

No. 737,683.

PATENTED SEPT. 1, 1903.

F. W. WARNER.
CARBURETER FOR CARBURETING LAMPS.
APPLICATION FILED JUNE 13, 1902.

NO MODEL.

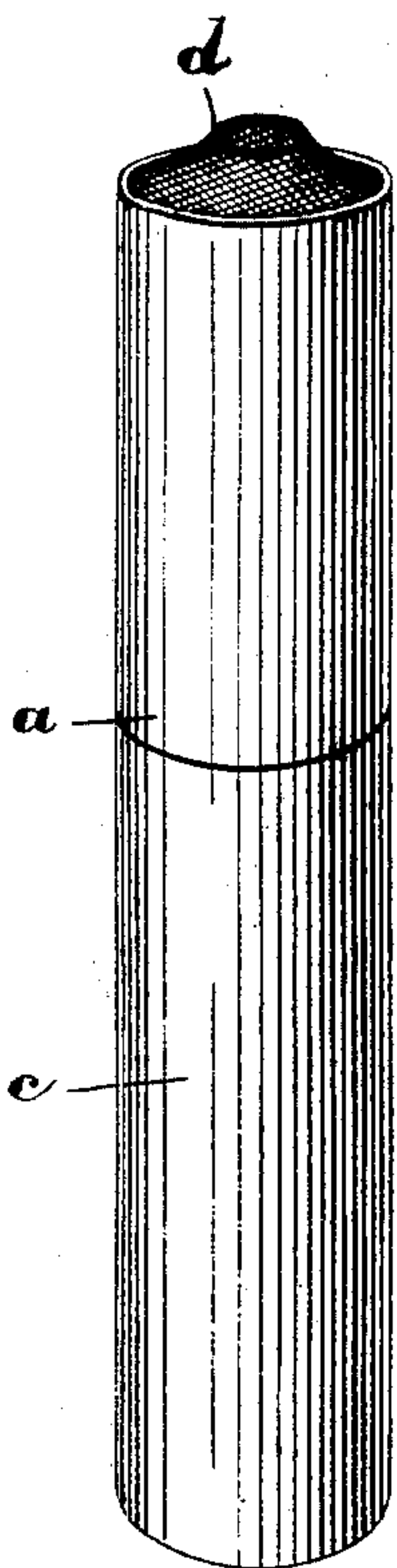


Fig. 2.

