

No. 617,695.

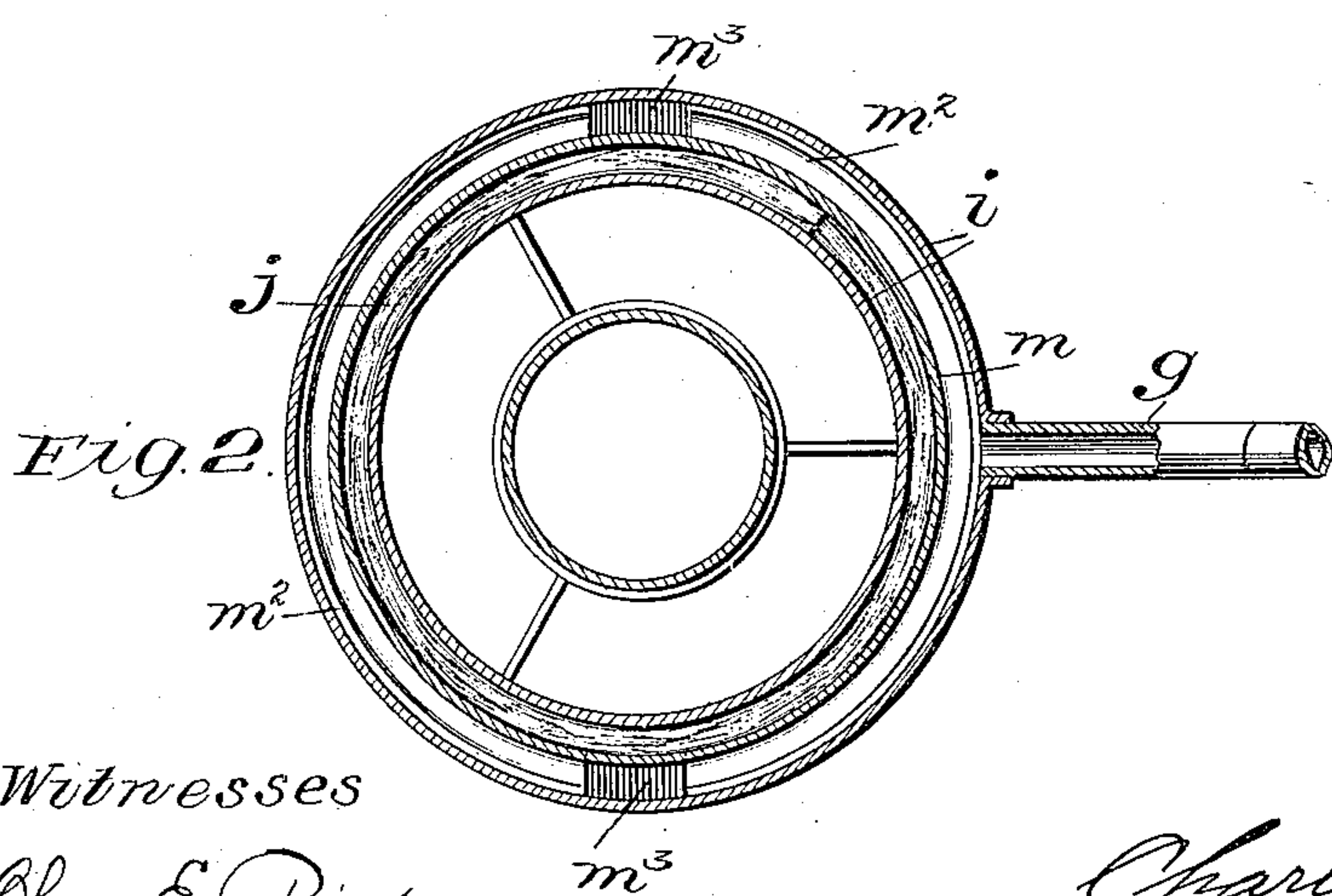
