

No. 885,799.

PATENTED APR. 28, 1908.

I. T. SMITH.  
GASOLENE LAMP.

APPLICATION FILED MAR. 25, 1907.

FIG. 1

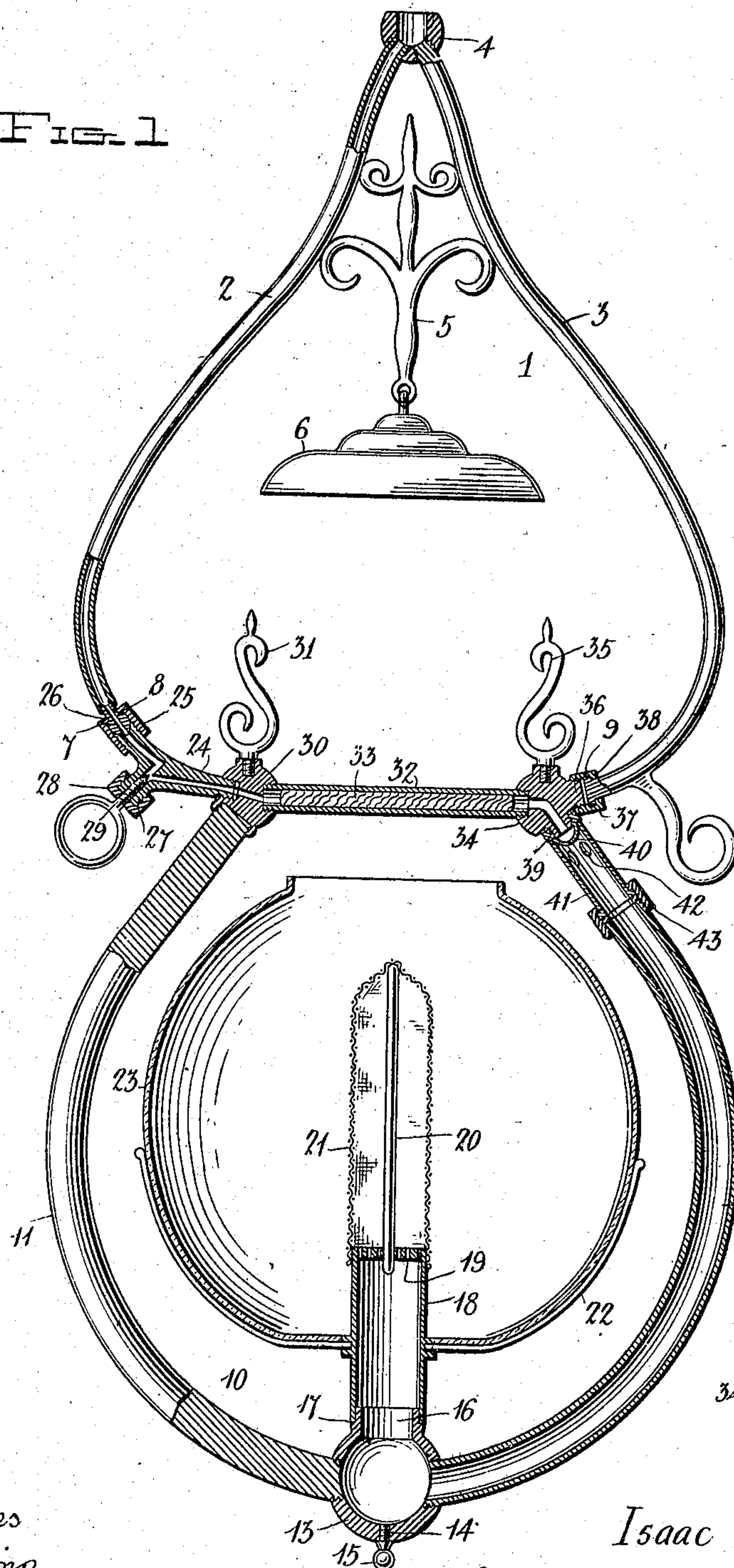
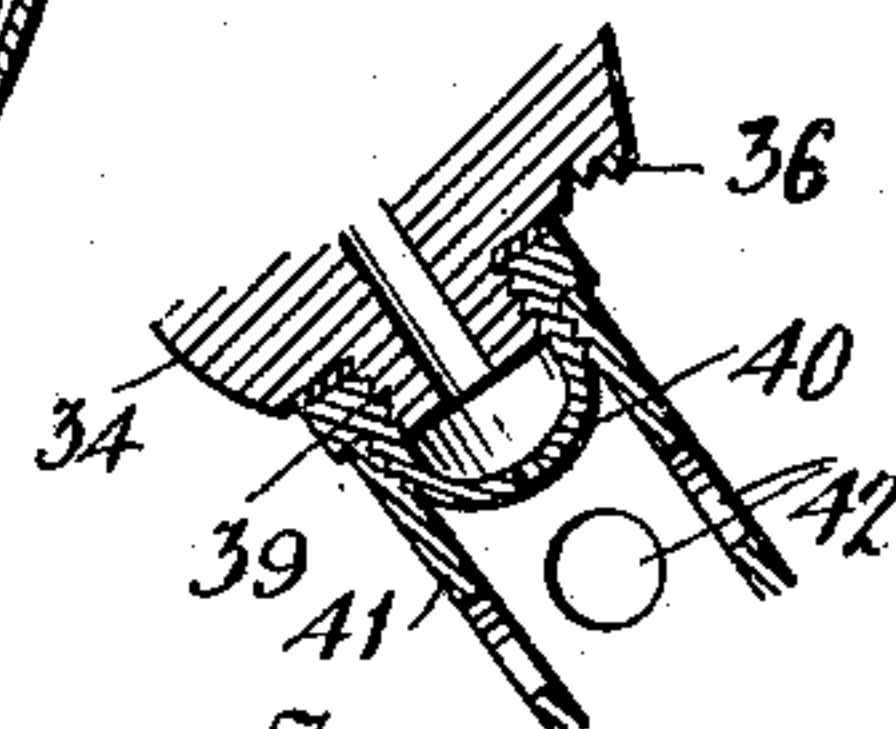


