

No. 846,512.

PATENTED MAR. 12, 1907.

O. J. SEEHAUSEN.
VAPOR LAMP.

APPLICATION FILED AUG. 21, 1906.

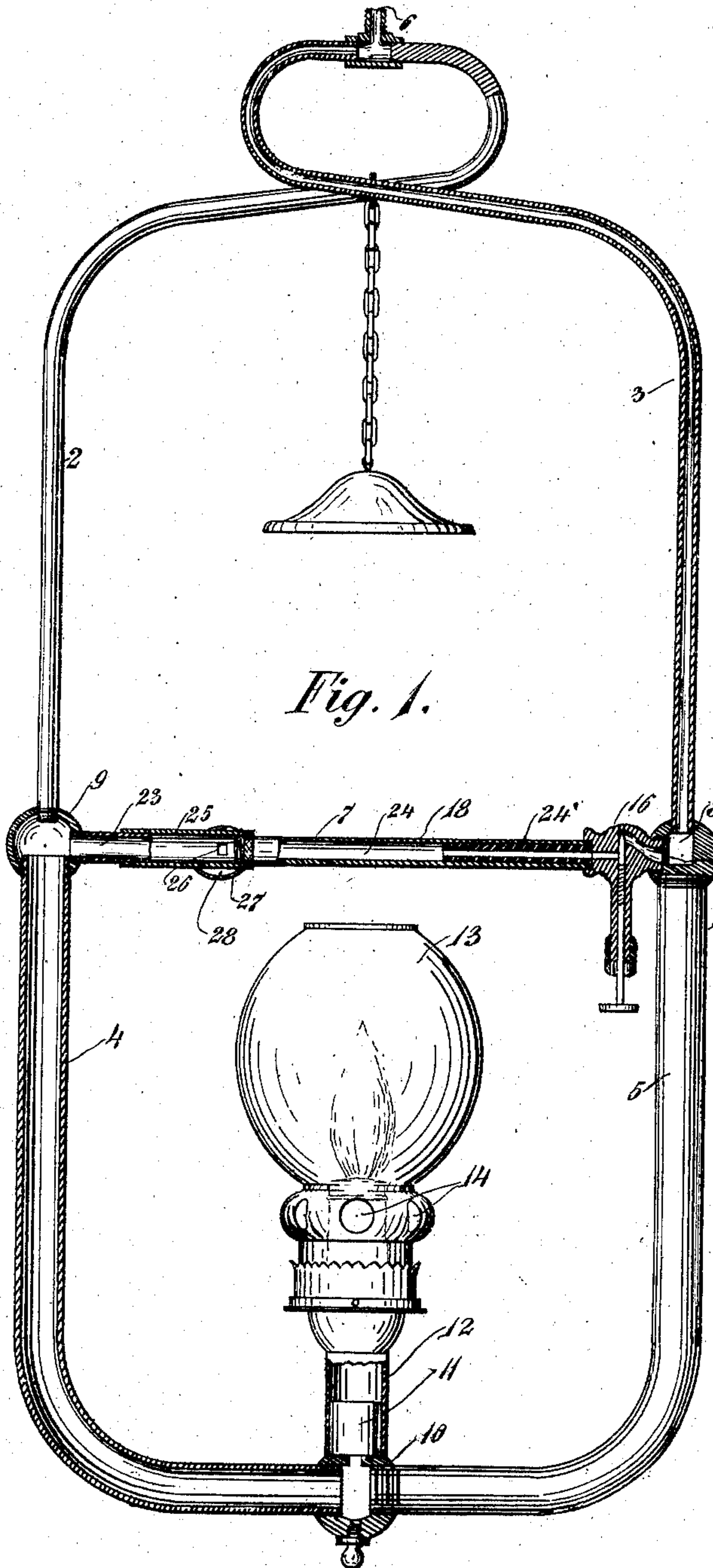


Fig. 1.

