

(No Model.)

F. B. STRUNZ.

APPARATUS FOR ENRICHING ILLUMINATING GAS.

No. 355,626.

Patented Jan. 4, 1887.

Fig. 1.

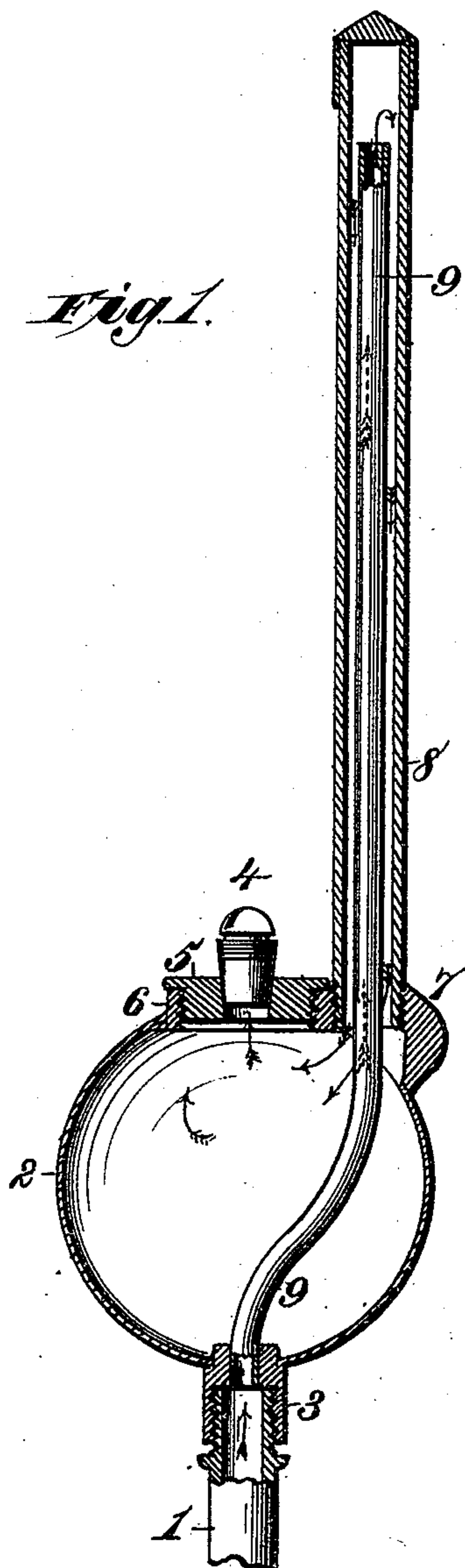
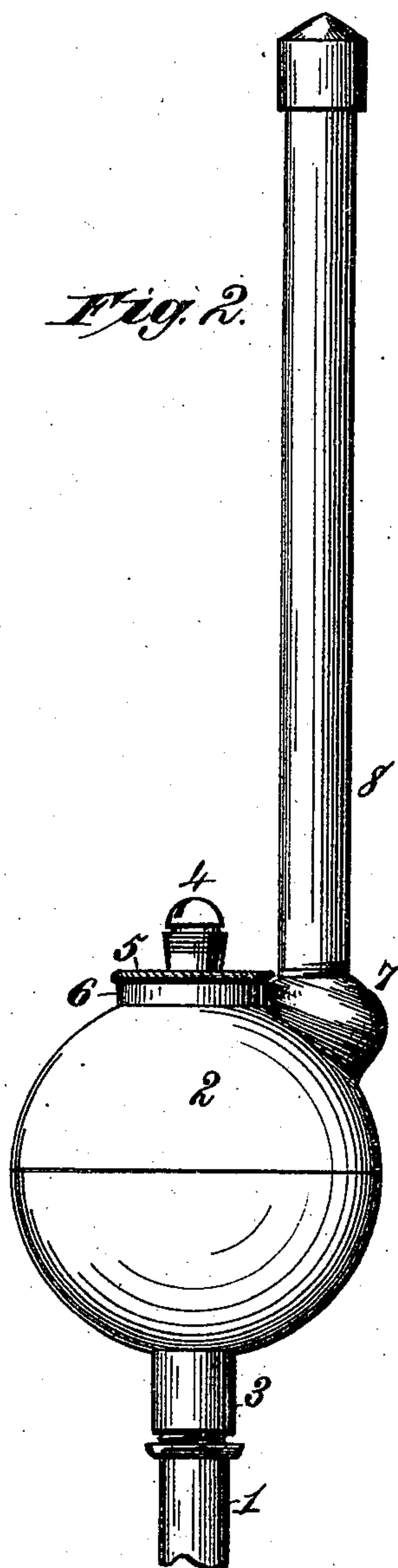


Fig. 2.



Witnesses
Robert Everett.
Geo. H. Rea

Inventor:
Frederick B. Strunz.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

FREDERICK B. STRUNZ, OF PITTSBURG, PENNSYLVANIA.

APPARATUS FOR ENRICHING ILLUMINATING-GAS.