FIG. 2



Witnesses  
J. L. Antonio  
C. H. Greisbauer

Inventor  
Isaac T. Smith  
by *A. B. Wilson & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

ISAAC T. SMITH, OF NORFOLK, VIRGINIA.

## GASOLENE-LAMP.

No. 885,799.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed March 25, 1907. Serial No. 364,472.

*To all whom it may concern:*

Be it known that I, ISAAC T. SMITH, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Gasolene-Lamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in gasolene lamps of that class in which the lamp is adapted to be hung from a ceiling or other support, and is fed with gasolene or other suitable liquid hydro-carbon from a tank located at some distance from the lamp; and it consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of my invention is to effect improvements in the construction of the generator tube and Bunsen or mixing tube, whereby the said mixing tube is located above one side of the globe, and the tip of the generator tube is disposed at such an angle as to discharge the vapor from the generator tube directly through the mixing tube into the gas tube or arm that leads to the burner, and such greasy particles as are discharged from the generator tube are prevented from dropping on and discoloring the globe; a further object being to so construct the lamp as to locate the air intakes of the Bunsen or mixing tube above one side of the burner out of the way of the heated air, which rises from the burner, so that such heated air is prevented from being sucked into such Bunsen or mixing tube.

In the accompanying drawings, which illustrate the invention, Figure 1 is a vertical sectional view of a gasolene lamp embodying my invention; Fig. 2 is a sectional detail view of the mixing chamber of the same.

The upper portion or hanger 1 of the lamp has one side formed by the feed tube 2, and the other side formed by a dead arm 3. The upper ends of said feed tube and dead arm are connected to a union 4, which is here shown as interiorly screw-threaded, to enable it to be attached to a hanger tube for supporting the lamp, and also for supplying gasolene to the feed tube. In the angle between the upper portions of the feed tube and dead arm is a pendant 5, preferably of ornamental form, which strengthens the said hanger 1 by

connecting and bracing said feed tube and dead arm. The said hanger also serves to support a usual bell 6. The feed tube is provided at its lower end with a nipple 7, which has a head forming an annular circumferential shoulder 8. The lower end of the dead arm 3 is formed with an annular circumferential shoulder 9. Below the hanger 1 is a frame 10, which comprises a dead arm 11, and a tubular gas arm 12 secured at their lower ends to a union 13, here shown as spherical in form and having an opening 14 in its lower side and a drip plug 15 to close the said opening. A tubular arm 16 extends upwardly from the said union 13 and is provided with an annular circumferential shoulder 17, which supports the burner tube 18. Said burner tube has on its upper end the usual perforated cap 19 from which rises the magnesia center support 20 that supports the usual incandescent mantle 21. The arms 22 which support the globe 23 project from the said burner tube.

