

No. 806,257.

PATENTED DEC. 5, 1905.

H. JACOBS.
INCANDESCENT OIL LAMP.
APPLICATION FILED JULY 11, 1905.

Fig. 1.

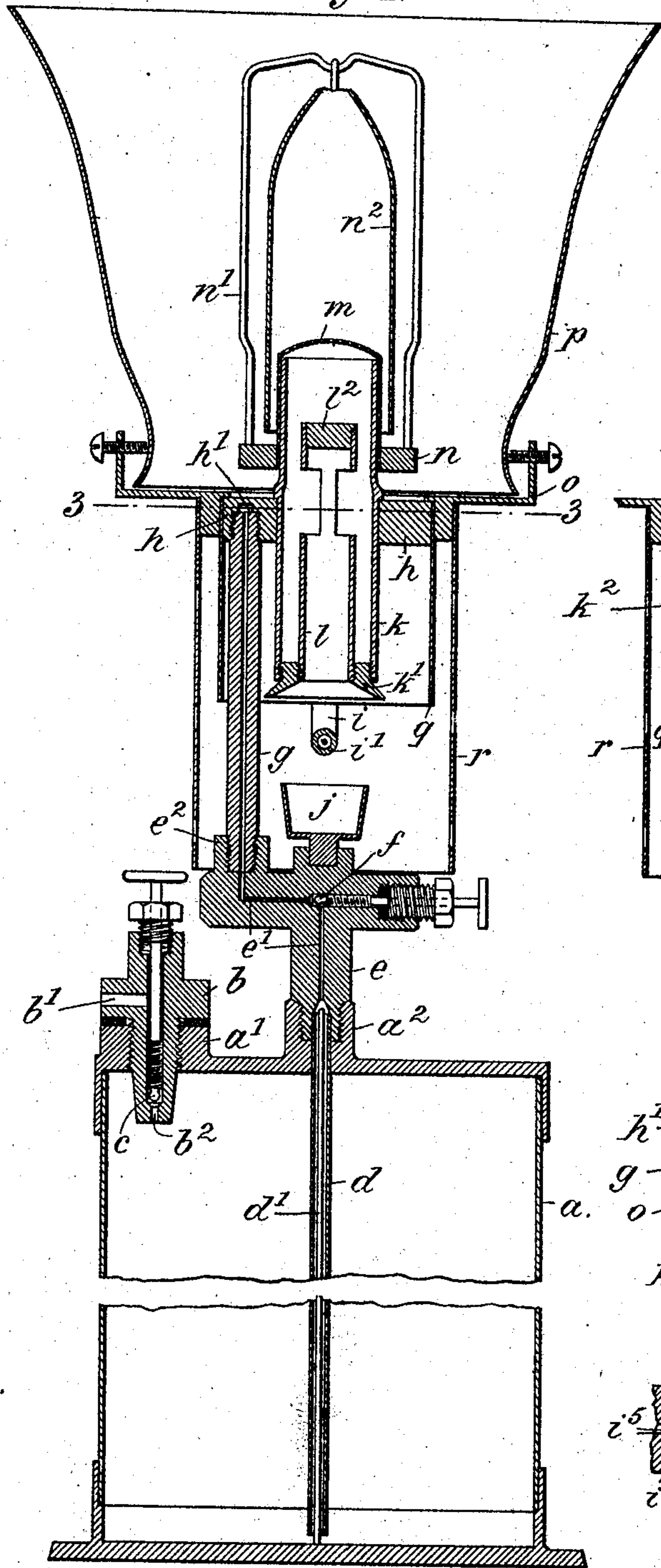


Fig. 2.