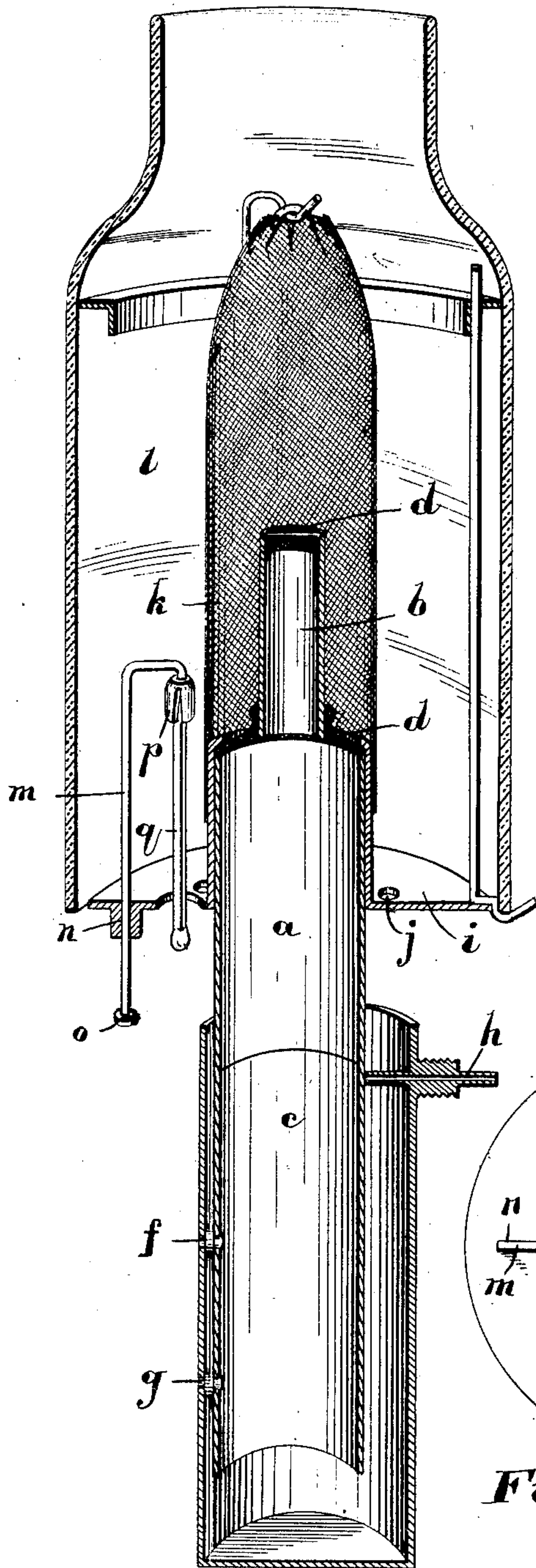


Fig. 1.

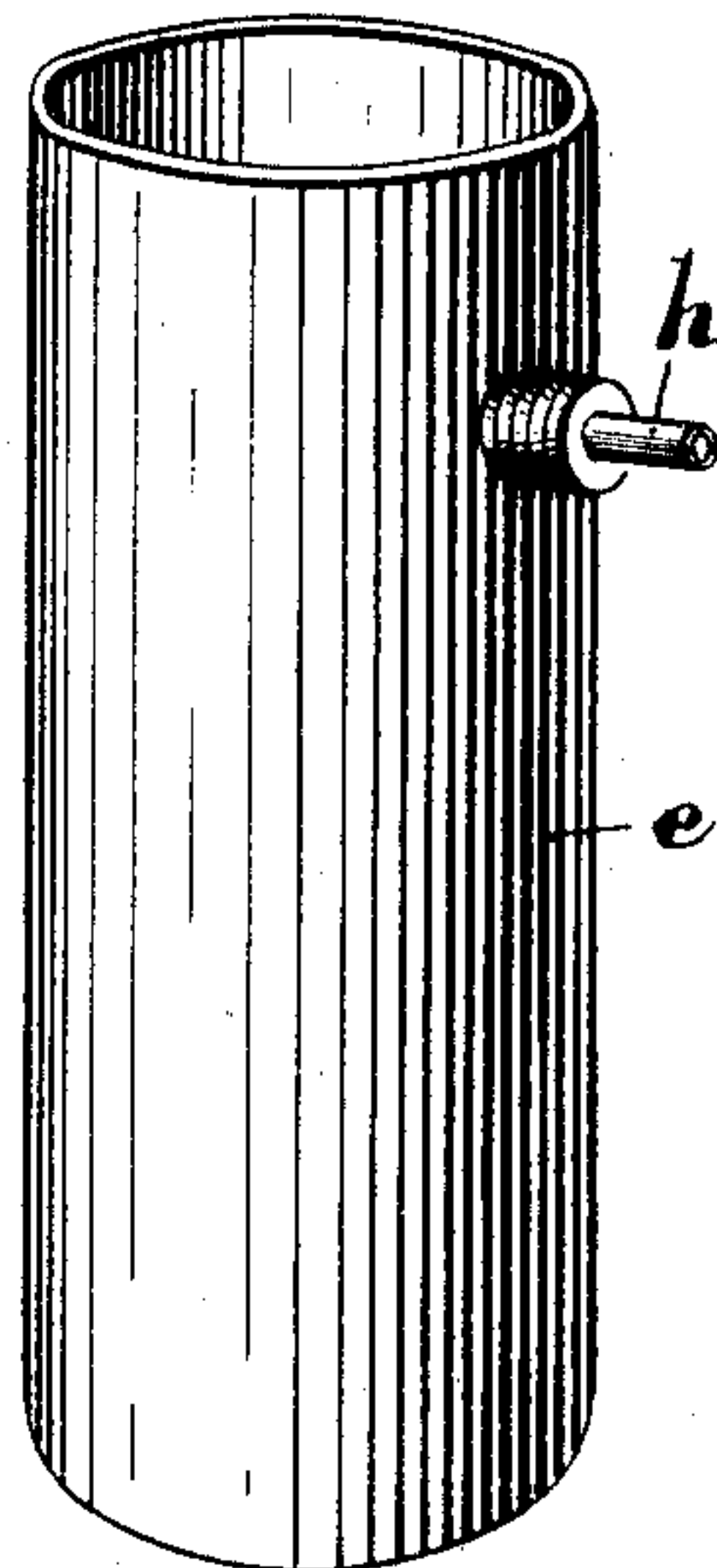


Fig. 3.

