

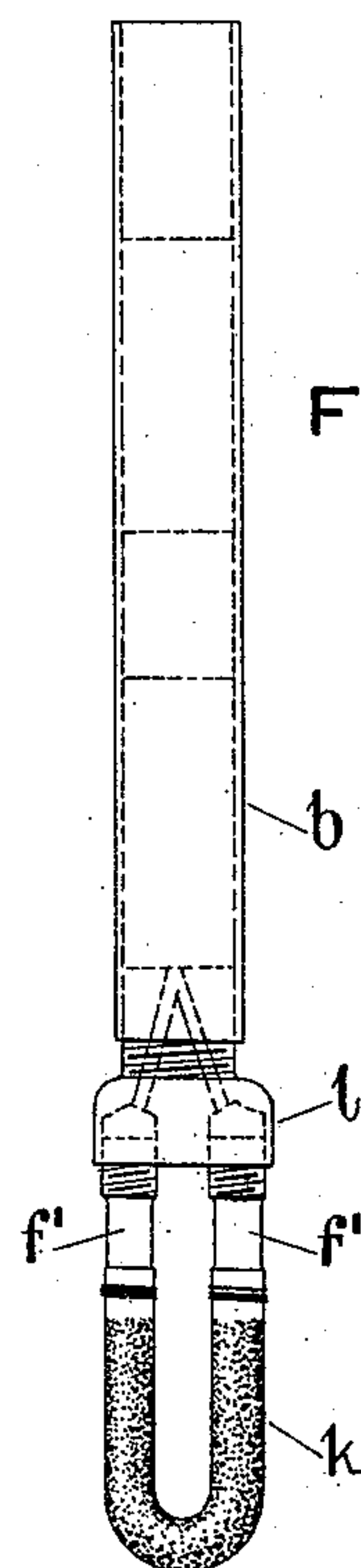