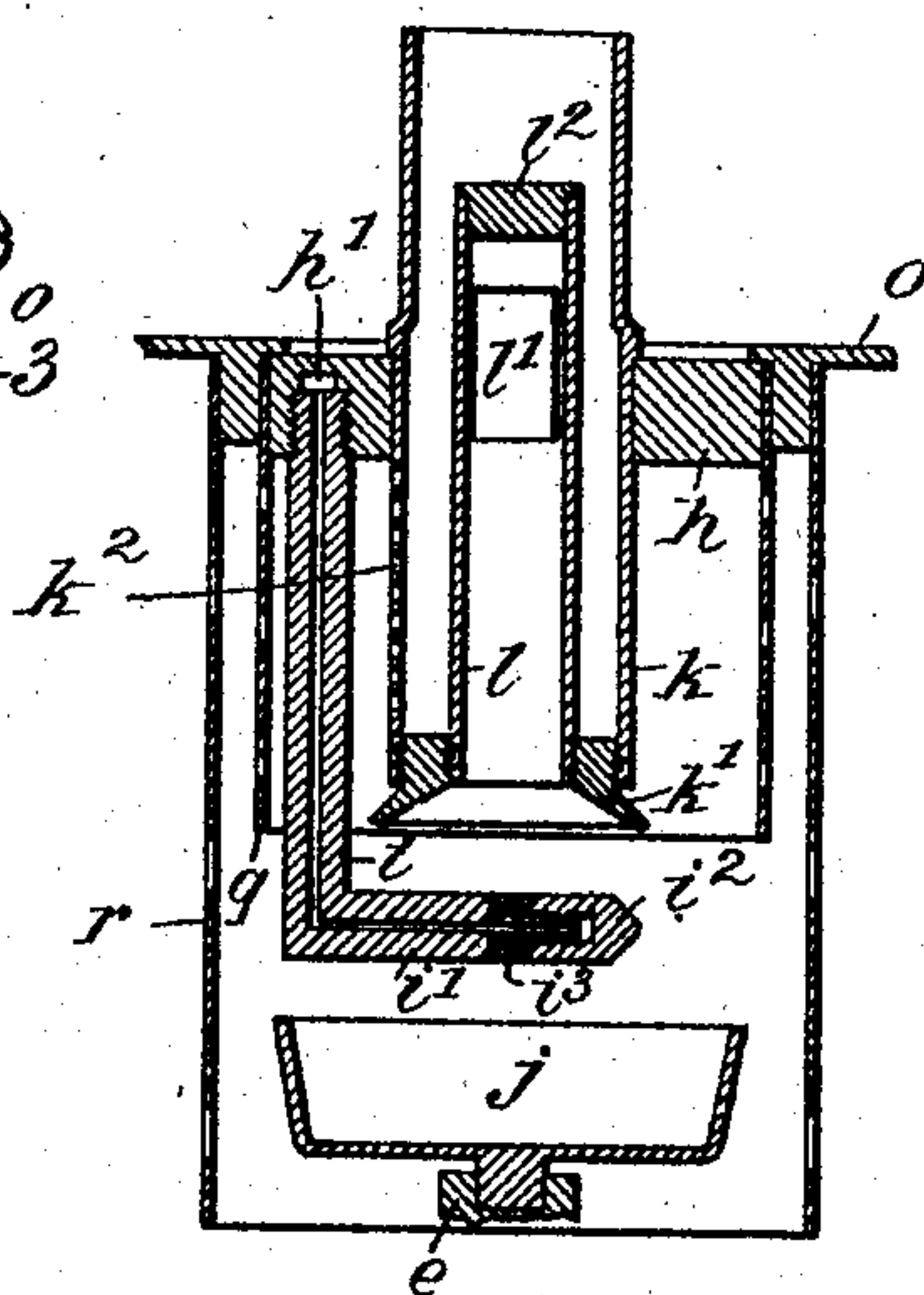


Fig. 3.

