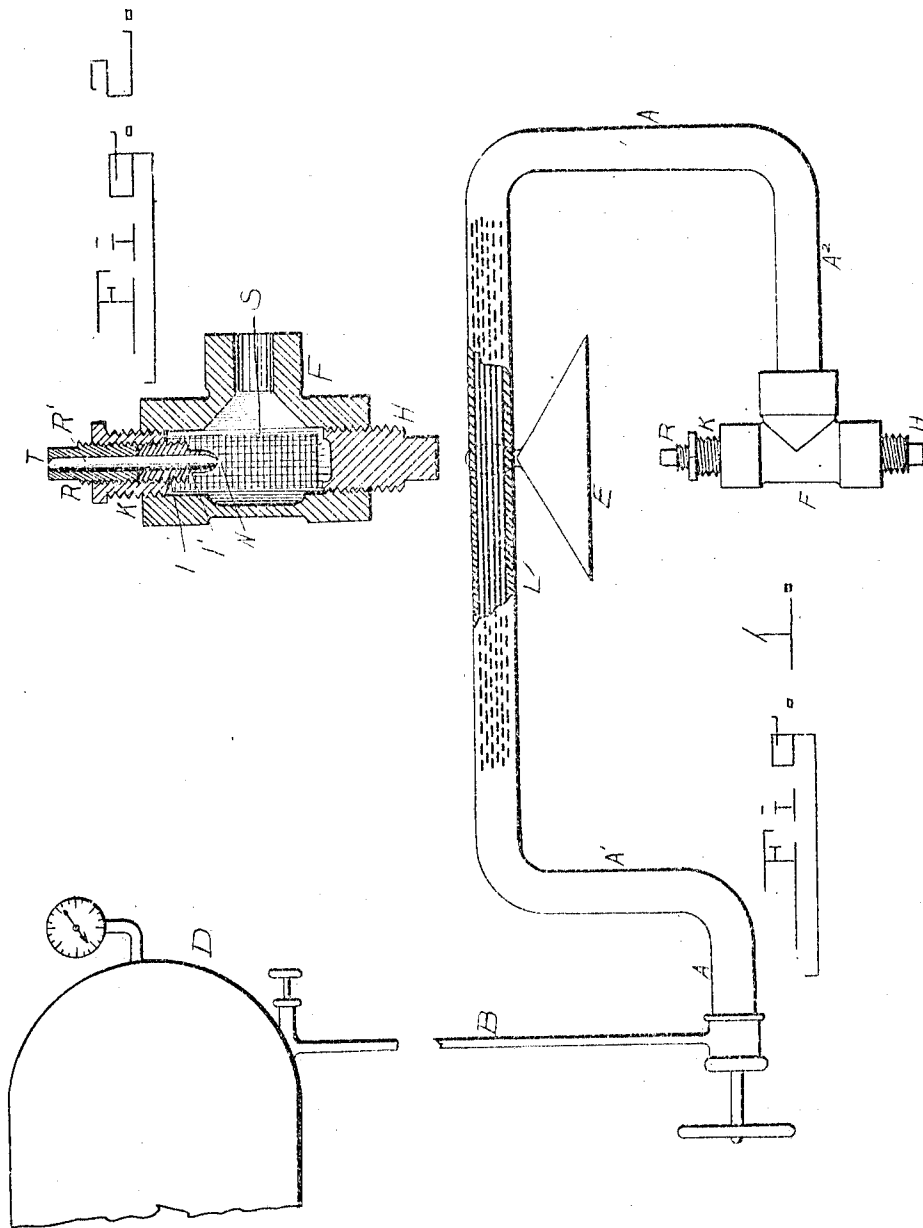


1,048,293.

Patented Dec. 24, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

ROY E. BUSHNELL, OF HUBBARD, IOWA.

KEROSENE-OIL GENERATOR.

1,048,293.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed July 15, 1912. Serial No. 709,534.