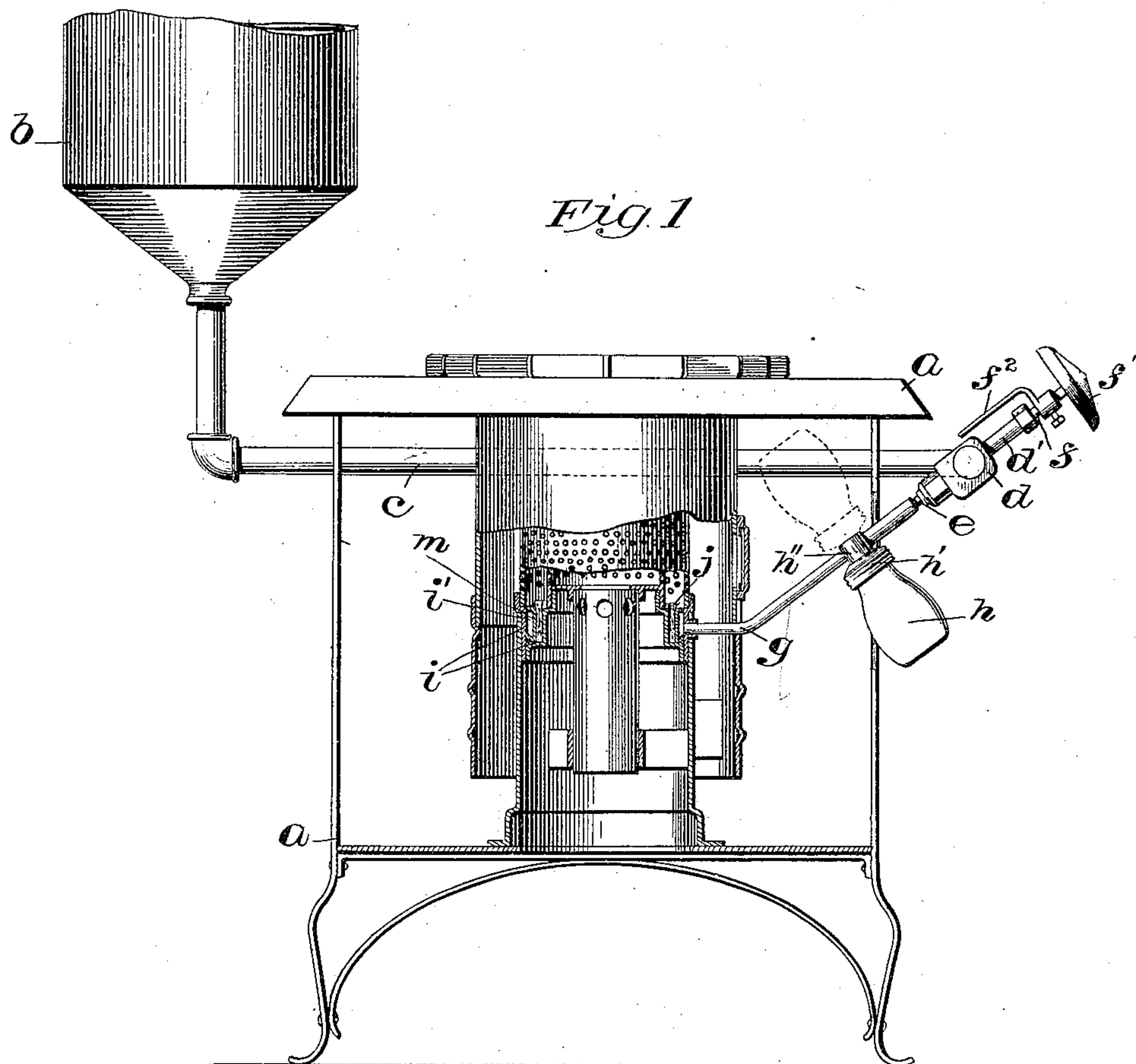
Patented Jan. 10, 1899.