SPECIFICATION forming part of Letters Patent No. 355,626, dated January 4, 1887.

Application filed June 21, 1886. Serial No. 205,793. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK B. STRUNZ, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Apparatus for Enriching Illuminating-Gas, of which the following is a specification.

My invention relates to apparatus for enriching illuminating-gas by bringing it, while heated, into contact with a volatile hydrocarbon, by which the gas is caused to take up a certain percentage of the volatilized material.

The purpose of my invention is to provide an extremely simple, compact, and easily-operated device whereby this purpose may be effected; and it consists in the several novel features of construction and combinations of parts hereinafter fully set forth, and definitely pointed out in the claim annexed to this specification.

In the accompanying drawings, Figure 1 is a vertical central section of an apparatus constructed according to my invention. Fig. 2 is a side elevation of the same in operation.

In the said drawings, the reference-numeral 1 designates the gas-supply pipe, which may be the stem of any ordinary gas-bracket. Upon this stem is mounted a metallic spheroid, 2, having a neck, 3, provided with a female thread, by which the connection is made, and having at its highest point a burner-tip, 4, mounted upon a disk, 5, which is tapped into a boss, 6, upon the spheroid 2, forming a removable cap, which may be utilized to obtain access to the interior.

A little in rear of the burner-tip 4 is formed a boss, 7, into which is tapped a vertical tube, 8, rising to a height of some inches above the top of the spherical shell 2.

From the neck 3, and from a point just above the stem 1 of the gas-bracket, a pipe, 9, rises, the lower open end thereof wholly closing the opening between the interior of the shell 2 and the neck 3. This pipe is slightly curved to one side to bring it into the axial line of the vertical pipe 8, into which it enters and extends to a point near the upper closed end of said pipe, as shown in Fig. 1. The pipe 9 is open at both ends and constitutes the channel through which the gas must pass as it flows from the gas-supply pipe 1, the diameter

of said pipe being such that it will stand in the pipe 8, leaving an annular space between the inner wall of the one and the outer wall of the other.

Within the spherical shell 2 is placed any suitable hydrocarbon—such as naphthaline, either solid or fluid—a sufficient quantity being introduced to partly fill the shell.

The construction and arrangement being as described, the gas is turned on at the bracket and lighted at the burner-tip 4. The heat generated thereby is speedily imparted to the outer closed tube, 8, through which the gas passes after it leaves the pipe 9. The gas heated thereby flows down into the interior of the shell 2, where it is brought in contact with the hydrocarbon contained therein, a portion of which is volatilized by the heat and taken up by or mingled with the gas. The gas thus enriched is consumed at the burner, giving an increased illumination with a less consumption of the gas from the main source of supply.

The other advantages of this invention are, that as but comparatively small quantities of hydrocarbon are used at any one point, there is not only no danger of explosion, but the complicated and costly apparatus for the generation of the enriching gas is wholly avoided, making a great reduction in expense, and saving much time and labor.

By turning the burner-tip until the slot in its end is directed toward the standing pipe 8, the full heating-power of the flame may be directed upon the said tube, whereas by arranging it slightly to one side or the other, so that the flame shall not strike upon the pipe, the heating-power may be varied according to requirements.

The shell containing the naphthaline may be of any form other than spherical.

I am aware that it is not broadly new to provide so-called "carbureting-lamps" with means for heating gas prior to its entrance into a vessel containing a hydrocarbon which is designed to be vaporized by the heated gas in order to become mingled therewith and enrich the same. Lamps of this nature have been made in various ways with provision for an upward and downward passage of the gas in tubes contiguous to the gas-flame. I am not aware, however, that an apparatus of the

construction herein described and claimed has hitherto been used, or that a carbureting-vessel has heretofore been provided at the top with concentric gas-tubes projecting above
5 said vessel, and with an adjacent rotatable plug that closes the filling-orifice, and carries a burner-tip, which is thus capable of being turned toward or away from the concentric
10 gas-tubes to vary the degree of heat thrown thereon. By my construction I provide a device of great simplicity which is capable of thoroughly heating the gas before it comes in contact with the hydrocarbon, and which enables the heating of the gas and consequent
15 intensity of the light to be controlled at will by simply turning the burner-tip without diminishing or increasing the flow of gas.

Having thus described my invention, what I claim is—

20 A carbureting gas lamp composed of a car-

bureting-vessel having a bottom screw-neck, 3, and an upper filling-orifice or screw-neck, 6, the vertical gas-heating tube 8, projecting above the carbureting-vessel and having its upper end closed and its lower end communi- 25 cating with said vessel, the tube 9, open at both ends and extending from the bottom screw-neck through the carbureting-vessel and into the heating-tube, and the rotatable plug 5, and connected burner-tip 4, seated in 30 the upper screw-neck and adapted to be turned to vary the degree of heat thrown on the heating-tube, substantially as described.

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

FREDERICK B. STRUNZ.

Witnesses:

D. P. BERG,

H. J. WENKE.