

No. 643,901.

Patented Feb. 20, 1900.

P. JOSSERAND.
ACETYLENE GAS LAMP.

(Application filed May 1, 1899.)

(No Model.)

FIG. 1.

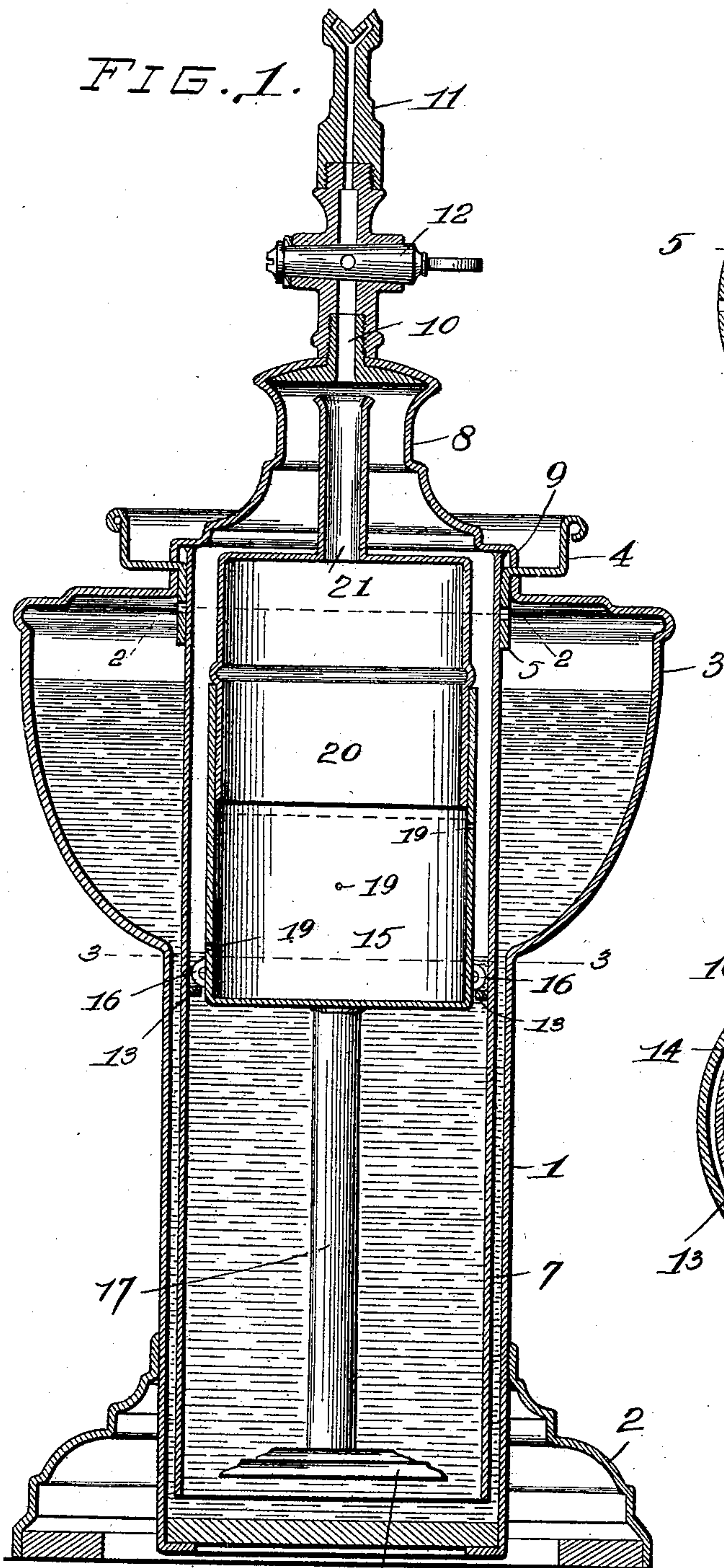


FIG. 2.