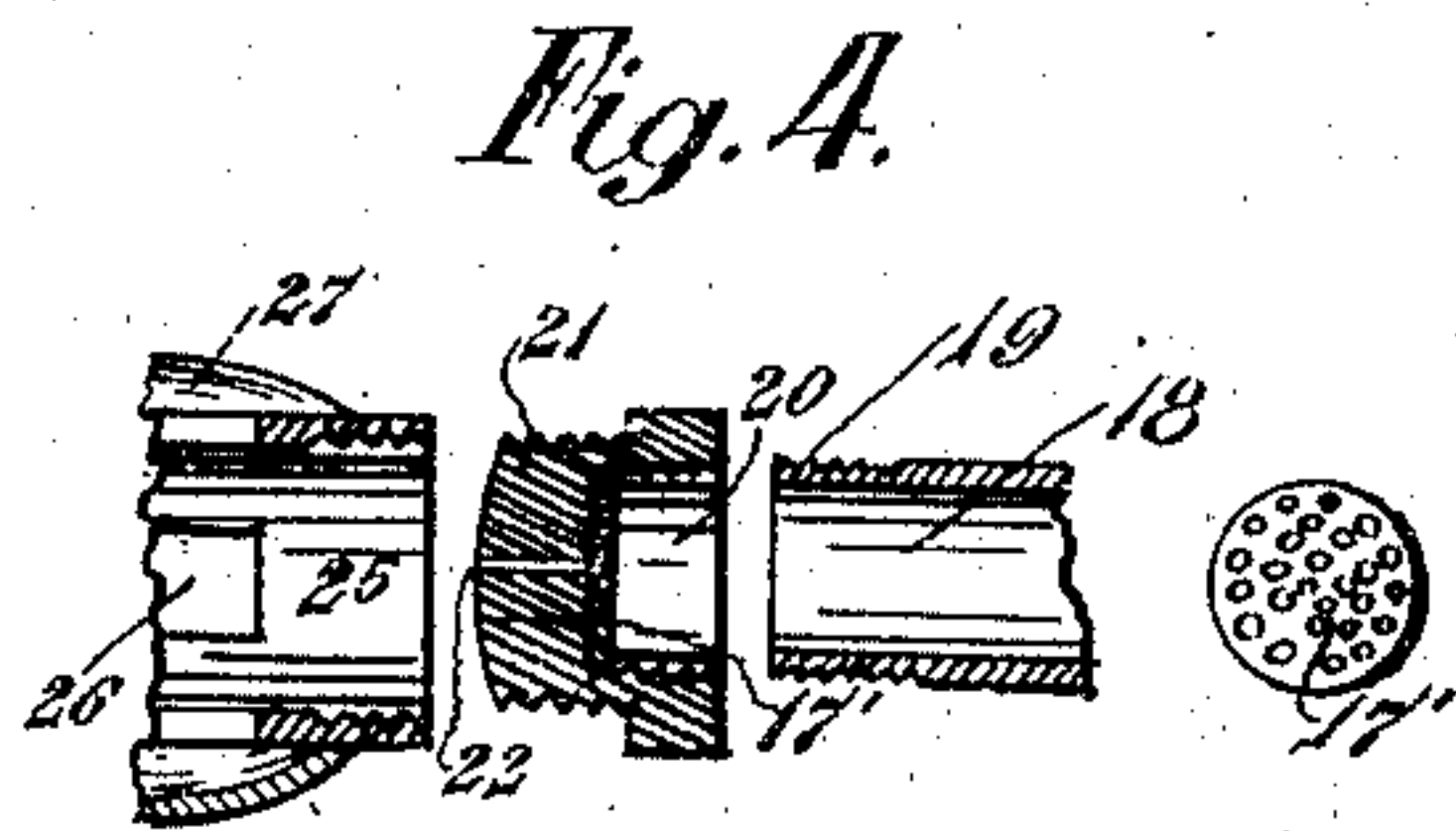


Fig. 4.

