

W. S. ESSEX.
OIL BURNER.

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1,005,821.

Patented Oct. 17, 1911.

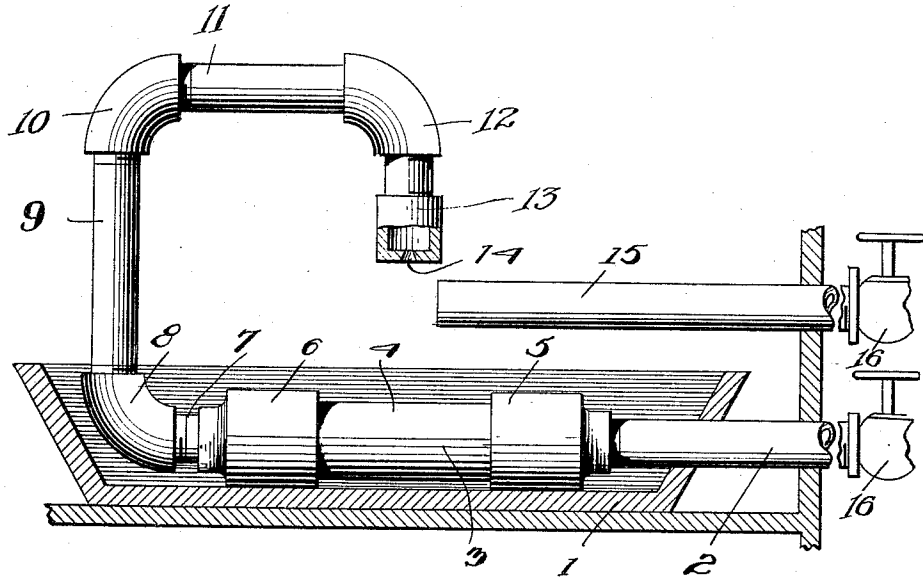


FIG. 1.

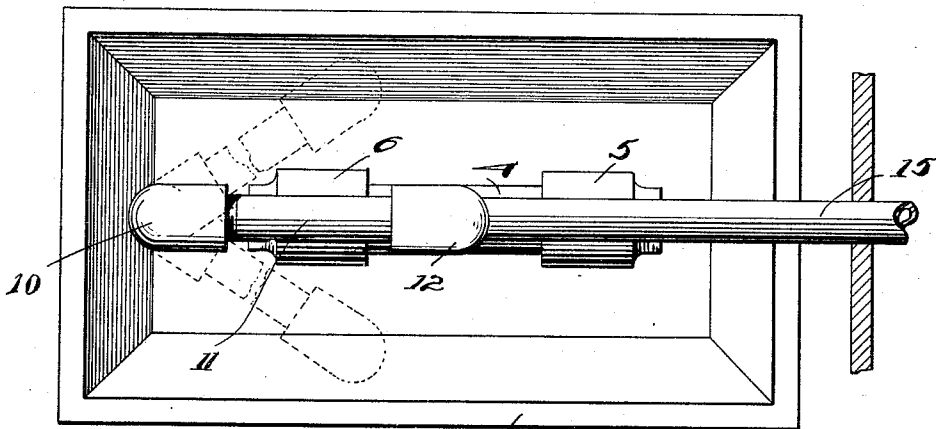


FIG. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

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OIL-BURNER.

1,005,821.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WINFIELD S. ESSEX, a citizen of the United States of America, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to oil burners and especially to that type of a burner used in connection with heating ranges or stoves, furnaces and boilers.

The object of the invention is to provide an improved oil burner of this kind so constructed and arranged that the heater will be thoroughly heated by the action of the steam thereon.

The invention further has for its object to provide an improved oil burner so constructed and arranged that the discharge of steam and oil will be effectively maintained and directed at a point so as to obtain the greatest efficiency from the burner.

With these and other objects in view, this invention consists of certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described and claimed.

In the drawing—Figure 1 is a view in side elevation of an oil burner constructed in accordance with this invention showing a part of a stove in section, the burner pan also being shown in section. Fig. 2 is a plan view of the oil burner.

Referring to the drawings by numerals, 1 designates the pan which may be of the usual type and of any desired shape. The water pipe 2 is secured to the heater 3 which is adapted to rest within the pan 1. The heater 3 comprises a tubular body portion 4 having nipples 5 and 6 engaging its respective ends. The nipples 5 and 6 are slightly larger than the body portion 4 of the heater and in this manner, the body portion is held slightly above the bottom of the pan, thereby allowing the flame to more effectually act upon the burner by burning all around the same. The nipple 5 is connected directly to the water feed pipe 2 and the nipple 6 is connected to a short pipe 7 which engages at its opposite end an elbow 8. The elbow 8 has secured thereto a vertically extending pipe section 9 on the upper end of which is swiveled an elbow 10 to which is secured a horizontal pipe section 11 having at its outer

end an elbow 12 from which depends a discharge nozzle 13. The nozzle 13 has its bottom provided with a discharge opening 14 which allows the steam which escapes therefrom to engage the heater 3 or mix with the oil contained within the pan 1.

The oil is fed to the pan 1 through the pipe 15 which terminates under the discharge nozzle 13 of the burner, and by the present arrangement, it will be seen that a good mixture will be obtained, since the steam and oil are both discharged at about the same point. The usual valves 16 are connected to the pipes 2 and 15 for controlling the flow of water or oil therethrough, as the case may be.

The discharge nozzle 13 may be swung to either of the positions shown in dotted lines, so as to discharge the steam upon the bottom of the pan, but it is preferable to have the pipe section 11 carrying the nozzle 13, extend horizontally so that the steam may be discharged directly upon the heater. In this manner, as previously stated, the stream of steam is broken and the fire in the pan will not be in danger of being blown out.

What I claim is:—

1. In an oil burner of the kind described, a pan, a water heating pipe mounted upon and elevated above the bottom of said pan, a vertical branch pipe connected to one end of said water heating pipe and having a horizontal portion with a depending steam discharge nozzle at its outer end located above a portion of the water heating pipe, and a horizontal supply pipe projecting over said pan, and having its discharge end located between said steam discharge end of the steam pipe and said water heating pipe.

2. In an oil burner of the kind described, a pan, a water heating pipe mounted on and elevated above the bottom of said pan, a vertical pipe mounted on one end of said water heating pipe, a horizontal arm swiveled to the upper end of said vertical pipe and having a depending steam discharge nozzle located above said water heating pipe, said arm and nozzle being adapted to be swung over said water heating pipe from one side to the other, and a horizontal oil supply pipe projecting over said pan and having its discharge end located beneath the discharge end of said steam pipe and above said water heating pipe.

3. In an oil burner of the kind described, a pan, a water heating pipe having a nipple

at each end resting on the bottom of said pan and holding said water heating pipe above said bottom, a water supply pipe connected with one of said nipples, a vertical
5 pipe connected to the other of said nipples, a horizontal pipe swiveled to the upper end of said vertical pipe and having a depending steam discharge nozzle located above said water heating pipe, and a horizontal

oil supply pipe having its discharge end located between said steam discharge nozzle and said water heating pipe. 10

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

WINFIELD S. ESSEX.

Witnesses:

GEO. T. WILKINSON,

Mrs. L. V. NEAL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."