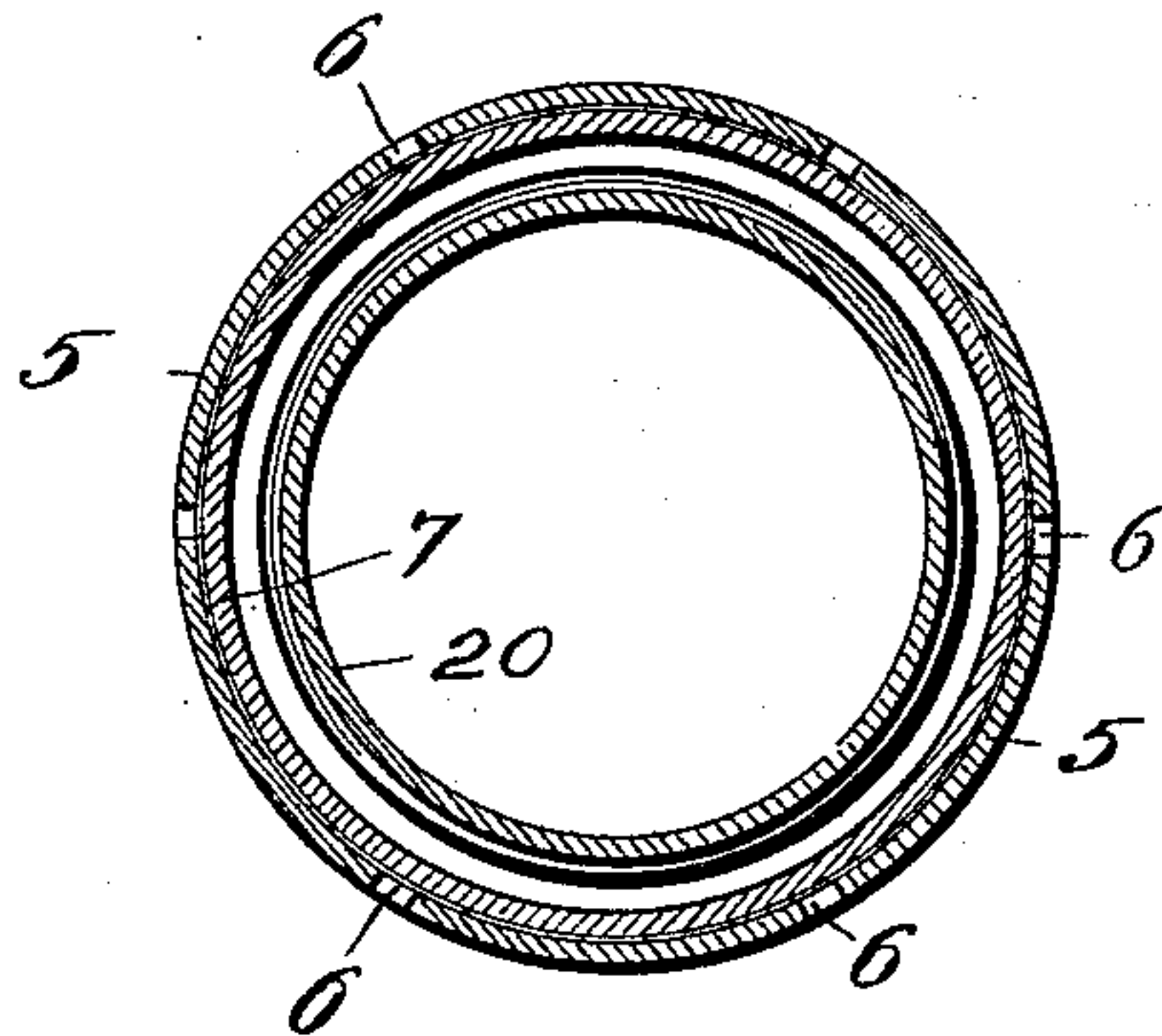
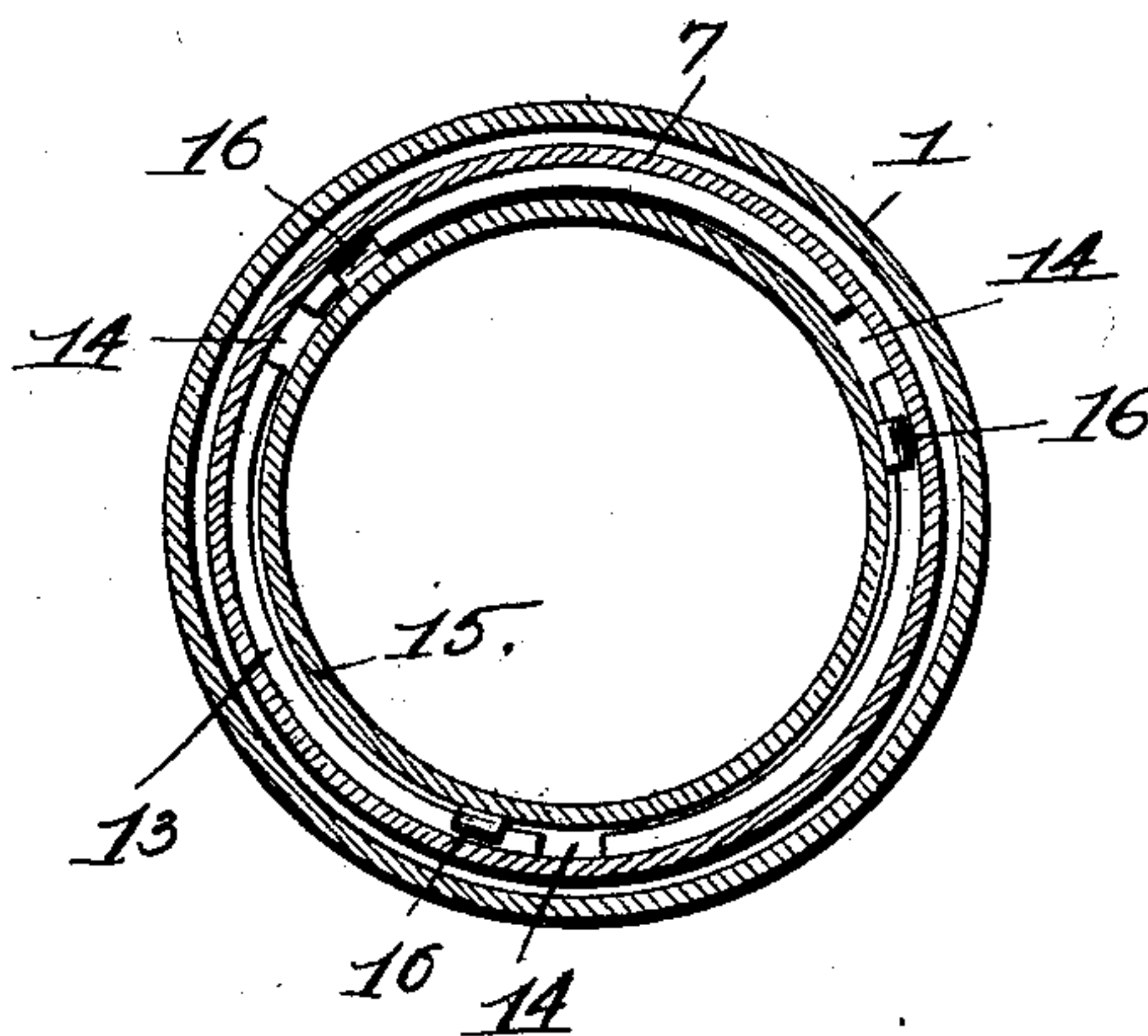