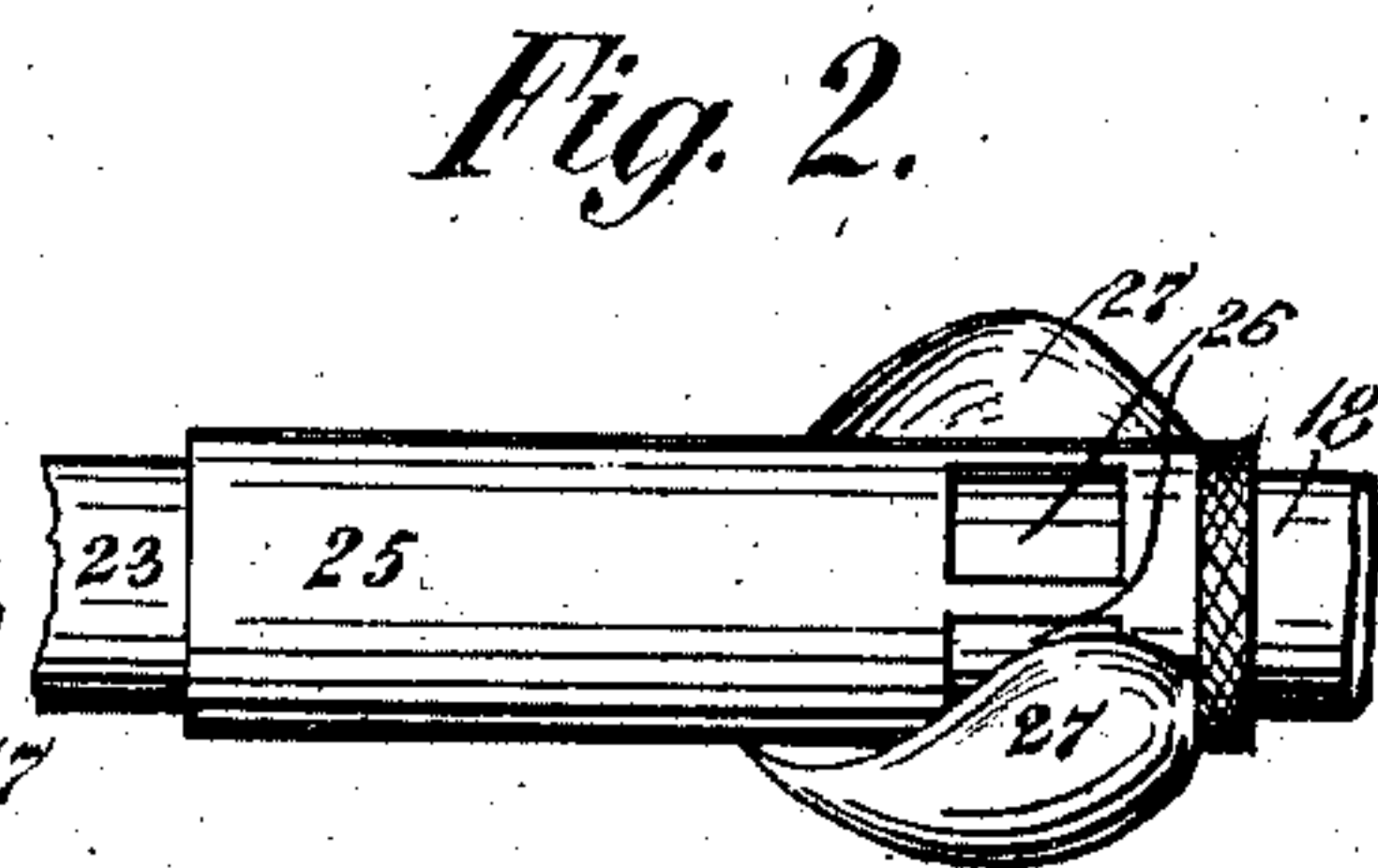


Fig. 2.