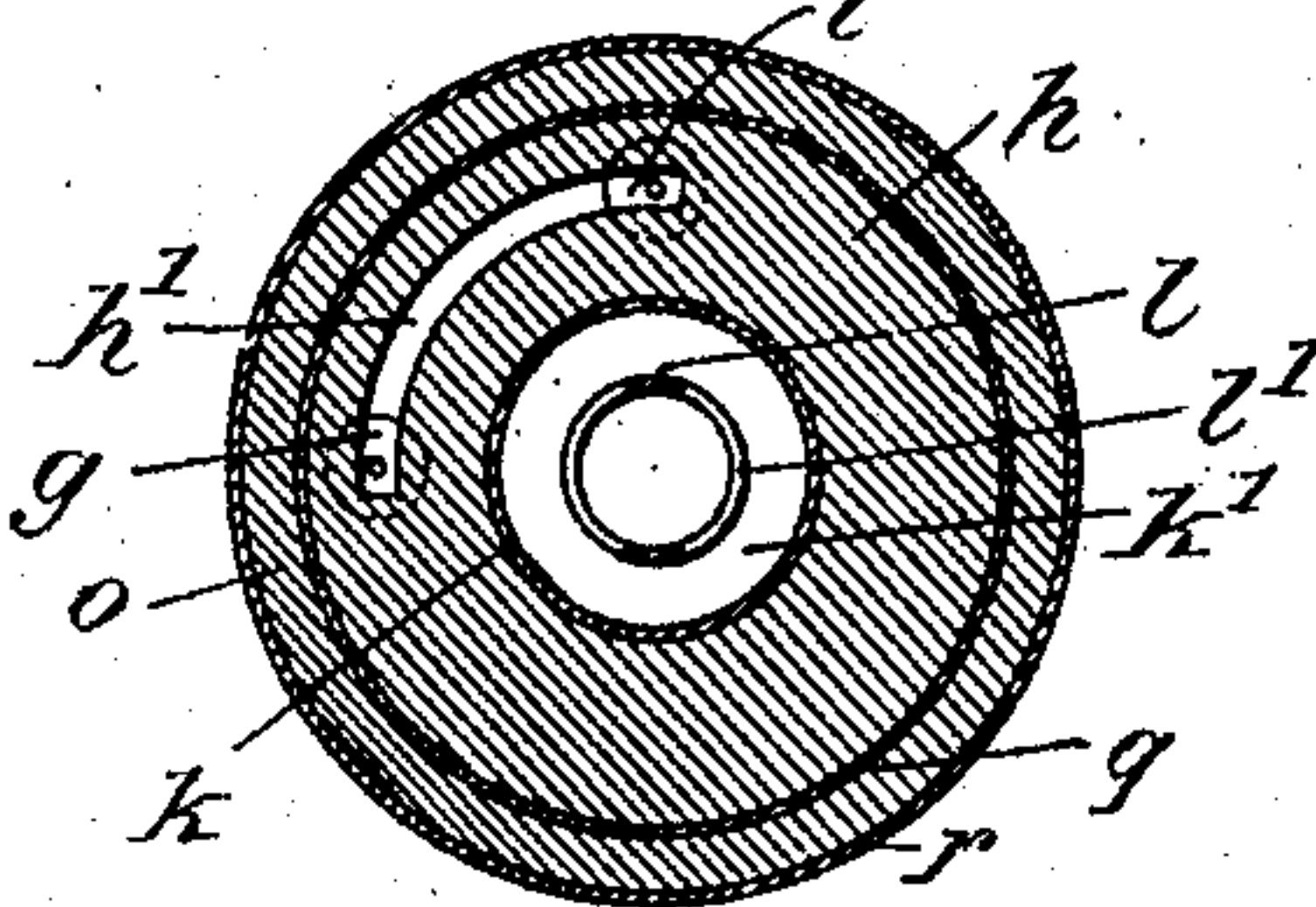


Fig. 4.

