Sept. 16, 1924. 1,508,491

J. W. WOODS

OIL BURNER

Filed June 1, 1923 2 Sheets-Sheet 1

Fig. 1.

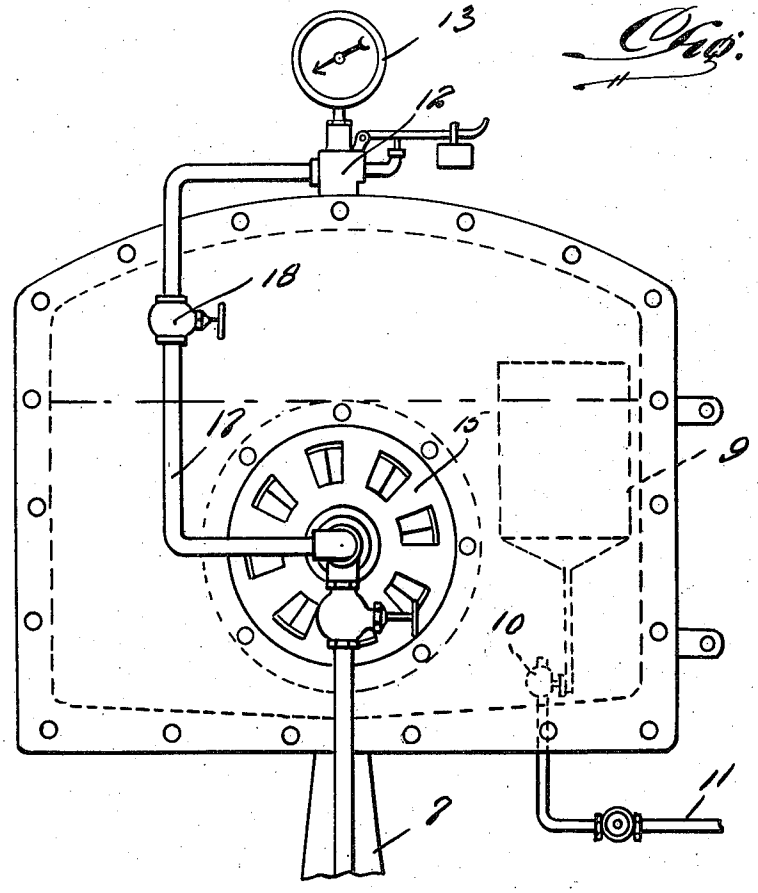
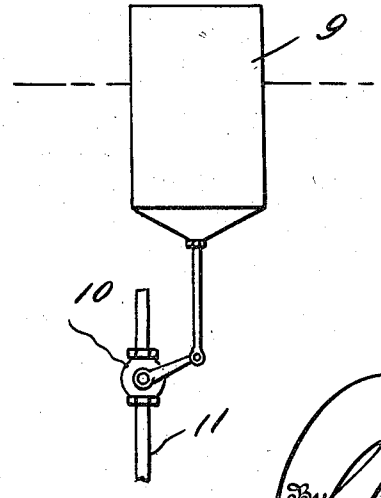


Fig. 3.



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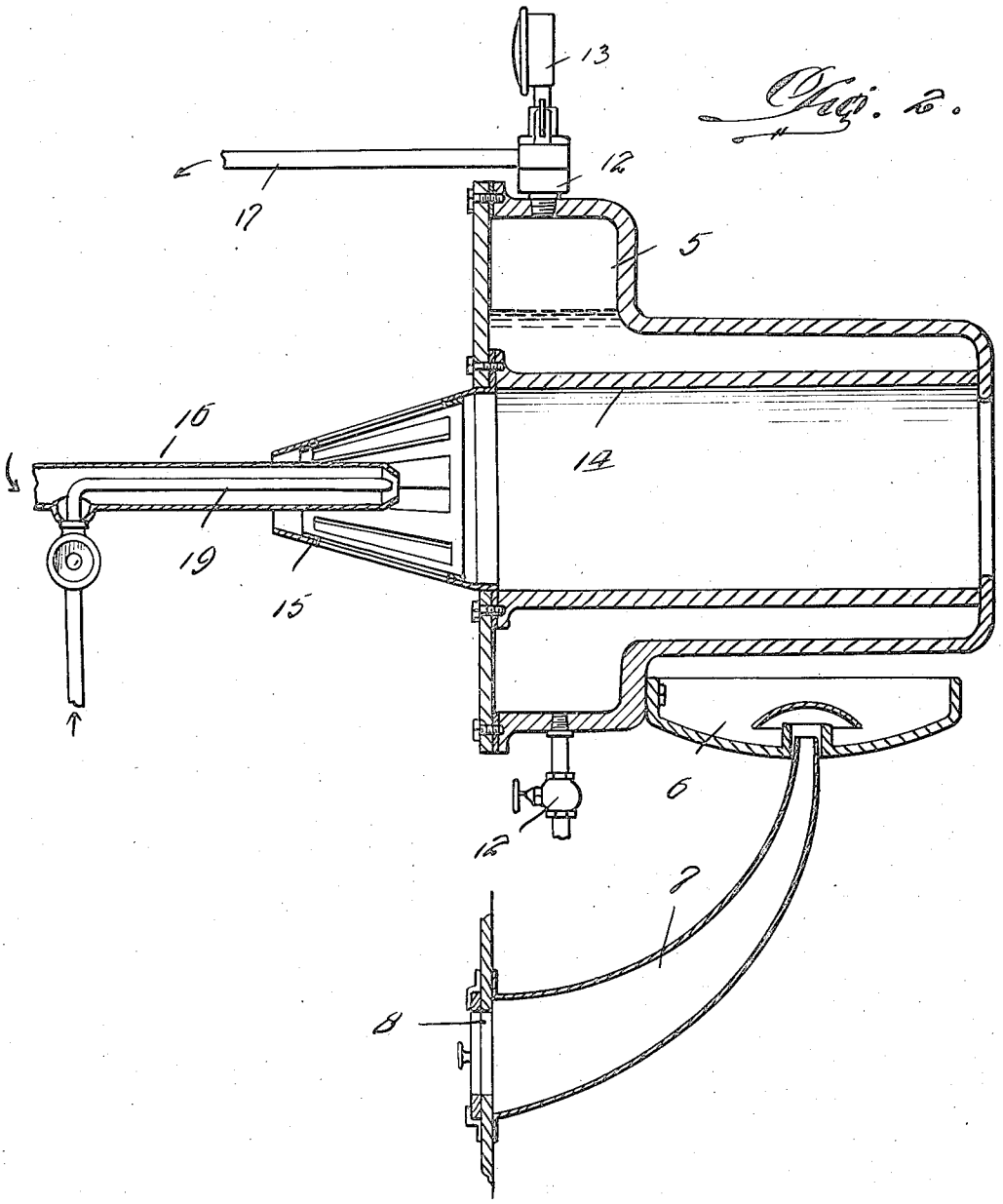
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Filed June 1, 1923 2 Sheets-Sheet 2