C. H. BOECK.
OIL STOVE.

(Application filed Aug. 18, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

Chas. E. Piordan

C. Davis

Inventor

Charles H. Boeck

By John C. Howell
Att'y

No. 617,695.

Patented Jan. 10, 1899.

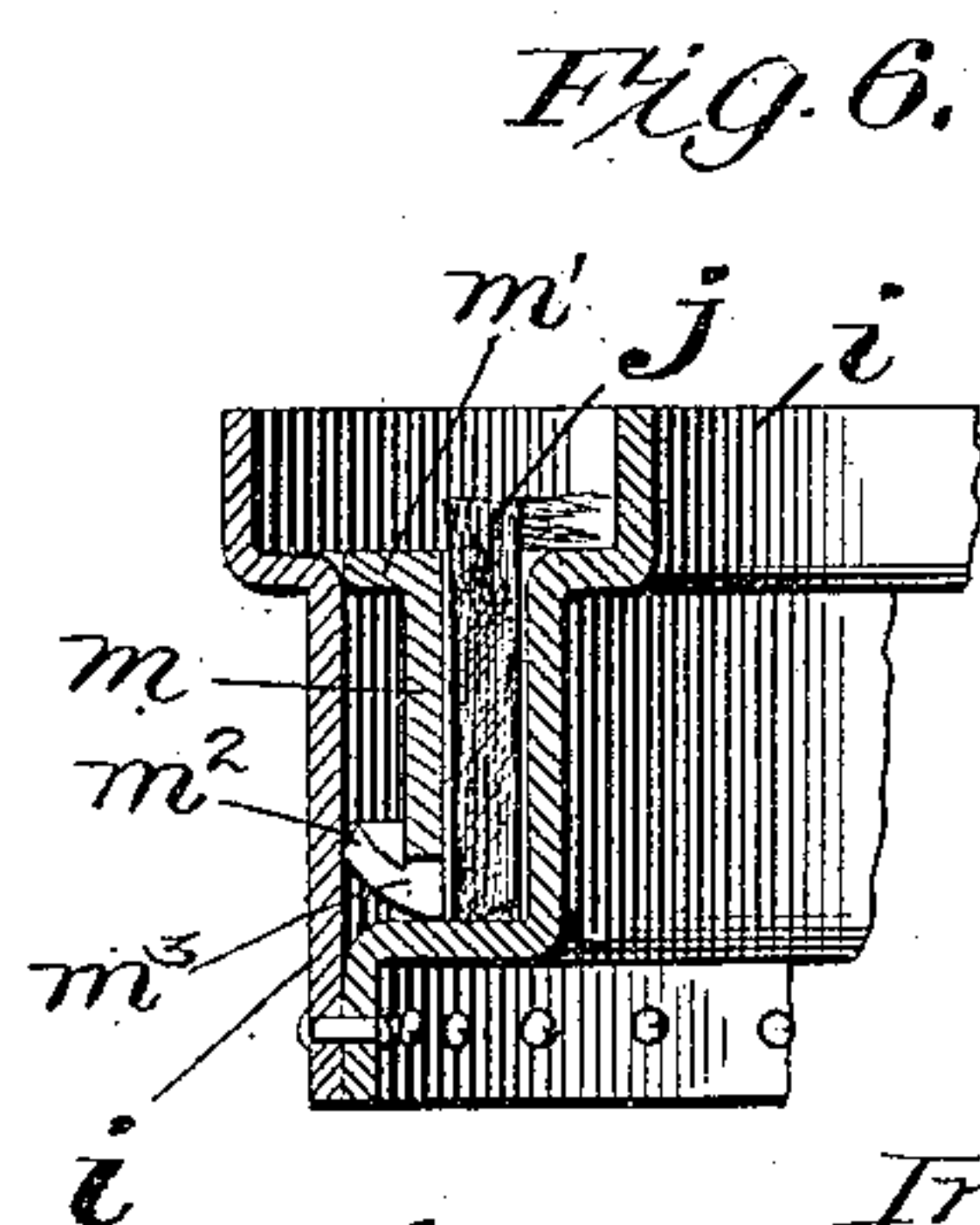
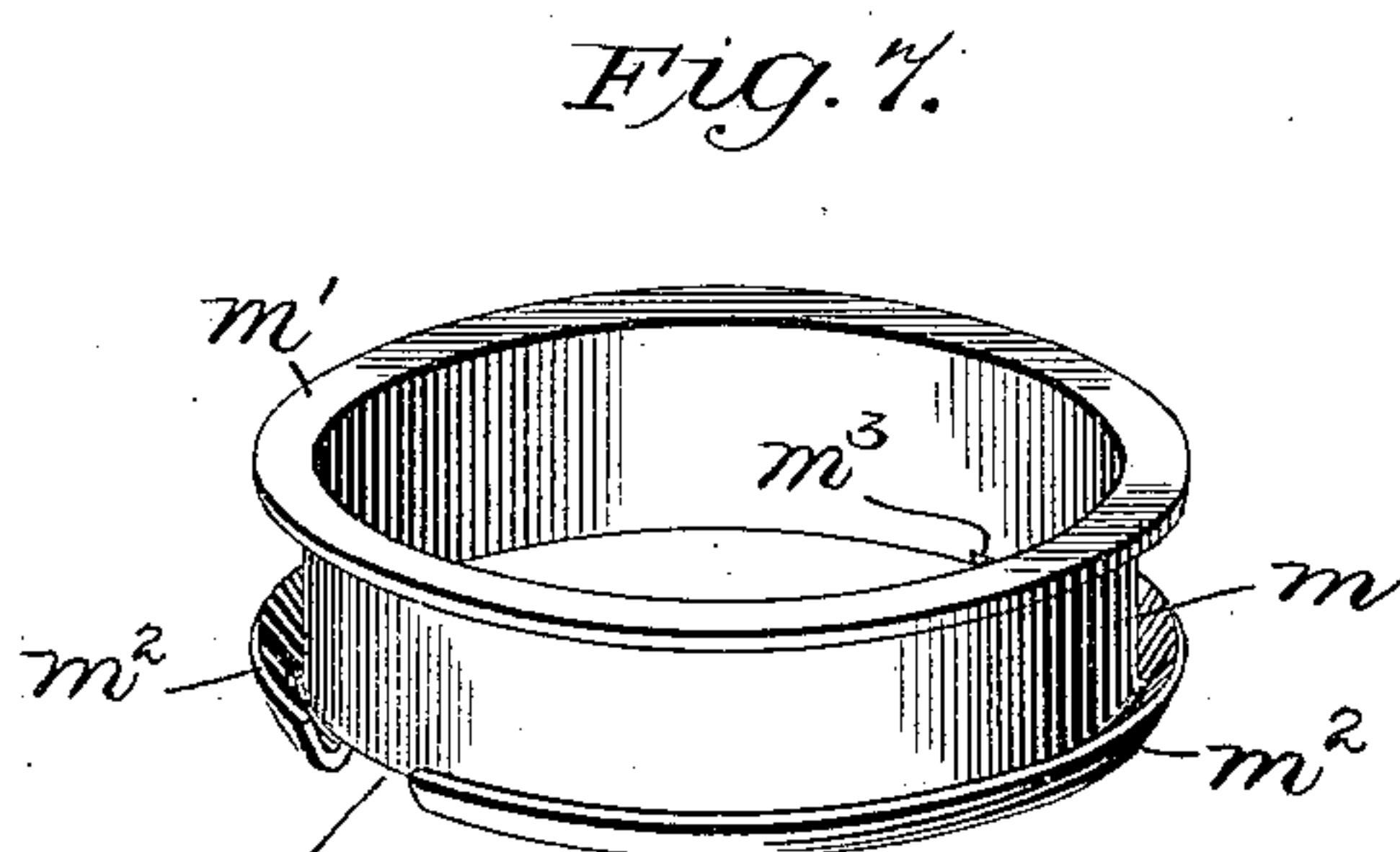
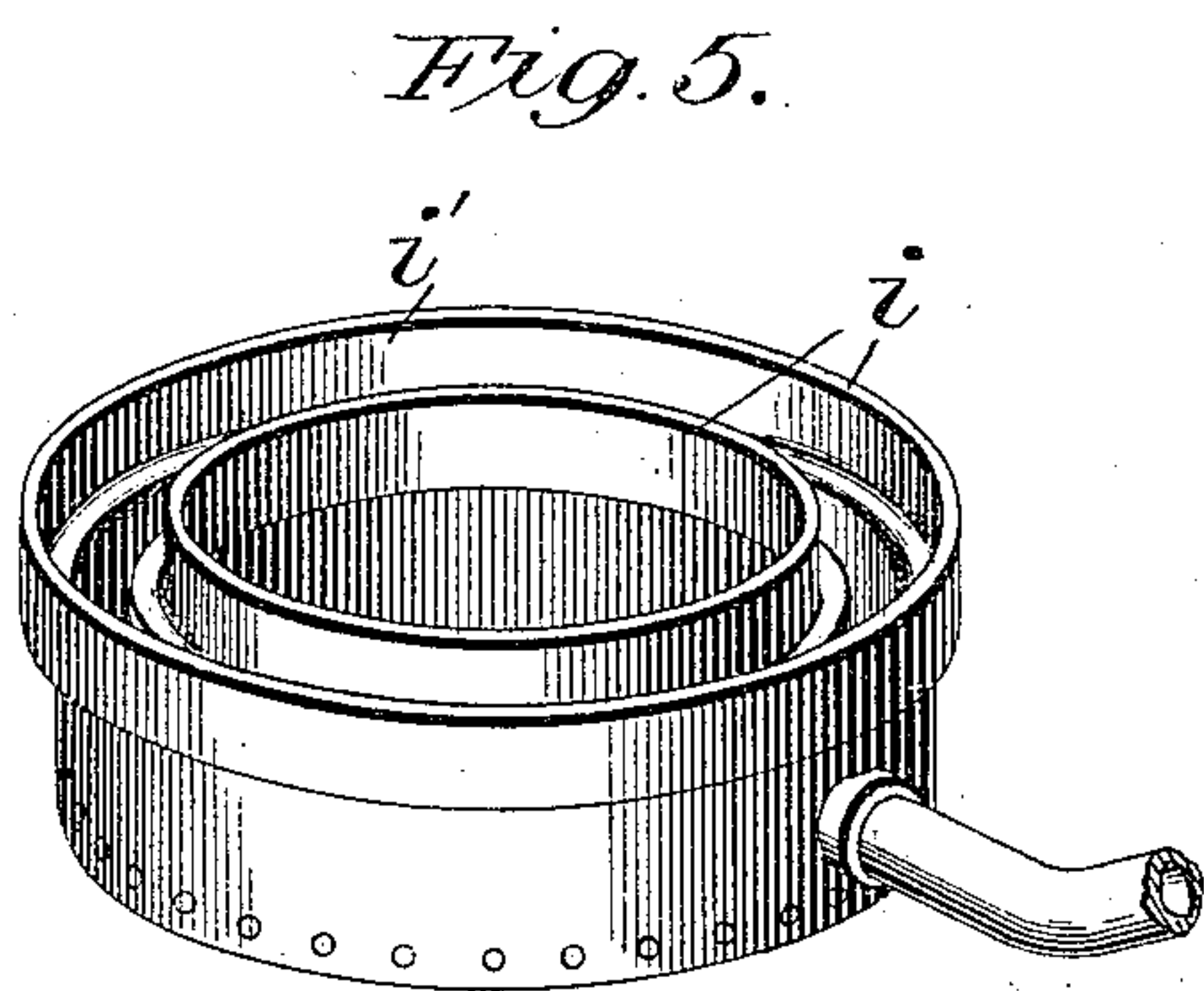
