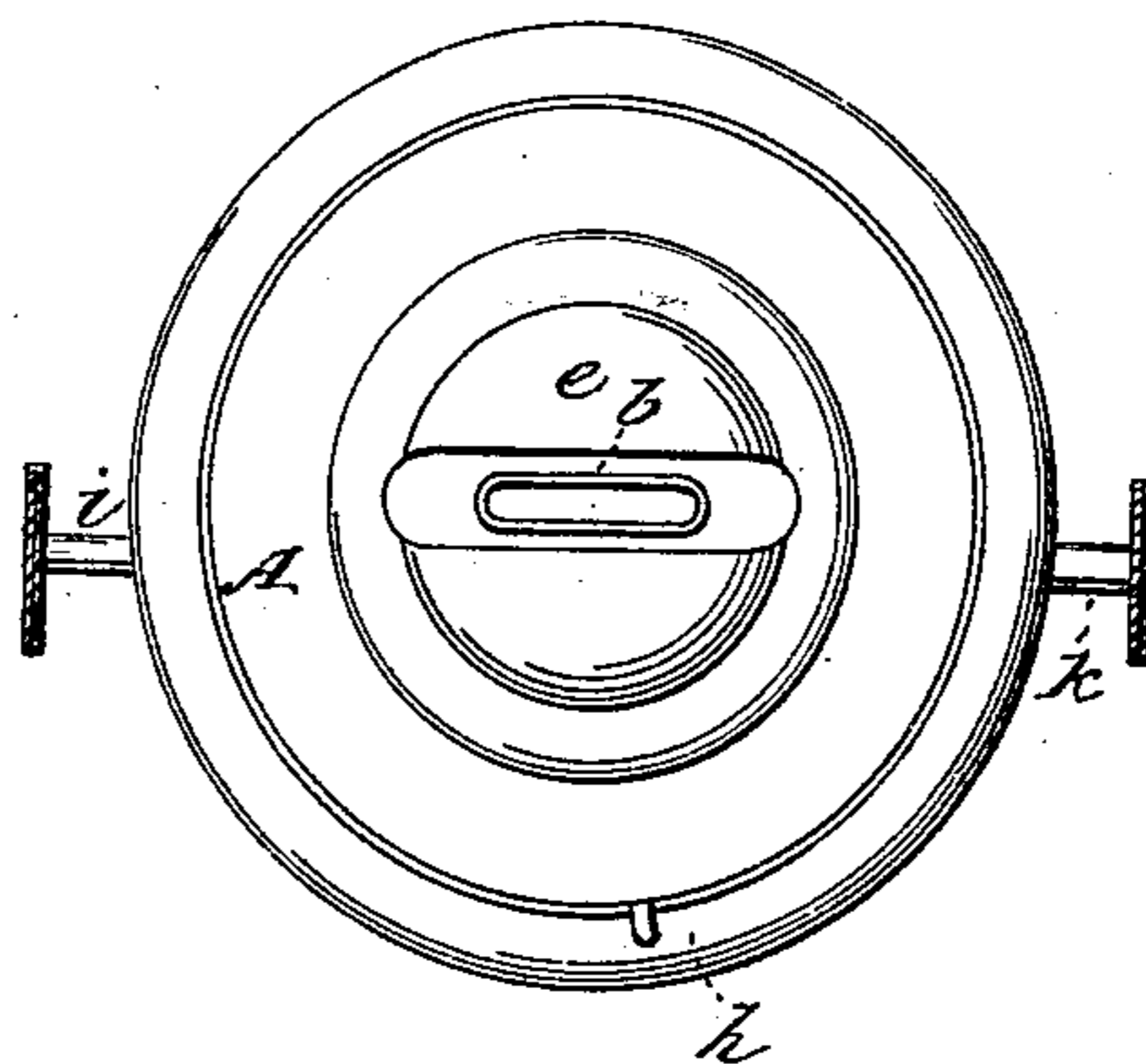


FIG. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

CORNELIUS ST. JOHN, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. 71,242, dated November 19, 1867.

To all whom it may concern :

Be it known that I, CORNELIUS ST. JOHN, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Lamp-Burners; and I do hereby declare the following to be a full, clear, and exact description of the same, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figures 1 and 2 are vertical sections; Fig. 3 a side elevation, and Fig. 4 a top view, of a lamp-burner constructed in accordance with my invention.