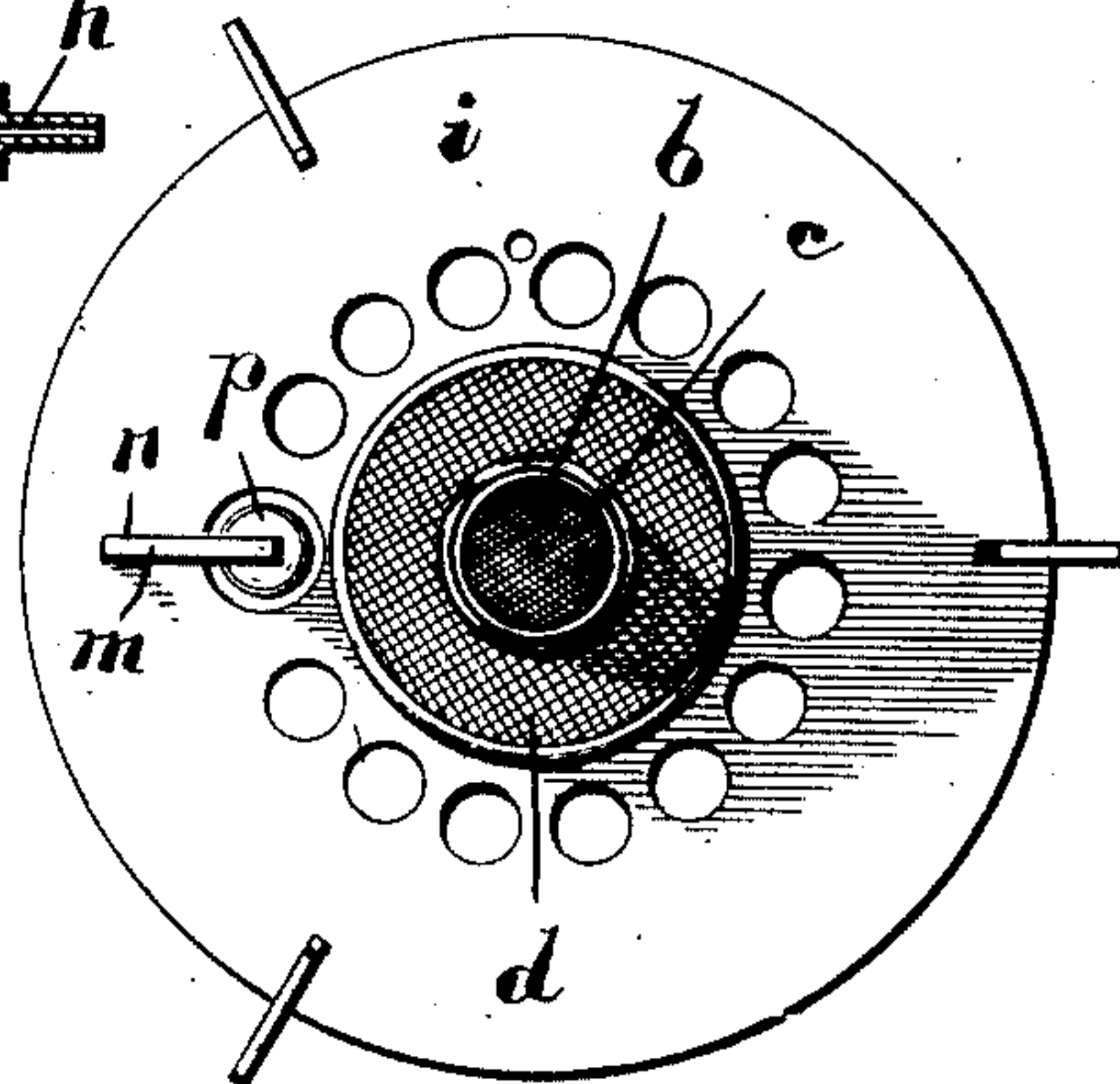


Fig. 4

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UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM WARNER, OF MONTREAL, CANADA.

CARBURETER FOR CARBURETING-LAMPS.

SPECIFICATION forming part of Letters Patent No. 737,683, dated September 1, 1903.

Application filed June 13, 1902. Serial No. 111,548. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM WARNER, a subject of the King of Great Britain, residing at Montreal, in the district of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Carbureters for Carbureting-Lamps, of which the following is a specification.

My invention relates to improvements in carbureters for carbureting-lamps; and the object of the invention is to devise a carbureter which shall vaporize the gasolene instantaneously, and thereby avoid the delay incident to the ignition of the burner and whereby when ignited a clear and steady light is produced.