To all whom it may concern:

Be it known that I, ROY E. BUSHNELL, a citizen of the United States, residing at Hubbard, in the county of Hardin and State of Iowa, have invented certain new and useful Improvements in Kerosene-Oil Generators; and I do hereby 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in muffler devices for kerosene oil generators and comprises a simple and efficient device of this nature, the purpose of which is to cause a thorough vaporization of the oil as it makes exit from the nozzle burner.

The invention consists of a simple apparatus having various details of construction and arrangements of parts which are illustrated in the accompanying drawings, and in which—

Figure 1 is a side elevation showing the application of my invention, and Fig. 2 is an enlarged detail sectional view through the nozzle burner.

Reference now being had to the details of the drawings by letter, A designates a pipe with an oil supply tube B communicating therewith through a suitable valved opening, said tube leading from an oil tank D. The pipe A is bent upwardly as at A' and thence horizontally, having a heat deflecting bell E projecting therefrom. Said pipe is bent preferably in the manner shown in Fig. 1 of the drawings and has a return portion A² which is parallel to the portion of the pipe to which said heat deflecting bell is attached, and F designates a T-connection which is hollow and fitted to the threaded end of the pipe, as shown clearly in Fig. 2 of the drawings. Said T, which forms a portion of the burner, has a plug H fitted in a threaded opening in the bottom thereof and in its upper end a hollow threaded bushing K is fitted which is interiorly threaded and receives a plug I having a chambered portion I' terminating in a nozzle N. A second plug, designated by letter R having circumferential threads is fitted in the upper end

of the bushing and is provided with a chambered portion R' terminating in a nozzle T. When the plugs are adjusted in place within the bushing with the inner end of the plugs in contact with each other, it will be noted that the walls of the two chambered portions are flush with each other, forming an elongated chamber serving as a muffler. When the plugs are adjusted in place, it will be noted that they are positioned directly underneath the central portion of the heat deflecting bell E and spaced apart a slight distance therefrom. Mounted within said T is a screen S serving to filter the oil before entering the nozzles. Positioned within the horizontal portion of the pipe from which the deflecting bell projects is a series of wires L and which are adapted to assist in the vaporization of the oil by their becoming heated from the burning gases.

In operation, by the peculiar construction of my nozzle burner, an efficient means is afforded for converting kerosene oil from a liquid to a gaseous state, increasing the amount of heat by more complete combustion than would otherwise occur in the usual oil burners and when the inner ends of the nozzles are fitted together the chambered portions thereof form a muffler, thus reducing to a minimum the noise incident to the vaporizing of the oil and also reducing the amount of oil used to produce a given result. By reason of the burner being positioned underneath the heat deflecting bell, the waste heat is utilized to assist in raising the temperature of the oil before it reaches the burner, thus expediting the vaporization of the same.

What I claim to be new is:—

1. An oil vaporizer comprising a pipe, a T-burner fitted thereto, a bushing mounted in one end of the T, and nozzle plugs fitted within said bushing and provided with chambered portions forming a muffler, as set forth.

2. An oil vaporizer comprising a pipe, a T-burner fitted thereto, a bushing mounted in one end of the T, nozzle plugs fitted within said bushing and provided with chambered portions forming a muffler, a plug closing the other end of the T-burner, and a screen over the opening leading from the pipe into said T-burner, as set forth.

3. An oil vaporizer comprising a pipe with a heat deflecting bell depending there-

from, a portion of said pipe having a return bent portion, a T-burner fitted to the end of the bent portion underneath said bell, a bushing fitted in one open end of the T-burner and provided with interior threads, nozzle plugs exteriorly threaded and fitted within said bushing, each plug having a chambered portion which, when the plugs are adjusted within the plug, form a muffler,

and a plug fitted in the other end of the T-burner, as set forth.

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

ROY E. BUSHNELL

Witnesses:

C. A. SCHRADER,
ESTELLA SCHRADER.