FIG. 3.



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UNITED STATES PATENT OFFICE.

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ACETYLENE-GAS LAMP.

SPECIFICATION forming part of Letters Patent No. 643,901, dated February 20, 1900.

Application filed May 1, 1899. Serial No. 715,134. (No model.)

To all whom it may concern:

Be it known that I, PETER JOSSERAND, of the city of Josserand, Trinity county, State of Texas, have invented certain new and useful Improvements in Acetylene-Gas Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to acetylene-gas lamps; and it consists of the novel construction, combination, and arrangement of parts hereinafter described and claimed.

Figure 1 is a vertical sectional view of an acetylene-gas lamp of my improved construction. Fig. 2 is a horizontal sectional view taken approximately on the line 2 2 of Fig. 1. Fig. 3 is a horizontal sectional view taken approximately on the line 3 3 of Fig. 1.

Referring by numerals to the accompanying drawings, 1 indicates a cylindrical sheet-metal body, its lower end being closed to form a receptacle for water, and the lower end of said body is provided with a flaring ornamental base 2. The upper end of the body 1 is formed into the bowl 3, and in the opening in the top of said bowl is fixed a collar 4, the same being provided with an integral downwardly-pending flange 5, in which is formed a plurality of perforations 6, the same being very close to the top of the bowl 3.

7 indicates an open-bottomed sheet-metal cylinder of such a size as that it will readily pass through the opening in the top of the bowl 3, and the upper end of this cylindrical body 7 is closed by an ornamental cap 8, the same being provided on its lower edge with a flange 9, which normally rests loosely upon the outwardly-projecting portion of the collar 4. This cap 8 is provided with an upwardly-extending screw-threaded collar 10, upon which is removably seated a suitable acetylene-gas burner 11, the same being provided with the usual key 12. At a point approximately half-way between the top and bottom of the cylindrical body 7 is an inwardly-projecting flange 13, in which is formed a plurality of rectangular openings or notches 14.

