W. E. JERVEY.

Vapor Stove.

No. 62,338. Patented Feb. 26, 1867.

Fig. 1

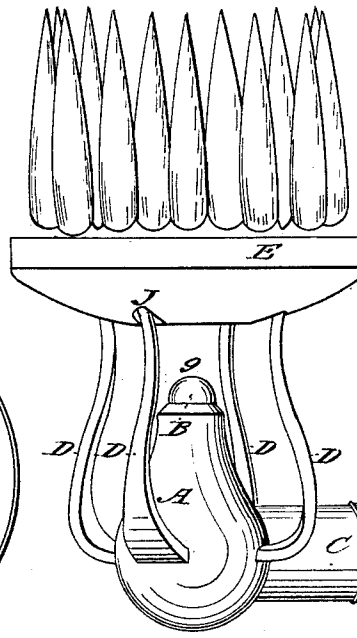


Fig. 3

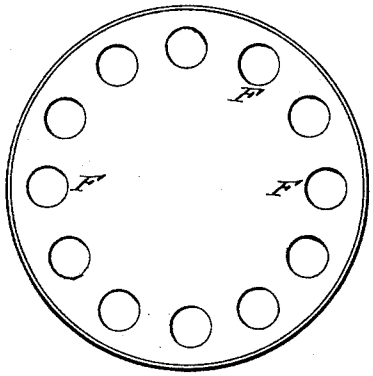


Fig. 4

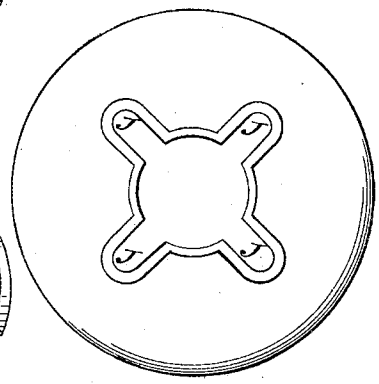
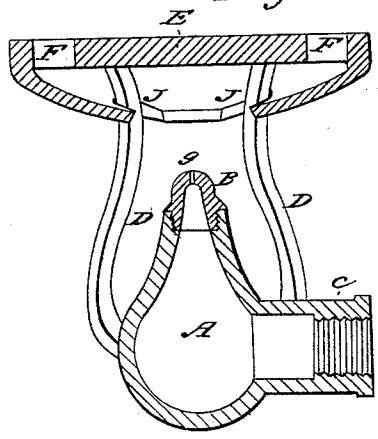


Fig. 2



Witnesses:

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United States Patent Office.

WILLIAM E. JERVEY, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 62,338, *dated February* 26, 1867.

BURNERS FOR PETROLEUM STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM E. JERVEY, of the city of New Orleans, parish of Orleans, and State of Louisiana, have invented a new and useful improvement in "Burners" for Petroleum Gas Stoves; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of my improvement.

Figure 2, a sectional view thereof.

Figure 3, a top view of the upper retort or furnace; and

Figure 4, a bottom view of the same.

My invention has for its object the supersedure of the use of white or red lead or other like substances, in the fabrication of petroleum gas burners; the more certain, easy, and thorough transmission of heat to the bottom of the lower or inferior retort or fluid-chamber; the perfect combustion of all the gas that is created; the direct transmission, in an upward direction, of the flame to the article to be heated; the more effectual preventing of leakage by abandoning the use of screw-valves, and the better and more regular retention of heat by dispensing with the use of conical rings and cross-wires which always decrease the heat; the diminution of the noise made by the escaping gas; and the attainment of many other advantages that need not be here specified.

To accomplish these beneficial results I construct a brass retort or fluid-chamber, A, figs. 1 and 2, provided with an iron nipple, B, which is screwed into the top of the fluid-chamber, as is shown in the drawings. The fluid-chamber A being of softer metal than the nipple B, the connection between the two can be so closely established that any escape of the gas, save through the jet *g*, becomes a physical impossibility; and consisting of but these two pieces or parts, thus closely united by a screw joint, there is no need for the use of white or red lead or other equivalent substance, as is the case when there are joints and seams which cannot be closed by the mode I have adopted. Projecting upward from the bottom of the fluid-chamber A are arms D, (see figs. 1 and 2,) which act as supports to the upper or superior retort or furnace E, and at the same time as conductors of the heat that is therein generated, to the lower retort or fluid chamber A, to the end of keeping up a regular and constant volatilization of the fluid contained within said chamber. The superior retort, or furnace, as it may more accurately be called, marked E upon the drawing, may be said to represent a very obtuse or flat hollow truncated cone, the base of which constitutes the top of the furnace, as is clearly shown on the drawings. This furnace rests upon and is supported by the conductors D, which pass within the rim on circle J to the lower side of the top plate of the furnace, as shown at figs. 1 and 2. It may be varied somewhat in form and of any size required, but never in such degree as to change its distinctive characteristics, as developed by the above-described form. It will be seen that when the gas escapes from the jet *g* and rises into the furnace E, it cannot escape excepting through the orifices F F in the top thereof. The peculiar construction of the furnace E, combined with its position with respect to the point at which the gas escapes from the fluid-chamber, causes the generation of so intense a heat that the combustion of the gas becomes perfect, whatever may have been its condition when leaving the lower retort, whilst at the same time the hissing and disagreeable noise made by the escaping gas is very greatly diminished, if it be not wholly destroyed.

By reference to the drawings the operation of my invention will be readily understood. The fluid is supplied from a reservoir placed above the burner and stove in the usual way, and passes from the reservoir through a small tube connected with the tube C into the lower retort or fluid-chamber A. The flow of the fluid is regulated by a stop-cock, but as I lay no claim to the reservoir, the tube leading therefrom, nor the stop-cock, I have not thought it necessary to delineate the same upon the drawings. So soon as the fluid is heated by any of the familiar and ordinary methods sufficiently to volatilize a portion of it, such part, now transformed into an inflammable gas, escapes through the jet *g* and rises into the furnace E, which quickly becomes so intensely heated that a complete combustion of the gas inevitably follows. This I have verified repeatedly by actual experiment with a white pocket handkerchief, which received neither stain nor discoloration by being rubbed upon the bottom of a vessel that had been subjected to a flame from my burner for several hours. The intense heat thus imparted to the furnace is communicated to the conductors D, which, from being enveloped in flame, become red hot, and through them a sufficient degree of heat is transmitted to the fluid-chamber to keep up a

continual and active volatilization of the fluid, even when the same is of the heaviest and crudest quality. The gas or flame issues from the furnace E through the orifices F F, and is brought into direct contact with the thing to be heated, whatever that thing may be. It will be observed that there is no joint in my burner which requires a packing of white or red lead, and hence that there is no leakage of gas or oil, as is the case in Gray's arrangement, and in all others with which I have any acquaintance, and consequently none of the evils arising from such leakage.

Having thus described my invention, and explained its mode of operation, what I claim, and desire to secure by Letters Patent, is—

The combination of the upper retort or furnace E, the supporting-arms and conductors D, and the fluid-chamber A, when these parts are constructed and arranged and co-operate in the manner shown and described, and for the purpose set forth.

WM. E. JERVEY.

Witnesses:

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