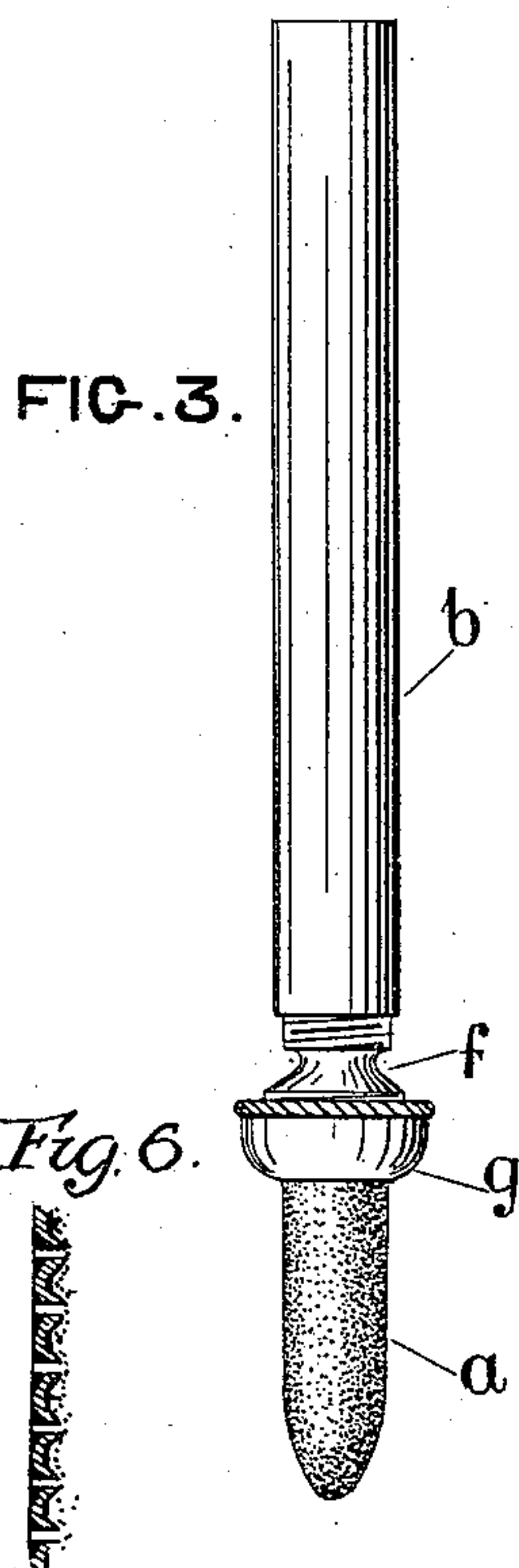
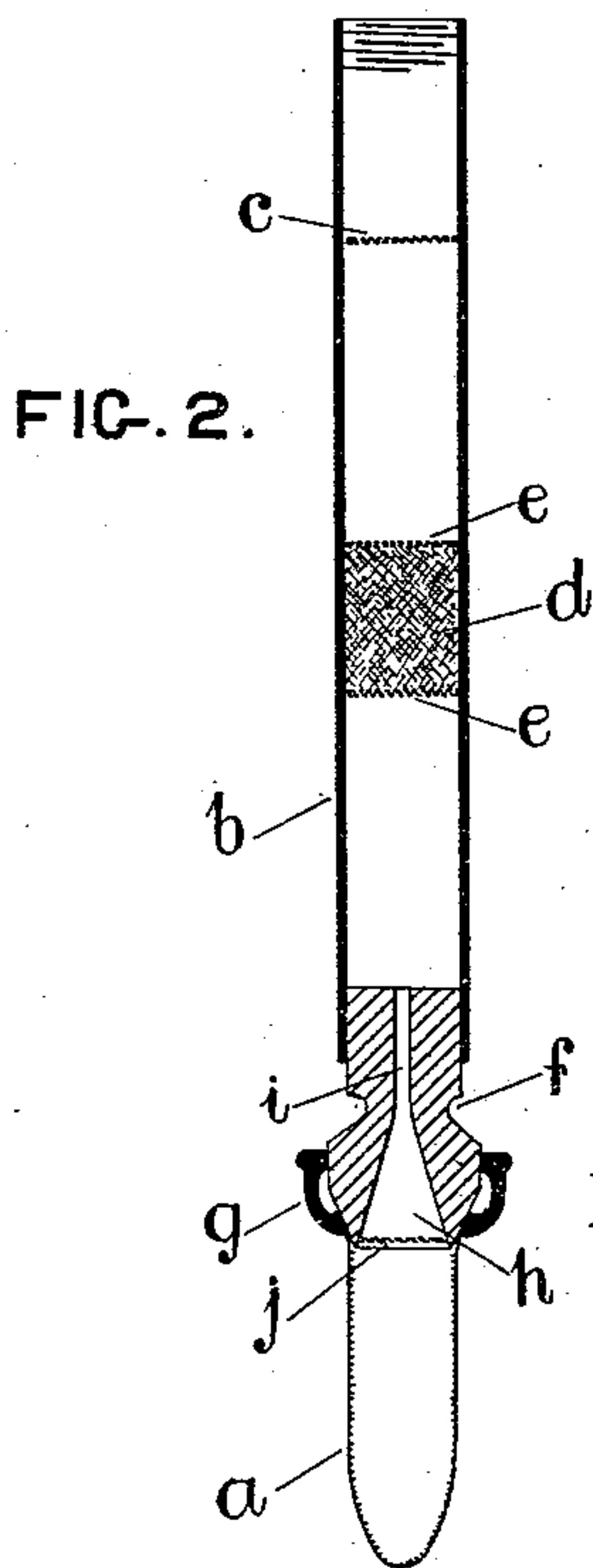