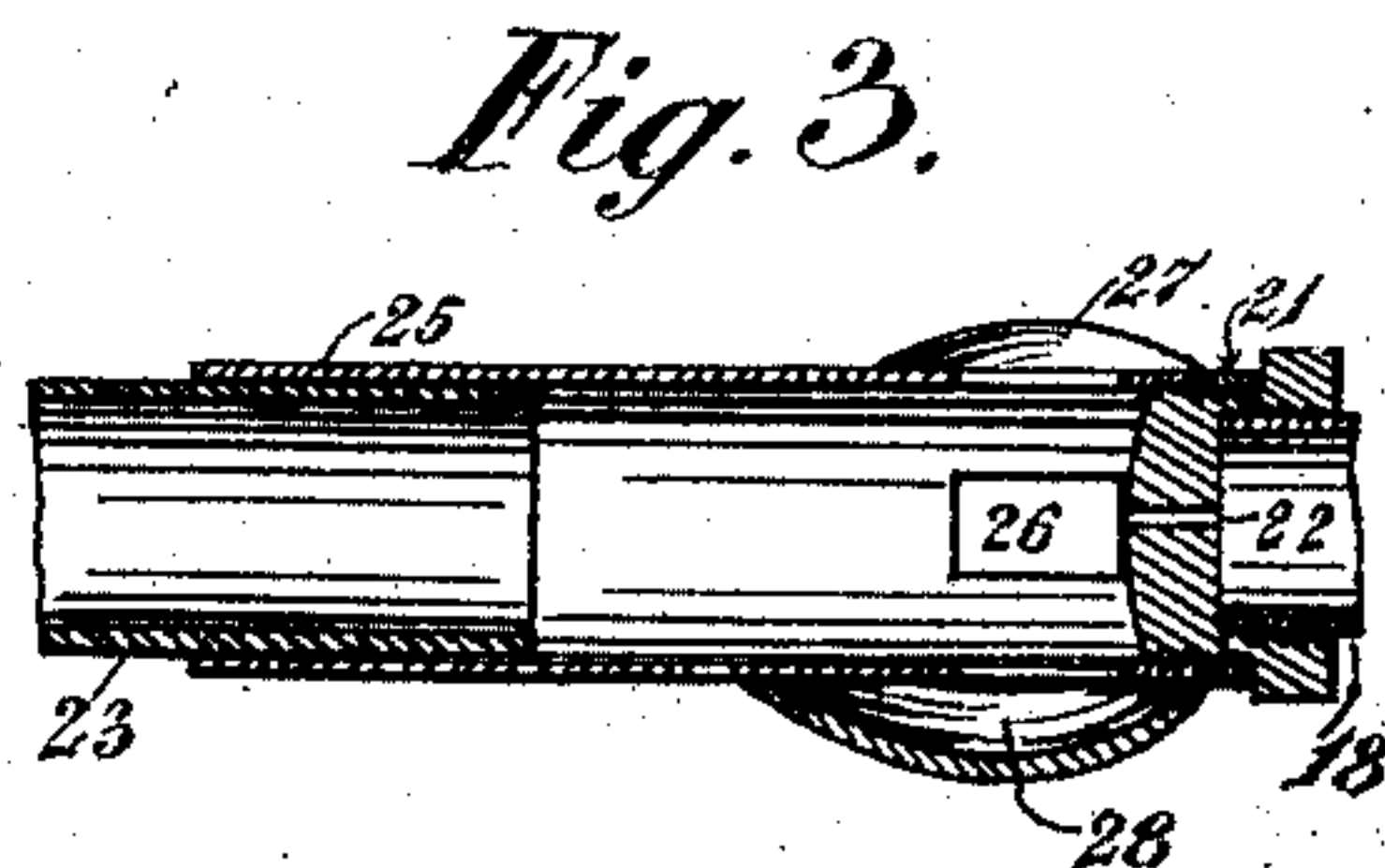


Fig. 3.

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OSCAR J. SEEHAUSEN, OF CHICAGO, ILLINOIS.

VAPOR-LAMP.

No. 846,512.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed August 21, 1905. Serial No. 275,020.

To all whom it may concern:

Be it known that I, OSCAR J. SEEHAUSEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vapor-Lamps, of which the following is a specification.

My invention relates to vapor-lamps, and has particular reference to certain improvements in connection with the vaporizing-tube or retort and the specific method of generating and charging gas from a volatile fluid, such as gasoline; and with the above objects in view my invention consists in the novel construction and arrangement of parts hereinafter referred to in the detailed description, and particularly pointed out in the claim.

In the accompanying drawing, forming a part of this specification, Figure 1 is an elevation, partly in section, of a well-known type of lamp to which my improvements have been applied. Figs. 2, 3, and 4 are enlarged detail views taken from Fig. 1.

Referring to the drawings, 2, 3, 4, and 5 represent the arms or members of a frame of ordinary construction. A portion of the frame is used as a conduit in the well-known manner and to that end the members 3 and 4 are hollow. The member 3 communicates with the nipple 6, leading to the source of liquid-supply, such as a reservoir, from which the liquid is fed by gravity or by pressure.

7 represents the retort or gas-generating tube, and same connects the arms 3 and 4.

Arms 2 and 5 may be either solid or hollow, and if the latter they will be closed, especially arm 2, against communication with the conduit, comprising tubes 3, 7, and 4. The arms 2 and 5 of the frame may be termed the "dead" arms and the others the "tubular" arms. The upper arms 2 and 3 of the frame or hanger are each shown with a reverse curve; but any suitable configuration other than that shown will be equally as well adapted for the purpose of my invention. The arms of the frame are connected by ball-castings 8 9 10 and the nipple 6, the casting 8 being recessed to provide communication between tubes 3 and 7 and the casting 9 similarly recessed or hollowed to open communication between tubes 7 and 4. The casting 10 is also hollowed out to provide a chamber communicating with the tube 4, and said casting 10 has an upwardly-projecting nipple

or neck 11. The arms of the frame or hanger are preferably screwed into the ball-castings and then soldered to insure against leakage.

