J. STUBBERS.

SERVICE PIPE FOR LIGHTING SYSTEMS.

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**996,535.**

Patented June 27, 1911.

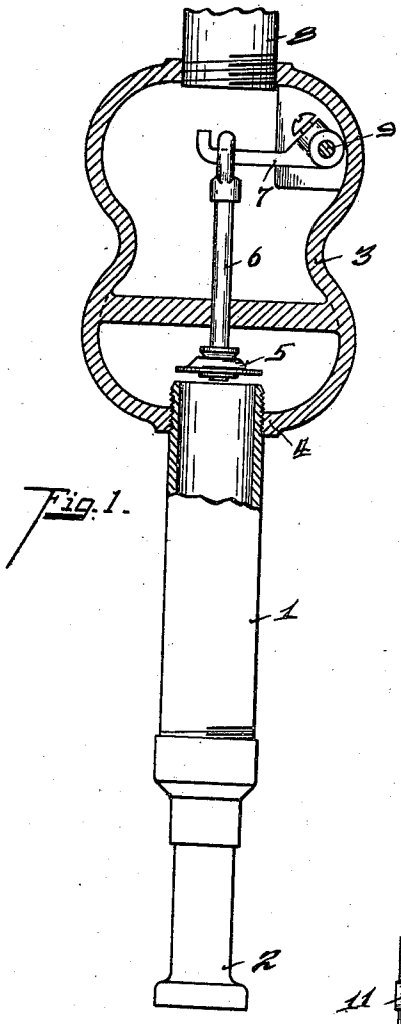


Fig. 1.

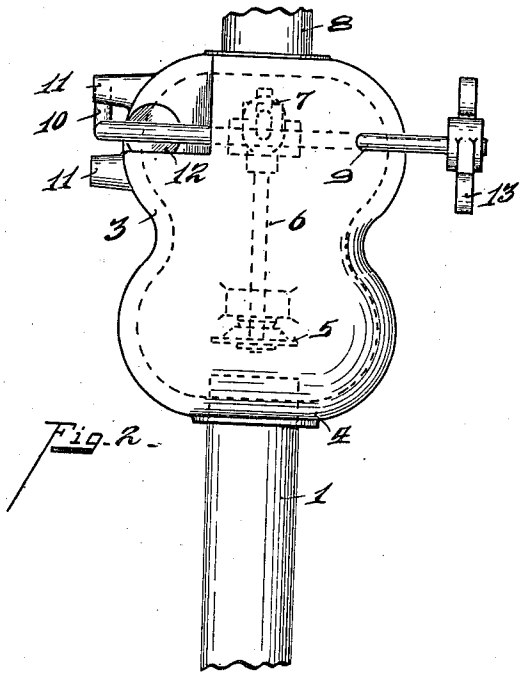


Fig. 2.

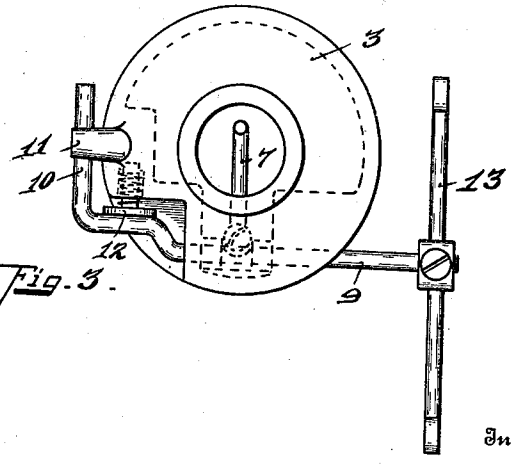


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH STUBBERS, OF COVINGTON, KENTUCKY, ASSIGNOR TO THE INCANDESCENT LIGHT & STOVE COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

## SERVICE-PIPE FOR LIGHTING SYSTEMS.

996,535. Specification of Letters Patent. **Patented June 27, 1911.**

Application filed November 30, 1908. Serial No. 465,218.