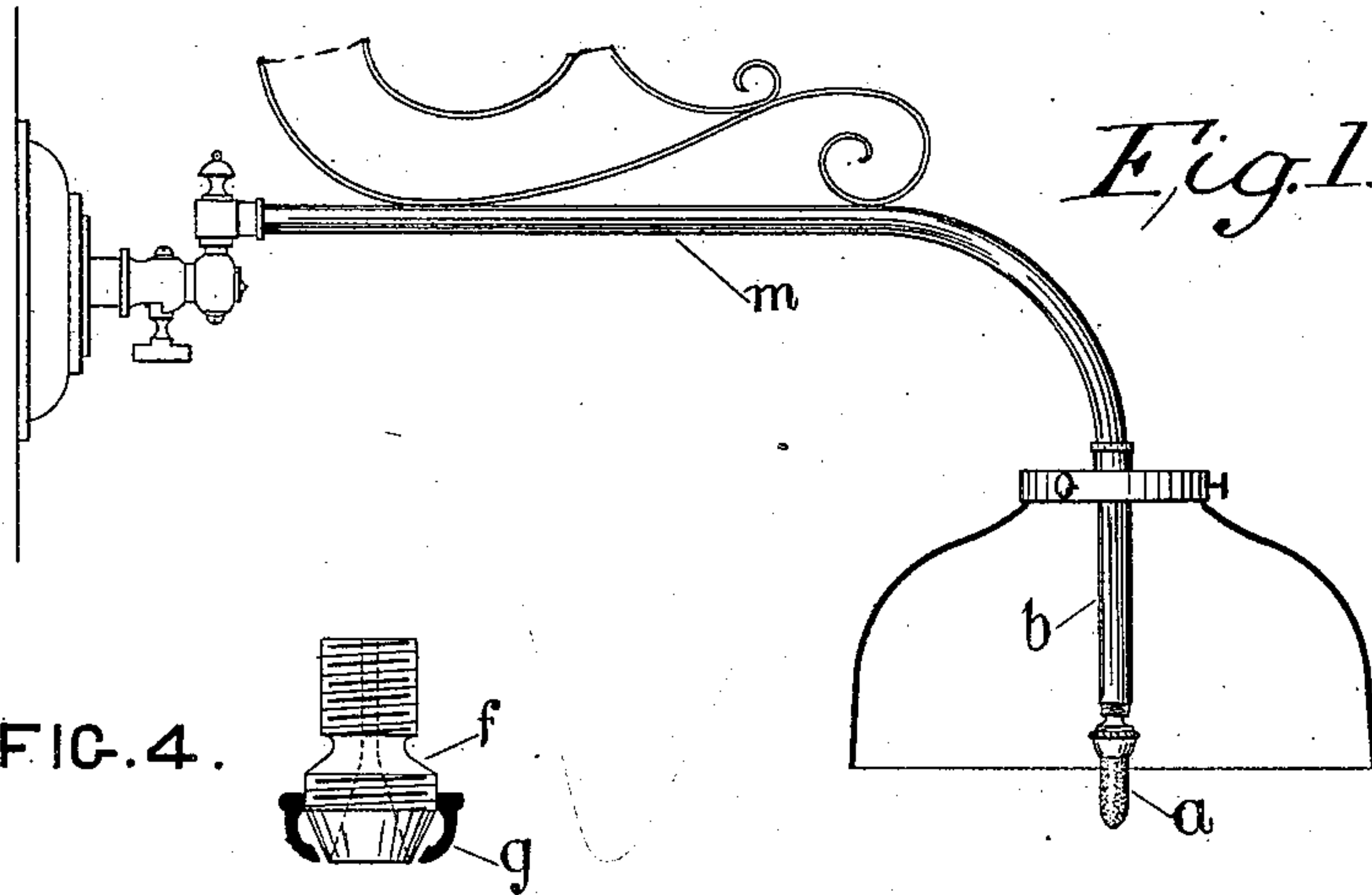
(No Model.)

