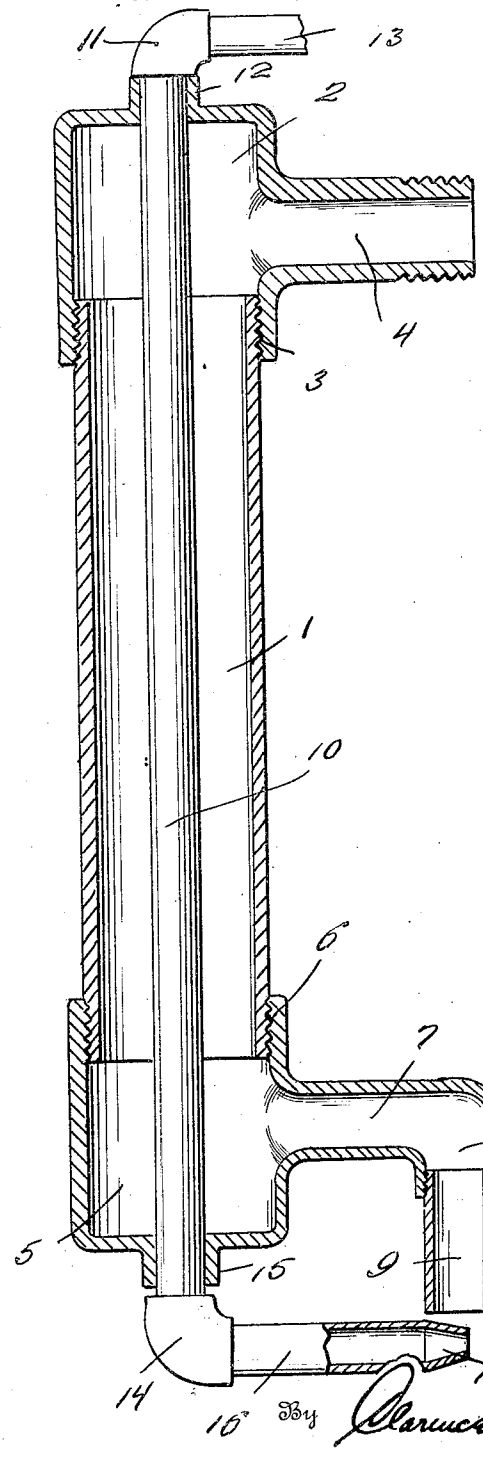
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W. R. GIBSON

VACUUM OIL BURNER

Filed Oct. 24, 1924



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UNITED STATES PATENT OFFICE.

WILLIAM R. GIBSON, OF MANSFIELD, LOUISIANA.

VACUUM OIL BURNER.

Application filed October 24, 1924. Serial No. 745,648.

To all whom it may concern:

Be it known that I, WILLIAM R. GIBSON, a citizen of the United States, residing at Mansfield, in the parish of De Soto and State of Louisiana, have invented certain new and useful Improvements in Vacuum Oil Burners, of which the following is a specification.

This invention relates to improvements in oil burners, and has for its principal object to provide a means whereby the atomizing fluid provides a means for causing the flow of oil through an oil pipe.

A further object of the invention is to provide a vacuum oil burner of the above mentioned character, wherein the flow of oil to the oil pipe is dependent upon the pressure of the atomizing fluid.

A still further object is to provide a vacuum oil burner of the above mentioned character wherein the oil feeding pipe is disposed within the atomizing fluid circulating pipe, whereby the oil feeding pipe will be heated by the atomizing fluid passing around the oil feeding pipe.

A still further object of the invention is to provide a vacuum oil burner of the above mentioned character, which is simple in construction, inexpensive, strong and durable, and further well adapted for the purposes for which it is designated.

Other objects and advantages of this invention will become apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification, and in which like numerals designate like parts throughout the same:

The figure represents a view partly in section, and partly in side elevation, of the vacuum oil burner embodying my invention.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates an elongated pipe, which is of a relatively large diameter. The upper and lower ends thereof are externally threaded. A head 2 is fitted on the upper end of the pipe 1 as illustrated at 3. The lateral tubular extension 4 is formed on the head 2, and provides an inlet for the atomizing fluid, which may be supplied to the head and pipe 1, by attaching a supply pipe to the outer end of the tubular extension 4. A similar head 5 is threaded on the lower end of the pipe 1, as illustrated at 6, and the head 5 is also provided with a tubular lateral extension 7. The tubular extension 7 forms an outlet for the atomizing fluid, which passes through the pipe 1 and the head 5, in the manner hereinafter to be more fully described. The outer end of the tubular extension 7 is disposed downwardly, as illustrated at 8, and is internally threaded, for receiving the discharge pipe 9.

Extending centrally through the pipe 1, and the heads 2 and 5 respectively, is the relatively small oil feed pipe 10. An elbow 11 is threaded on the upper end of the oil feeding pipe 10, and rests on the annular shoulder or collar 12, formed on the upper head 2, and affords the connection with the oil supply pipe 13. A similar nipple 14 is threaded on the lower end of the oil feeding pipe 10, and is disposed adjacent the annular shoulder or collar 15 formed on the bottom of the head 5 A discharge nozzle 16 has its inner end threaded into the nipple 14, for communication with the oil feed pipe 10, and the outer end of the discharge nozzle 16, which is reduced, as illustrated at 17 is disposed directly below the lower end of the discharge pipe 9, and is in communication therewith for the purposes to be presently described.

The atomizing fluid, used in conjunction with my improved oil burner may be either steam or air. The atomizing fluid will enter the head 2, through the inlet 4, and will circulate down through the pipe 1, around the oil feeding pipe 10, and will be discharged outwardly from the head 5, through the outlet 7, and the discharge pipe 9. The atomizing fluid, upon being discharged from the pipe 9 will cause a vacuum or siphonic action, in the oil feeding pipe 10, whereby the oil will be delivered to the pipe 10, and fed downwardly therethrough, and discharged through the nozzle 16, and upon leaving the reduced outer end 17 of the nozzle, the oil and atomizing fluid will be ignited and will provide a flame at the end of the discharge nozzle.

If the pressure of the atomizing fluid is increased, the heat will be increased, and the flame will not go out, when the pressure of the atomizing fluid is increased. When the steam is used as an atomizing fluid, the same, upon passing downwardly through the pipe 1 will, of course, come in contact with the oil feeding pipe 10, and thereby superheat the oil as the same is fed through the pipe,

thereby further increasing the efficiency of my improved vacuum oil burner. It is also to be understood that the nozzle 16 may be readily disengaged from the elbow 14 on the lower end of the oil feed pipe 10, in order to permit the attachment of any other suitable nozzle.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape, and arrangement of parts may be resorted to, without departing from the spirit of the invention and the scope of the appended claim.

Having thus described my invention, what is claimed is:

A vacuum oil burner comprising a cylindrical casing, a head on the upper end thereof, a tubular lateral extension associated with the head comprising an atomizing fluid inlet, an additional head on the lower end of the casing, a tubular extension associated with the last mentioned head and providing an outlet for the atomizing fluid, a discharge pipe in the outer end of the tubular extension providing an outlet, an oil pipe extending centrally through the casing and through said head, a supply pipe associated with the upper end thereof, and an oil discharge nozzle on the lower end of the oil pipe, the outer end of the nozzle being disposed in communication with the outer end of the discharge pipe.

In testimony whereof I affix my signature.

WILLIAM R. GIBSON.