*To all whom it may concern:*

Be it known that I, JOSEPH STUBBERS, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Service-Pipes for Lighting Systems, of which the following is a specification.

My invention relates to an improved construction in or attachment to the burner pipe of a hydro-carbon incandescent lighting system.

The object of the invention is to prevent the condensed vapors from gaining access into the burner proper.

Another object of the invention is to trap these combustible fluids of condensation before they enter the burner and preferably in a position located within the heating zone of the flame, so that the fluid will evaporate off in a harmless manner.

The invention is shown and has particular utility in connection with incandescent mantle burners of the inverted type. In this type the fluids of condensation more readily find their way into the burner and fall therefrom into the flame causing an undesirable fire hazard. In hydro-carbon lighting systems condensation of vapors in the horizontal pipes is apt to occur, and the flow of the gases carries the fluid into the burner. By my invention I interpose a fluid trap in the service pipe to the burner in such a way as to catch these fluids and hold them while the gas passes on to the burner.

The features of the invention are more fully set forth in the description of the accompanying drawing, forming a part of this specification, in which:—

Figure 1 is a central vertical section of my trap for fluids of condensation in connection with burner. Fig. 2 is a side elevation of the same. Fig. 3 is a top plan view.

1 is the inverted burner tube and 2 the burner from which an incandescent mantle is suspended. Upon the upper end thereof is secured a sleeve or chamber 3 of larger diameter than the burner tube with the upper end of the burner tube projecting through the base portion 4 of this chamber, so as to extend above the same. 5 represents a valve of the disk type for sealing this open upper end of the burner tube. It is connected to a rod 6, which is raised and lowered by means of the lever mechanism. This valve disk 5 is movable axially over the mouth of the burner tube and forms a sort of a hood, which prevents any liquid condensation from falling into the burner tube. This sleeve forms a continuous channel with the burner tube, being in vertical registration therewith, but of larger diameter, so that any condensation occurring within this sleeve will deposit upon the inside walls thereof and flow down upon the floor below the valve, being thus prevented from finding entrance into the burner tube. The upper portion of the chamber is in connection with a supply pipe 8. The lever mechanism for operating the valve 5 comprises an arm 7 connected with the rod 6 at one end, and at its opposite end to the actuating rod 9. The rod 9 is bent at one end forming a projection 10, adapted to move between the stop lugs 11, projecting from the shell of the chamber 3.

12 represents a spring controlled plunger, bearing against rod 9 to frictionally maintain the valve in any adjusted position.

13 represents a valve actuating bar secured to rod 9.

While the valve 5 is shown in the chamber 3, this is not of the essence of the invention. In its broader aspect the element 3 is a condensation chamber or a fluid trap interposed between the service pipe and the burner, which has the function of catching the fluids of condensation in such way as to prevent their access into the burner tube without interfering with the flow of gas, and this trap is preferably interposed in position to be located within the heating zone of the flame, so that the trapped fluids may harmlessly evaporate.

Having described my invention, I claim:—

1. In a burner for pre-admixed hydro carbon vapor and air, a vertically alined and slightly separated service pipe and burner tube, means for attaching a mantle directly to the lower end of the burner tube, a shell inclosing the adjacent ends of said pipe and tube, said tube projecting upwardly into the shell, whereby the shell is in the immediate proximity of the mantle, a valve within said shell for opening and closing and screening the open end of the burner tube, and means exterior of said shell for operating said valve.

2. In a burner for pre-admixed hydro carbon vapor and air, a vertically alined and

slightly separated service pipe and burner tube, means for attaching a mantle directly to the lower end of the burner tube, a shell inclosing the adjacent ends of said pipe and tube, said tube projecting upwardly into the shell, whereby the shell is in the immediate proximity of the mantle, an axially movable valve disk in the shell for the mouth of the burner tube, forming a hood to prevent liquid condensation falling into the burner tube, and means projected through the shell for operating the valve.

In testimony whereof, I have hereunto set my hand.

JOSEPH STUBBERS.

Witnesses:
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