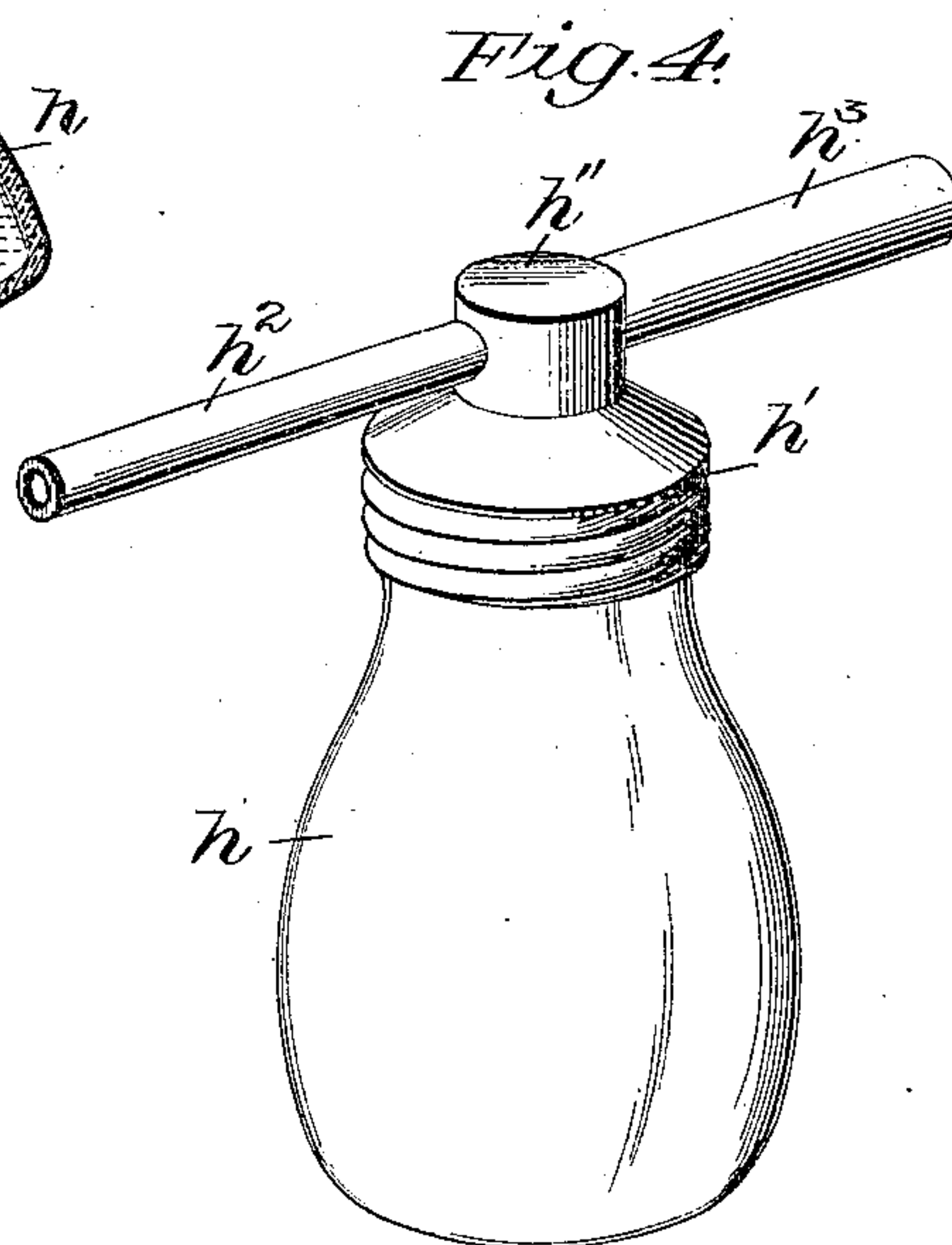
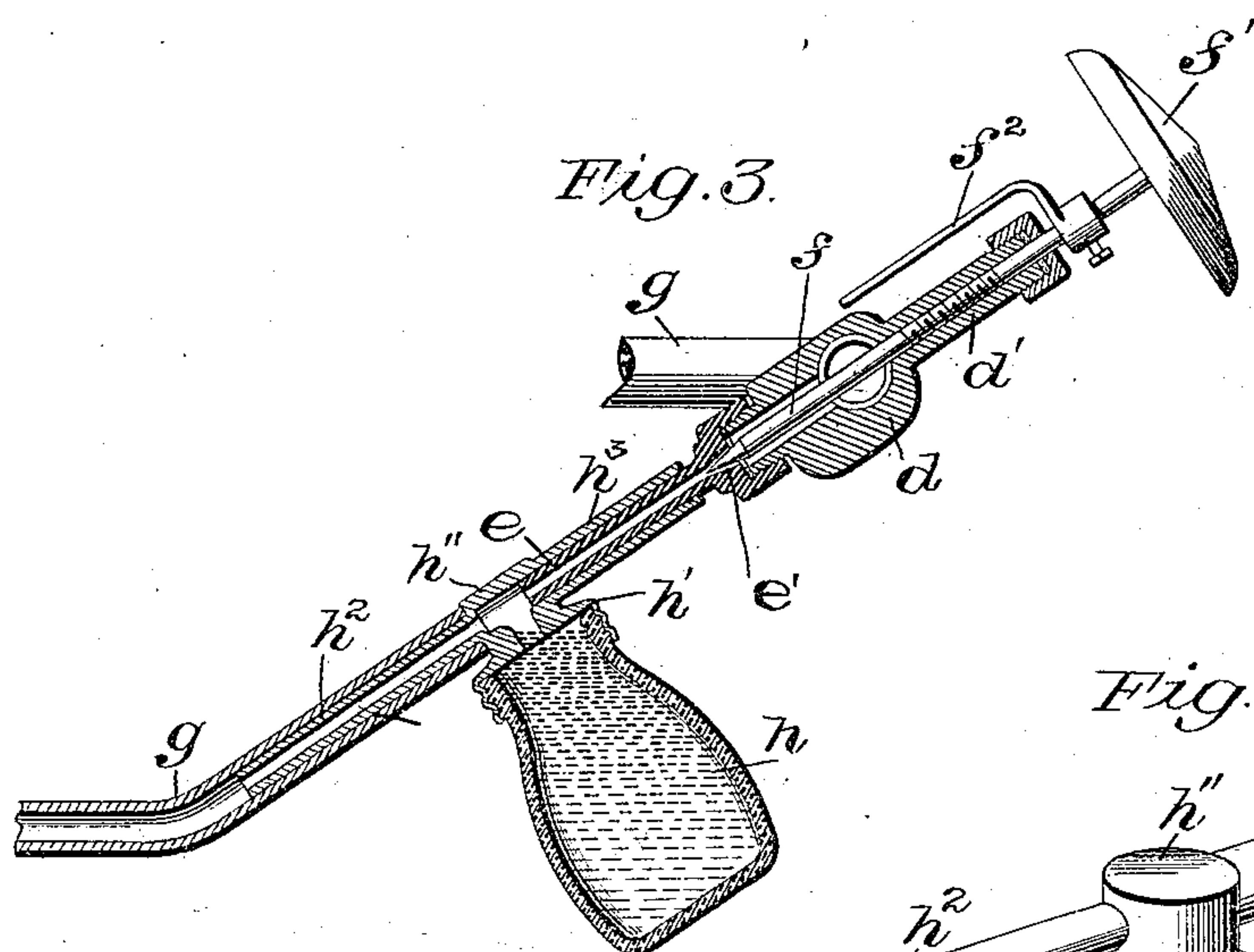
C. H. BOECK.