The carbide-receptacle of my improved lamp comprises a cylindrical sheet-metal cup 15, adapted to pass into the open lower end of the cylindrical body 7 when the latter is re-

moved from the lamp, and integral with and projecting laterally from the lower end of this cup 15 are the lugs 16, the same being of such size as that they will readily pass through the rectangular openings or notches 14 in the flange 13, and there are the same number of these lugs 16 as there are notches 14. Depending from the under side of the cup 15 is a tube 17, upon the lower end of which is fitted a suitable base 18. This tube and base perform the function of a handle for operating the carbide-receptacle when the same is in position within the cylinder 7 prior to the insertion of the latter within the lamp, and when said carbide-chamber is removed from said cylinder said tube and base act as a support or standard for said receptacle.

Formed in the side wall of the receptacle 15 is a plurality of minute openings 19, the same being disposed at various points around the periphery of the receptacle, and said perforations are arranged at predetermined distances one above the other.

The carbide-receptacle 15 is normally closed by a removable cap 20, the same sliding into the upper end of said receptacle 15, and said cap 20 is provided with an upwardly-projecting tube 21, the same terminating a short distance below the collar 10, carried by the cap 8, previously described.

To charge my improved lamp and to place the same in an operative condition, a quantity of carbide is placed within the receptacle 15 while the same is removed from the cylinder 7 and while the latter is removed from the lamp, and there should be such an amount of carbide as that it will extend above the plane occupied by the uppermost one of the apertures 19. The cap 20 is now placed upon the carbide-receptacle, after which said receptacle is inserted in the lower end of the cylindrical body 7, and by rotating said receptacle 15 and the body 7 in opposite directions the lugs 16, carried by the receptacle, will be brought into coincidence with the openings or notches 14, after which the carbide-receptacle is passed into the upper end of the cylinder proper, thus bringing the lugs 16 above the flange 13, after which the receptacle and body 7 are rotated a slight distance in either direction, and thus the carbide-receptacle is held in the upper portion of the

body 7, the lugs 16 resting upon the top of the flange 13. The body 1 is filled with a quantity of water, after which the cylindrical body 7, with the carbid-receptacle therein, is passed downwardly into the cylindrical body 1. The water of course will rise upwardly through the lower portion of the body 7 as soon as the burner is opened, and as a few drops of the water pass through the lowermost one of the apertures 19 in the carbid-receptacle they will act upon the carbid in said receptacle and gas will be generated. The key 12 is of course closed to cut off the passage of gas through the burner during this operation, and the gas thus generated passes upwardly through the cap 20, out through the tube 21, and into the base 18 and upper portion of the cylindrical body 7. As more gas is generated it will force the body of water within the cylindrical body 7 downwardly, and consequently the water within the bowl 3 will rise, thus forming a pressure which acts to expel the gas from the lamp through the burner when said burner is lighted. As the gas in the upper portion of the cylindrical body 7 is used through the burner 11 the water will gradually rise within the cylindrical body 7 around the carbid-receptacle 15 until one of the apertures 19 is reached, and as a few drops of water pass through the aperture the operation just described will be repeated, thus creating a fresh supply of gas. This action will be automatically repeated as long as there is any unburned carbid remaining in the receptacle 15, and then of course said carbid-receptacle must be removed and a fresh supply of carbid placed therein.

Should for any reason an excess supply of gas be generated, the cylindrical body 7 will

be forced upward and outward and said excess gas will pass downwardly through the cylindrical body 7 and then upwardly into the upper portion of the bowl 3, whence it will readily find vent and escape through the apertures 6, as the cylindrical body 7 is not tightly fitted in the downwardly-pending flange 5. The cap 8 is held in place by being soldered to the upper end of the cylinder 7, but the gas under excessive pressure can pass beneath its flange 9 (which is not soldered) and escape to the outer air.

An acetylene-gas lamp of my improved construction is simple, inexpensive, and entirely automatic in all its workings and is perfectly safe.

I claim—

The improved acetylene-lamp, comprising the water-receptacle having an opening in its upper end, the collar 4 provided with the depending flange 5 in which are formed perforations 6 and said flange inserted within said opening of said receptacle with said perforations closely adjacent to the top of the water-receptacle, the cylinder 7 with its upper end passed through said collar 4 and projecting above said perforated flange 5, the cap 8 carrying a burner, the said cap being tightly fastened upon the projecting upper end of said cylinder, the carbid-receptacle within said cylinder, and means for applying water to the carbid, substantially as herein specified.

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

PETER JOSSERAND.

Witnesses:

EDWARD E. LONGAN,
JOHN C. HIGDON.