12 is a Bunsen tube which holds the gallery, mantle, and glassware, and said tube is of exactly the same diameter as to interior opening as the diameter of the passage through arm 4 to insure a free passage of the gas, and thus obviating the noise incidental to a cramped outlet. The glass globe or chimney 13 is shown provided with a series of circularly-arranged holes arranged in a lower plane than the burner. These holes are for the purpose of providing an abundant flow of air from below to take place of the heated air rising rapidly within the globe or chimney 13. The generating-tube 7 comprises a valve-body 16, which has threaded engagement with or is soldered to, or both, the casting 8. In this casting is placed a disk of very fine brass-gauze cloth 17, which arrests any impurities which would otherwise enter the generator 7 and produce smells or clog up the fine needle-opening, to be referred to hereinafter.

Connected with the valve 16 is a seamless brass tube 18, which is also preferably both threaded and brazed to the valve. The tube 18 has on its opposite end a threaded portion 19, which has threaded engagement with a threaded socket 20 in a removable tip 21, provided with a minute passage 22, which leads from tube 18 to a tube 23, communicating with the casting 9.

To one side of the vertical plane of the burner or Bunsen tube 12 and within the tube 18 is an asbestos tube 24', through which the gas or liquid fuel is passed from the valve 16 to the superheating-chamber 24 of the tube 18. This chamber 24 is directly above the flame. Within the socket 20 of the tip 21 is also a piece or disk of fine brass-gauze cloth 17', which arrests any particles in the gasoline or vapor which may have passed the gauze 17, such as paraffin or other precipitated matter. The two gauze tips straining the gas and liquid both before and after expansion in chamber 24 will ordinarily insure a free opening through the passage 22, and when it has for any reason become clogged the tip may be quickly removed as is indicated in its separation from adjoining parts in Fig. 4. Loosely mounted on the tube 23 and having threaded engagement with nipple 21

is a sleeve 25, having a series of openings 26. This tube serves as an air-mixer for the vapor issuing from the tip 21.

5 The air-mixer or sleeve has a combination drip-cup and flame-guard 27, which is in the form of a hollow shell extending around the openings 26 and fitting closely to the tube 25 for about one-half of the circumference of said tube. As shown in Fig. 1 the contour of the
10 drip-cup is such as to leave a clear space all around the tube on that portion of same which has the perforations or openings 26. The air is thus freely admitted to the holes on the under side of the tube and opposite the
15 bottom of the drip-cup. As the drip-cup completely shields the tube 25 in its horizontal plane against ignition through the holes or openings 26 from the flame which heats the chamber 24, the protection is ample for en-
20 tire safety and any drippings of impure matter or raw gasoline through the openings 26 are caught in the cup and the inflammable matter evaporated and the resultant gas drawn in with the air through the openings 26 to be
25 utilized as a fuel instead of being permitted to fall on the floor or carpet. Four openings 26 are preferably provided and these openings are made of such size as to admit, through siphonage, the proper amount of air relative
30 to the volume of gas issuing through the opening in the tip 21. Through this arrangement of drip-cup and flame-guard surrounding and guarding the openings 26 from below these openings can be made of any suitable size
35 and arranged in any suitable manner without reference to the liability of dripping at the

point of air-admission, such dripping being automatically collected, evaporated, and utilized, thereby saving waste and liability of damage through the soiling by or ignition 40 of drippings. Another very important function performed by this drip-cup and shield arranged to surround the openings 26 in their horizontal plane is the protection it affords against the blowing out of the lamp. 45

A large number of lamps of this class are unsatisfactory in their operation by reason of the fact that sudden gusts of wind or drafts check the flow of gas through the mixing-chamber, shutting off the pressure and 50 flow to the burner, and consequently extinguishing the flame. The shield 27 prevents accidents of that kind and insures a steady flame.

I claim as new and desire to secure by Let- 55 ters Patent—

In combination with a burner, having an air and gas mixing chamber provided with air-openings, a hollow shell-like shield extend- 60 ing around said openings for substantially one-half the circumference of said chamber and being affixed to the latter, the ends of said shell being disconnected and spaced apart and extending upwardly to shield the adja- 65 cent openings.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

OSCAR J. SEEHAUSEN.

Witnesses:

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A. R. WILSON.