OIL STOVE.

(Application filed Aug. 18, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses
Chas. E. Riordan
L. Davis

Inventor
Charles H. Boeck
By John C. Dowell
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES H. BOECK, OF JACKSON, MICHIGAN, ASSIGNOR TO THE NOVELTY MANUFACTURING COMPANY, OF SAME PLACE.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 617,695, dated January 10, 1899.

Application filed August 18, 1898. Serial No. 688,892. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. BOECK, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Oil-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to what are commonly known as "blue-flame" oil-stoves, and more particularly to that type wherein the oil-feed is regulated by a valve which restricts the flow of oil to correspond with the consumption in the burner in contradistinction to that type of stove wherein a certain oil-level is maintained on the student-lamp principle.

It will be readily understood that in the type of stove to which my invention relates the oil-feed is necessarily very much restricted, the valve, in fact, only allowing the oil to pass in drops. Hence it will be apparent that in putting the stove in operation it is necessary to wait some time before the wick-chamber is sufficiently charged to permit lighting of the wick.

One object of my invention is to provide for quickly putting the stove in lighting condition without waiting for the burner to become charged by the inflow of oil a drop at a time; and to this end the invention provides an auxiliary oil fount or reservoir incorporated in the conduit connecting the main reservoir with the burner and being invertible. When inverted, this auxiliary fount or reservoir may empty into the conduit and quickly charge the burner and when restored to its normal position it will be refilled from the conduit, and the continued flow of oil from the main reservoir will cause an overflow from the auxiliary fount or reservoir, whereby the burner is kept supplied with oil.

Another object of the invention is to provide an improved construction of burner whereby the oil entering the same is distributed more uniformly around the wick than in constructions heretofore in vogue, and in this connection the invention provides a sim-

ple and effective arrangement whereby the oil upon entering the burner does not immediately encounter the wick, but is spread and caused to flow around to opposite sides of the wick, where it has access to the same.

The drawings which accompany and form part of this specification illustrate one form of embodiment of the invention.

Figure 1 represents the stove partly in side elevation and partly in vertical cross-section. Fig. 2 shows the burner in horizontal cross-section on an enlarged scale. Fig. 3 shows a portion of the oil-conduit in longitudinal section, together with the auxiliary fount or reservoir. Fig. 4 represents the latter in perspective. Fig. 5 represents the burner-shell in perspective. Fig. 6 represents a portion of the burner in cross-section on an enlarged scale, and Fig. 7 represents the oil spreader or distributor of the burner in perspective.

The reference-letter *a* designates the ordinary framework of an oil-stove; *b*, the main reservoir suitably supported adjacent thereto; *c*, the feed-pipe leading from said main reservoir; *d*, a head in which one end of said pipe is fastened; *e*, a pipe-section screwing onto a nipple on said head and formed with an interior tapered valve-seat *e'*; *f*, a needle-valve arranged to cooperate with said seat and having a screw-threaded stem engaging an interiorly-screw-threaded sleeve-like portion *d'* of the head *d* and having the usual handle or knob *f'* and indicator *f''*, and *g* a pipe of larger bore than the pipe *e* and entering the side of the burner.

The head *d* is set obliquely, and the pipe *e* extends correspondingly downward and on the same inclination as a portion of the pipe *g*, the end of which is separated from the end of said pipe *e*. The auxiliary fount or reservoir, which is designated by the letter *h* and is preferably in the form of a glass bulb, has a metallic cap *h'*, with a top part *h''*, fitting between the ends of pipes *g* and *e* and formed with oppositely-extending tubular arms or trunnions *h²* and *h³*, which telescope with the latter, respectively, the pipe *h²* fitting within the pipe *g* and the pipe *h³* fitting outside of the pipe *e*. The interior of the fount *h* is in free communication with the pipes *h²* and *h³*,

and hence, with the conduit, extending between the main reservoir and the burner, and this condition always obtains.

Normally the auxiliary fount depends from the inclined portion of the conduit, as illustrated in Figs. 1 and 3, and is filled to overflowing, so that the oil passing the valve reaches the burner as overflow from the auxiliary fount or reservoir:

When the stove is to be put in condition for lighting, the fount *h* is inverted by swinging it to the position shown in dotted lines in Fig. 1, and the oil contained in it will be emptied into the conduit, so as to quickly charge the burner. The capacity of the auxiliary fount is such that it can refill while the oil it has discharged into the burner is being consumed, so that by the time this oil is consumed the regular feed from the main reservoir is established by the overflow of the auxiliary fount. When the stove is to be extinguished, the attendant merely closes the valve *f*, thus cutting off the supply of oil to the burner, but at the same time leaving the auxiliary fount charged with oil for use when the stove is to be again put in operation. It will be seen that this arrangement thoroughly fulfils the object first above stated and provides a very simple means for accomplishing the purpose, which, however, may of course be modified within the scope of the invention.