J. S. P. STUTLEY.

INCANDESCENT BURNER FOR HYDROCARBON GAS.

No. 494,040.

Patented Mar. 21, 1893.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JAMES SEYMOUR PHILLIP STUTLEY, OF ADELAIDE, SOUTH AUSTRALIA.

## INCANDESCENT BURNER FOR HYDROCARBON GAS.

SPECIFICATION forming part of Letters Patent No. 494,040, dated March 21, 1893.

Application filed April 21, 1892. Serial No. 430,155. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES SEYMOUR PHILLIP STUTLEY, a subject of the Queen of Great Britain and Ireland, residing at the Grand Coffee Palace, Hindley Street, in the city of Adelaide, in the Province of South Australia, have invented a new and useful invention, entitled an Improved Incandescent Burner for Hydrocarbon Gas, of which the following is a specification.

Figure 1 is a view illustrating the burner fixed to an ordinary gas bracket and ready for use. Fig. 2 is a sectional elevation and Fig. 3 is an elevation of the burner, while Fig. 4 is a view of the nipple, and Fig. 5 is an elevation of an alternative arrangement. Fig. 6 is a sectional view of a small section of the thimble shell enlarged.

My burner consists of a thimble (a) which is made by stamping a sheet of platinum or iridium foil with about three thousand perforations to the square inch, and afterward molding it into the desired shape with the burrs of said perforations projecting inwardly. The interior of the thimble (a) is coated with powdered or finely ground asbestos which is prevented from coming through the perforations by the said burrs; this serves to add to the brilliancy of the light, as also to check the gas from escaping too freely by extending over the perforations in the thimble in order to insure its proper combustion. The asbestos may be made to remain permanently in contact with the thimble, in any suitable manner, as by the use of any suitable adhesive material such as that used in boiler coverings. The burrs act to retain the asbestos in place.

Although as above stated the asbestos lining extends over the perforations it is not applied so thickly as to close up the same against the escape of gas. The gas will be checked by this partial covering of the opening, but will escape in sufficient quantities through the interstices in the asbestos lining to secure the desired effect.

(b) is the connecting tube, which is provided with a wire gauze disk (c) and the asbestos wad (d) said wad is kept intact by the wire gauze disks (e) and (e). One end of said tube (b) is screwed on to the thread which carries

the gallery of an ordinary gas bracket, while the other end communicates with the thimble (a) of the burner, through the medium of the nipple (f).

The aforesaid thimble (a) is secured and firmly held in position by means of the flange on the binding collar (g) and the inclined seat on the nipple (f), thus facilitating the supply or removal of the thimble without injury to same. Said nipple (f) is provided with a bell shaped regulating and distributing chamber (h) which communicates with the connecting tube through the passage (i).

(j) is a wire gauze cap which fits tightly over the mouth of said chamber, for the purpose of breaking up the volume of gas before it enters the thimble (a).

The alternative arrangement of burner shown at Fig. 5, is provided with two nipples (f') and (f') to which is connected the platinum or iridium body (k). Said nipples communicate with the connecting tube, through the medium of the union piece (l).

The most suitable gas for consumption by the burner is that generated from volatile oil, such as benzine or gasoline, or I may use ordinary coal gas when mixed with air through any well known carburetor.

The use and action of my invention are as follows:—The gas when admitted to my burner through the supply pipe (m) is first checked by the gauze disk (e) in the connecting tube, to arrest any foreign matter which may be in the pipe. It then passes through the asbestos wad (d) which serves a double purpose. First;—to purify as also to allow the gas to pass into the thimble (a) of burner at an even pressure to prevent whistling, and secondly, to prevent the connecting tube from getting hot. The gas then enters the chamber (h) and is distributed evenly over the interior surface of the said thimble (a), finally issuing from the perforations, and when ignited, causing the platinum or iridium thimble to become highly heated and of an incandescent nature.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In an incandescent gas burner such as herein described, a perforated thimble, having the burrs made by the perforations projected



inwardly, and the interior of said thimble coated with powdered or finely ground asbestos, for the purposes herein set forth.

2. In combination in an incandescent gas burner, the thimble having perforations and the interior coating of asbestos against the inner wall of the thimble, substantially as described.

3. In an incandescent gas burner the union piece (*l*) provided with two nipples (*f'*) and (*f'*) and the platinum or iridium body (*k*), substantially as herein described.

JAMES SEYMOUR PHILLIP STUTLEY.

Witnesses:

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