My present invention is an improvement in that class of lamp-burners generally known as "kerosene-burners," or those for burning light volatile oils for purposes of illumination, &c., one object of the invention being to so construct the burner that the lower part of the chimney employed with such burner shall be maintained in a comparatively cool state, or one sufficiently so to enable such chimney to be handled with impunity at any time while the wick is inflamed; the same construction which accomplishes this object also enabling me to produce a burner at very small cost.

Another object of this invention is to insulate the burner from the body of the lamp by the interposition of a non-conducting material composing the body of such burner, thus preventing possibility of heating and vaporizing the contents of the lamp by radiation, and enabling a highly volatile substance to be employed, if desirable.

The invention further has for its object, to provide a ready means of regulating or adjusting the upper surface of the wick before or after being inflamed, for the purpose of producing an even flame, and this without the necessity of extinguishing the flame or removing the chimney.

By referring to the accompanying drawings, in the different figures of which like letters indicate like parts, it will be seen that the body of the burner is denoted by the letter A, and as composed of a cylinder of wood suitably formed for supporting upon its exterior surface the chimney, which fits over it and rests upon the flange *x*, and with its interior or chamber *a* of sufficient capacity to supply the proper amount of oxygen to the flame of the wick, the tube for receiving such wick

being shown at *b* as supported in part by a foraminous shelf or plate, *c*, forming the bottom of chamber *a*, and by a smaller cylindrical perforated extension or neck *d*, the lower part of such neck being furnished with a male screw in the ordinary manner for application to the mouth of the lamp.

The conical deflector, or that shallow portion of one necessary to my invention, is shown at *e* as surmounting the cylinder A, and connected to its mouth or opening *f* by a short foraminous tube, *g*. The air for admixture with the flame passes upward through the foraminous bottom *c*, thence upward to and about the top of the wick, tube, and the deflector *e*, the interstices in the tube *g* preventing to a great extent liability of radiation of heat from such deflector to the body of the burner, and also aiding in a beneficial distribution of air about the parts.

In order that the burner may accommodate itself to slight differences in diameter of chimneys of the same grade of size, I apply to one side of the body A a small spring-wire, *h*, one end of which is bent at a right angle and screwed into such body A. By turning this wire in one or the other direction it will approach or recede from the burner, according to the size of the chimney, which it will securely retain in place.

It will be self-evident, besides having been proved in practice, that as wood is a good non-conductor of heat, the lower part of the chimney will be maintained in a cool state, and so that it may be handled at any time while the lamp is in operation. For the same reason it will be apparent that heat cannot be radiated to any extent from the deflector *e* to the body of the lamp and heat its contents.

The wick elevating and adjusting device is constructed as follows: A shaft, *i*, carrying one notched wheel *j* is supported in a hole made in one side of the neck *d*, and has its inner end extending into a tubular shaft, *k*, supported in like manner in the opposite side of the neck *d*, and to which is affixed the second notched wheel *l*, the outer ends of the shaft *i* and *k* being provided with the usual milled head for rotating them. The shaft *i* fits within the tubular shaft *k* with sufficient friction to cause both shafts to revolve together and elevate the wick by power applied to either of such shafts. Should the two sides

of the upper surface of the wick, as is often the case, be of unequal height, notwithstanding the greatest care exercised in trimming it, by turning either one or the other of the shafts *i* or *k* in the right direction, and holding the other shaft immovable, the two edges or corners of the wick may be adjusted while the wick is inflamed until its flame is even. By this arrangement of the two shafts *i* and *k* the wick may be raised or lowered from either side, the advantage of which will readily manifest itself to intelligent persons.

I claim—

1. The combination, with the base and wick-tube of a lamp-burner, of the cylindrical chimney rest and supporter A, of wood or other suitable material which is a non-conductor of heat, substantially in the manner and for the purposes herein shown and specified.

2. The combination, with the wick-tube and base of the burner, of the chimney-rest A, deflector *e*, and perforated plates, by which said chimney-rest and deflector are supported and held in position with relation to the wick-tube, substantially as herein shown and set forth.

3. The adjustable spring applied to the side of the burner for sustaining the chimney in place, essentially as set forth.

4. The peculiar arrangement and application of the wick-elevating shafts *i k*, essentially as herein shown and described, and productive of advantages as explained.

CORNELIUS ST. JOHN.

Witnesses:

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FREDERICK CURTIS.