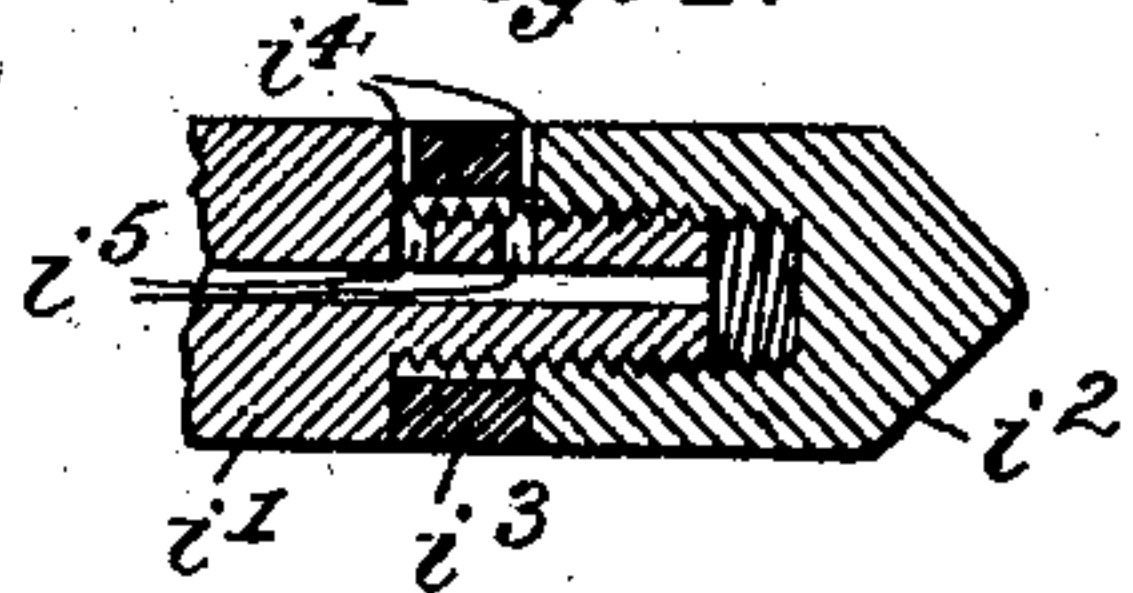
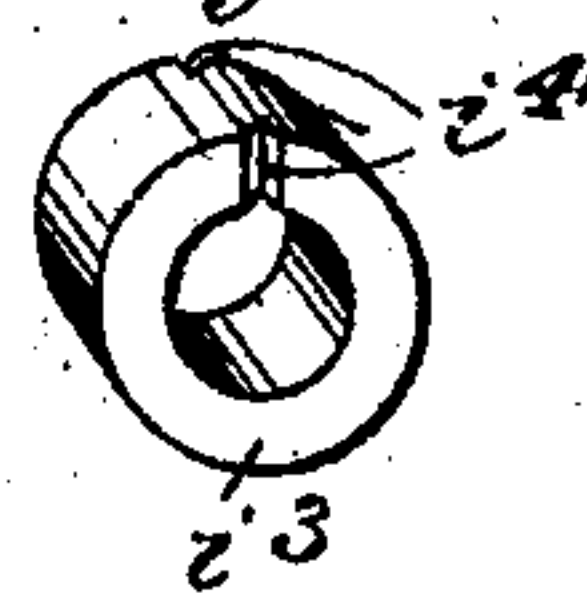


Fig. 5.



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UNITED STATES PATENT OFFICE.

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INCANDESCENT OIL-LAMP.

No. 806,257.

Specification of Letters Patent.

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Application filed July 11, 1905. Serial No. 269,190.

To all whom it may concern:

Be it known that I, HILARY JACOBS, a citizen of the United States, residing at New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Incandescent Oil-Lamps, of which the following is a specification.

This invention relates to an incandescent lamp of novel construction for burning vaporized hydrocarbon oil. The lamp effects a thorough combustion of the fuel and burns with a bright and steady flame.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of my improved lamp; Fig. 2, a similar section of part thereof, taken at right angle to Fig. 1; Fig. 3, a horizontal section on line 3-3, Fig. 1; Fig. 4, a detail of part of the vaporizing-tube, and Fig. 5 a detail of the nozzle.