Passing now to the burner, it comprises concentric shells *i*, secured together so as to provide an annular chamber *i'* with closed bottom and also flanged above said chamber, as usual, the said chamber being for the purposes of my invention somewhat wider than usual, so as to accommodate not only the annular wick *j*, which as customary in stoves of this class is an asbestos band, but also a partition in the form of a removable metal distributing band or ring *m*, which extends the full height of the annular chamber and is outwardly flanged at top and bottom, as shown at *m'* and *m''*, whereby it is held away from the outer wall of the chamber and divides the latter into concentric compartments, the inner one of which affords just sufficient space to accommodate the wick and the outer one of which receives the oil. The lower flanges *m''* are upturned, so as to provide substantially semicircular troughs to catch the oil which enters through the outer wall of the chamber, and these lower flanges are separated by spaces *m'''*, diametrically opposite each other. The band *m* rests against the bottom of the wick-chamber, and the oil must of necessity pass through the openings *m'''* in order to gain access to the wick, so that by adjusting the band so as to bring a portion which is half-way between the openings *m'''* opposite the point where the pipe *g* enters the oil flowing in through the latter instead of passing immediately to the wick is caused to spread and flow around the band in the troughs provided by the flanges *m''*, reaching the wick only through the openings *m'''*. Thus

the oil will be carried to opposite sides of the wick and will be distributed uniformly through the same. It is obvious that the result of this will be to produce uniformity in the flame, which is not often the case with the burners heretofore in use in this type of stoves.

It is to be understood that the construction of burner here shown may be modified without departing from the spirit and scope of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an oil-stove, the combination with the burner, the main oil fount or reservoir, and the connecting-conduit, of an invertible auxiliary fount or reservoir in communication with the conduit and adapted when inverted to empty into the same and when in normal position to fill from the conduit, substantially as described.

2. In an oil-stove, the combination with the burner, the main oil fount or reservoir, and the connecting-conduit, of an invertible auxiliary fount or reservoir incorporated rotatively in the conduit and adapted when inverted to empty into the same and when normally positioned to fill from the conduit.

3. In an oil-stove, the combination with the burner, the main oil fount or reservoir, and the connecting-conduit, of an invertible auxiliary fount or reservoir having hollow trunnions in communication with its interior and telescoping with portions of the conduit, said auxiliary fount or reservoir adapted when inverted to empty into the conduit and when normally positioned to fill from the same, substantially as described.

4. In an oil-stove, the combination of an oil-conduit extending between the main fount or reservoir and the burner and comprising an inclined portion, a valve in the conduit at the upper part of the inclined portion, and an auxiliary fount or reservoir rotatively incorporated in the inclined portion of the conduit below the valve and adapted when inverted to empty into the conduit and when in normal position to fill from the same.

5. In an oil-stove, the combination with the burner, the main oil fount or reservoir, and the connecting-conduit, of an auxiliary fount or reservoir in communication with the latter at an intermediate point and adapted under normal conditions to fill from the main reservoir through one portion of said conduit and to overflow into another portion thereof leading to the burner, provision being made for emptying the said auxiliary fount's full complement of oil into the latter portion of the conduit, substantially as and for the purpose described.

6. An oil-stove burner comprising an annular chamber, a feed-tube opening into the outer wall thereof, and a partition extending the full height of said annular chamber at a distance from the outer wall thereof and con-

fronting the feed-tube opening in the same, said partition constituting a barrier to direct communication between said feed-tube opening and the wick-space, and causing the oil to reach the latter only at one or more points remote from the feed-tube opening, substantially as and for the purpose described.

7. An oil-stove burner comprising an annular chamber, a feed-tube opening into the outer wall thereof, and an annular partition rising from the bottom of said chamber and confronting the feed-opening, said partition having one or more openings through it at points remote from the latter affording access for oil to the wick-space.

8. An oil-stove burner comprising an annular chamber, a feed-tube opening into the outer wall thereof, and a removable partition occupying said chamber and outwardly flanged whereby it is spaced from the outer wall thereof, said partition confronting the feed-opening and preventing direct flow of oil therefrom into the wick-space, and one or more inlets to the latter being provided at points remote from such feed-opening.

9. An oil-stove comprising an annular cham-

ber, a feed-tube opening into the outer wall thereof, a removable partition occupying said chamber and confronting the feed-opening in the outer wall thereof, said partition having an outer upturned flange at the bottom to catch the oil and one or more passages being provided at points remote from the feed-openings to give access for oil to the wick-space.

10. An oil-stove burner comprising an annular chamber, a feed-tube opening into the outer wall thereof, and a removable partition occupying said chamber and confronting the feed-opening in the outer wall thereof, said partition being outwardly flanged at top and bottom and the bottom flanged portion being upturned to catch the oil and one or more passages being provided remote from the feed-opening to give access for oil to the wick-space, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. BOECK.

Witnesses:

D. R. TARBELL,
N. P. BEEBE.