A valve tube 24 has its upper end secured in a coupling sleeve 25, which is swiveled on the reduced portion of the nipple 7, being provided with an inwardly extending annular flange 26, which bears against the shoulder 8 of said nipple. The said valve tube has an interiorly and exteriorly threaded arm 27 projecting downwardly and outwardly therefrom, on which is a packing sleeve 28. A needle valve stem 29 operates in the threaded bore of the said arm and extends through an opening in the said packing nut, said needle valve stem serving to cut off or open the supply of gasolene through the valve tube to the burner. To the lower or inner end of the said valve tube is screwed a union 30, which is here shown as globular in form and is provided with an ornament 31 on its upper side. One end of the generator tube 32 is attached to the said union at a point opposite the inner end of the valve tube. The upper end of the dead arm 11 is also attached to the said union. The generator tube extends above the globe 23 so that it becomes heated by the burner to such a degree as to vaporize the gasolene which is fed to the said generator tube. An asbestos or other suitable wick 33 is preferably placed in said generator tube, and the opposite end of said generator tube is connected to a globular union 34, which union has an ornament 35 on its upper side and is provided with a screw-threaded arm 36, which is detachably connected to the



lower end of the dead arm 3 by a coupling sleeve 37. Said coupling sleeve is swiveled on the said dead arm, being provided with an inwardly extending annular flange 38, which engages the shoulder 9. By constructing the generator tube in this manner it is very strong and rigid and not liable to get out of order from the expansion and contraction to which it is subjected. It also locates the valve or controlling means at one side of the top of the lamp where it will not become so heated as to vary its length or render it uncomfortable to the touch when being manipulated, as would be the case if it were located nearer the top of the lamp.

It will be observed by reference to the drawing that the globular union 34 is at one side of the top of the globe, and that the same is provided with an outwardly extending tubular discharge arm 39, which is screw-threaded and provided with a jet tip 40, and to which is screwed the upper end of the Bunsen or mixing tube 41. Said Bunsen or mixing tube is inclined laterally from and above one side of the globe 23 and is provided near its upper end with air intake openings 42, and its lower end is coupled to the upper end of the tubular gas arm 12 by means of a coupling sleeve 43.

It will be observed by reference to the drawing that the discharge jet tip of the generator tube and the Bunsen or mixing tube are located at one side of the top of the globe 23, where they are remote from the discharge opening in the upper side of the said globe, so that the heated and partially decomposed air and products of combustion which rise from the globe escape therefrom at a point so remote from the Bunsen or mixing tube that the same do not become sucked into the mixing tube and commingle with the vapor, to the consequent detriment to the burning qualities of the gas formed by the mixture of air and vapor. Owing to the fact that the said Bunsen or mixing tube is thus located at one side of the top of the globe, the air which is mixed with the vapor in said tube is pure atmospheric air which is best adapted to form in combination with the vapor a highly combustible gas for use in the burner.

It will be further understood upon refer-

ence to the drawing that the discharge jet tip of the generator tube is laterally inclined, and is in alinement with the Bunsen or mixing tube and the upper portion of the tubular gas arm 12, so that the vapor from the generator tube is discharged directly through the said Bunsen or mixing tube and into the said gas tube, together with such undecomposed or partially decomposed greasy particles as escape from such generator tube, and said particles are prevented from dropping upon or into the globe and discoloring and otherwise injuring the same.

From the foregoing description, taken in connection with the accompanying drawing, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claims.

Having described my invention, I claim:—

In a gasolene burner, a hanger comprising a vertically arranged curved conduit provided with unions and having a burner connected with its lower end, the portion of the conduit between the unions being rigidly connected therewith at its ends and extending transversely above the burner to form a generator, the portion of the conduit at the side of one union opposite the generator being in the form of an inclined Bunsen burner tube which is connected with the adjoining section by means of a coupling sleeve, and the portion of the conduit at the side of the other union opposite the generator being provided with a valve and connected with the adjoining section by means of a coupling sleeve, and dead arms connected with the conduit to complete the hanger.

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

ISAAC T. SMITH.

Witnesses:

J. W. GARNER,  
M. J. KING.