The invention includes the construction and arrangement of parts hereinafter described, and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional perspective view of my device. Fig. 2 is a perspective view of the main burner and cylindrical casing. Fig. 3 is a perspective view of the outer casing or cup. Fig. 4 is a plan view of the disk from above, eliminating the lamp and chimney.

Like letters of reference indicate corresponding parts in each figure.

a is the main burner, and *b* the supplementary burner surmounting the same.

c is the cylindrical casing extending downwardly from the main burner and firmly attached thereto or forming part thereof and open at its lower end.

d d are wire-gauze screens covering the top of the main burner *a* and the top of the supplementary burner *b*.

e is an outer casing or cup preferably cylindrical in shape and designed to contain the cylindrical casing *c*, suitably suspended therein by the rivets *f* and *g*, leaving a clear space all around between the outer and inner casing, though the inner casing is not centrally disposed in the outer casing.

h is a tube or passage extending through the outer casing and across the space between to the outer periphery of the inner casing.

i is a chimney-support provided with a central sleeve surmounting the main burner and firmly secured thereto in any suitable manner:

j are orifices extending through the chimney-support and preferably arranged in a circle around the main burner.

k is a mantle suitably supported from the main burner.

l is a chimney of any suitable shape and size and supported by the support *i*.

m is a rod extending upwardly through the orifice *n* in the disk *i* and provided with the button *o* at its lower end and at its upper and bent end and pointing downwardly the crotch *p*.

q is a match designed to be inserted in the crotch *p* before lighting.

r is an annulus supported by the rods *s* and designed to steady the chimney at its upper end in order to prevent any possibility of the mantle being damaged through any accidental jar of the said chimney.

Having described the various parts in detail involved in my invention, I shall now more particularly explain the operation thereof.

The tube or passage *h* is suitably connected to a gasolene-supply tank and any approved form of cut-off provided. The gasolene is then turned on, and as it trickles slowly through the passage *h*, and on and down the outer periphery of the inner casing a match is lighted and inserted in the crotch *p* when the latter is in its lower position. The button *o* is then pushed upwardly, which carries the lighted match inside the chimney *l*. This causes the air inside the chimney to heat, and consequently to ascend and find egress from the chimney through the top thereof.

The egress of the air from the chimney causes a rush of air to take its place, and as the only openings into the chimney besides the top opening are the orifices *j* and the burners *a* and *b* the air will naturally rush into the chimney up through the said burners, for the open top end of the outer casing offers the least resistance as the first entrance for the air to the chimney in comparison with the orifices *j*, which, of course, supply a cer-

tain amount of air to the said chimney, but only sufficient to clear the smoke and contribute oxygen to aid combustion.

The inrush of air down between the casings *c* and *e* causes the almost instantaneous evaporation of the gasoline trickling down the outer periphery of the inner casing, and in the second inrush of air the vapor will be carried and emitted through the gauzes *d d*.
10 The match which is burning inside the chimney ignites the vapor pouring through the gauzes, and this causes the illumination of the mantle.

It will be seen that the supplementary burner *b* carries a portion of the vapor still higher up in the mantle, and thus distributes the same more evenly therearound, in order that the best possible results may be arrived at in the general admixture of heated air and
20 vapor rising through the said supplementary burner.

It may be further said in reference to the supplementary burner *b* that it is particularly adaptable for the superheating of the
25 vapor while the light is in operation, and consequently a clearer and steadier light is the result.

The device for the insertion of a match, as explained and illustrated herein, is merely a

matter of convenience, as it is essential to heat the air in the chimney; but I do not wish to confine myself to the arrangement for the match as shown.

What I claim as my invention is—

1. A carbureter for hydrocarbon-burners comprising a receptacle, a burner-supporting tube depending within said receptacle and having a lower open end, said tube being spaced from the walls of the receptacle and a feed-pipe for hydrocarbon adapted to feed the hydrocarbon directly against the exterior surface of the burner-tube, substantially as described.

2. A carbureter for hydrocarbon-burners comprising a cylindrical receptacle, a burner-supporting tube located eccentrically within the same and having an open lower end and a feed-pipe for hydrocarbon terminating in close proximity to the exterior wall of the feed-pipe, substantially as described.

Signed at Montreal, in the district of Montreal, in the Province of Quebec, Canada, this 10th day of June, 1902.

FREDERICK WILLIAM WARNER.

Witnesses:

LLOYD BLACKMORE,
E. FETHERSTONHAUGH.