The letter *a* indicates the reservoir of the lamp, having a nozzle *a'* for the introduction of the oil. Into this nozzle fits a plug *b*, having duct *b'*, that may be connected to an air-pump. The outlet *b''* of the plug is controlled by a valve *c*, so that by the means described the oil in reservoir *a* may be placed under air-pressure. The oil ascends through a tube *d*, extending through reservoir *a* and communicating therewith by its open lower end. In order to conveniently reduce the capacity of the tube, a rod *d'*, of somewhat smaller diameter, is inclosed within the same.

The top of reservoir *a* has a threaded nipple *a''*, into which is screwed a stem *e*, having duct *e'*, that communicates with the open upper end of tube *d*. The duct *e'* first extends upward, then sidewise, and then again upward and is controlled by a valve *f*. At its upper end the duct communicates with the lower end of an upright feed-pipe *g*, which is tapped into a nipple *e''* of stem *e*. The pipe *g* supports an annular disk *h*, from which depends a vaporizing-tube *i*, Fig. 2. A duct *h'* of disk *h*, Fig. 3, establishes communication between the tubes *g* and *i*. The tube *i* terminates in a horizontal arm *i''*, the reduced threaded end of which is engaged by a cap-nut *i'''*, Fig. 4. The threaded end of the arm is provided with discharge-orifices *i''''* and is embraced by a tubular sleeve or burner *i'''''*, having radial notches

i'''''', that communicate with orifices *i'''''''*. The burner *i'''''* is confined between the end of arm *i''* and the nut *i'''*, so that by manipulating the latter the burner may be readily removed or remounted.

Immediately below nozzle *i'''''* there is supported upon stem *e* a cup *j*, adapted to contain the ignition charge.

Through the central opening of disk *h* extends an outer tube *k*, which projects above as well as below the disk. The lower end of tube *k* carries a ring *k'*, which supports an inner or mixing tube *l*, inclosed within tube *k*. The tube *l* has lateral discharge-openings *l'* and is closed at its top by a plug *l''*. The upper end of outer tube *k* is partly closed by a perforated diaphragm *m*, which constitutes the burner. From a base-ring *n*, encircling tube *k*, projects the holder *n'* of the mantle *n''*.

Opposite to vaporizer *i* the tube *k* is provided with a number of perforations *k''*. A gallery *o*, fitted around disk *h*, supports the globe *p*. From the gallery depend a pair of perforated concentric wind-guards *q* and *r*, of which the inner shorter guard *q* projects beneath tubes *k* and *l*, while the outer longer guard *r* extends below cup *j*.

In starting the lamp the charge in cup *j* is ignited to heat vaporizer *i*. The valve *f* is then opened, so that the oil forced up from reservoir *a* is vaporized and will issue from nozzle *i'''''* in a gaseous form. This gas will be mixed with air within tube *l*, and the bulk of the combustible mixture thus formed will flow outward through openings *l'* and up through tube *k* to be ignited at burner *m*. Part of the mixture will flow from openings *l'* downward and out through the openings *k''* to be there ignited. The supplemental flame thus produced constitutes the heating charge which vaporizes the oil in vaporizer *i*.

What I claim is—

1. An incandescent oil-lamp provided with a reservoir, a valve-controlled feed-tube communicating therewith, an annular disk supported by the feed-tube, a vaporizer depending from the disk and communicating with the feed-tube, an outer tube projecting above and below the disk and perforated opposite the vaporizer, a ring on the lower end of the outer

tube, and an inner mixing-tube supported by said ring and having upper discharge-orifices which open into the outer tube, substantially as specified.

- 5 2. An incandescent oil-lamp provided with a vaporizing-tube having a reduced threaded perforated end, a cap-nut engaging the same, and a notched tubular sleeve embracing the

threaded end and engaged by the nut, substantially as specified. 10

Signed by me at New York city, (Manhattan,) New York, this 10th day of July, 1905.
HILARY JACOBS.

Witnesses:

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