Fig. 2.



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Patented Sept. 16, 1924. 1,508,491

UNITED STATES PATENT OFFICE.

JOHN W. WOODS, OF WINNETT, MONTANA.

OIL BURNER.

Application filed June 1, 1923. Serial No. 642,732.

To all whom it may concern:

Be it known that I, JOHN W. WOODS, a citizen of the United States, residing at Winnett, in the county of Fergus and State of Montana, have invented certain new and useful Improvements in Oil Burners, of which the following is a specification.

My invention relates to an improvement in oil burners and has for its primary object, the provision of such a burner, that is so constructed as to be adapted for use in conjunction with stoves and furnaces, the nature of the same being such as to be positioned within the usual fuel opening of the stove when the door thereof has been removed.

A further object of my invention is to provide an oil burner, wherein the same comprises a water reservoir, together with means for heating said water for providing a source of steam to be commingled with the oil for substantially increasing combustion properties thereof.

A still further object is to provide a burner that is comparatively simple of construction, one that may be manufactured, marketed, installed and operated at a minimum expenditure, this burner comprising relatively few parts, and these so correlated as to reduce the liability of disarrangement to a minimum.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination, and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a front elevation of my improved burner.

Figure 2 is a detail longitudinal section thereof, and

Figure 3 is an elevation of a float controlled valve, comprising an essential part of my invention.

With particular reference to the drawings, my novel burner includes a water receptacle 5 of such a shape as to be inserted within the usual fuel inlet of stoves or furnaces and thereby secured to the side edges of this opening, through the medium of bolts or other suitable fastening elements.

Directly beneath the said receptacle 5 is a suitable form of oil burner 6, preferably of the pan type, and adapted for preheating the water within said receptacle. In communication at one end with this burner 6 is an air inlet tube 7, the opposite end thereof being positioned adjacent the usual air inlet valve 8 of stoves or furnaces.

Within the receptacle 5 is a float 9 that is suitably connected to a valve 10 of a water supply pipe 11 for obvious purposes. In communication with this receptacle is a drain pipe 12, and preferably upon the top side of the receptacle 5 is a steam blow off valve 12 as well as a steam pressure gauge 13.

The front and rear walls of the receptacle 5 are formed with alined openings, between which is positioned a longitudinally extending heating tube 14. Extending outwardly from the receptacle, and in communication at one end with said tube 14 is an air damper 15, extending within which is a steam tube 16, this tube being in communication with a pipe 17, that is in turn in communication with the top side of the water receptacle 5, this pipe being preferably equipped with a cut off valve 18. Positioned longitudinally within the tube 16 is an oil pipe 19, which is in communication with a suitable source of fuel supply.

In view of the above description, it will be at once apparent that when my improved burner is positioned within a stove or furnace and the water receptacle partially filled with water, the same may be heated through the medium of the burner 6 for producing steam. This steam discharging into the tube 16 will thoroughly mix with the fuel to the pipe 19 for thereby providing a combustible mixture, and when the same is ignited, the flame will be through the tube 14 into the furnace, this tube consequently becoming heated for in turn maintaining the water within the receptacle at a proper degree of heat for consequently providing a source of steam supply.

Numerous advantages of an oil burner of this description will be at once apparent, and even though I have herein set forth the most practical embodiment of the present invention, it is nevertheless to be understood that minor changes may be made therein, without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what

I claim as new, and desire to secure by Letters-Patent, is:

An oil burner comprising a water jacket body having an end portion adapted to serve as a stove opening closure and being diametrically reduced at its opposite end portion, a heater attached to the body, and disposed under the diametrically reduced end portion thereof, the opposite end walls of the body being provided with openings, a tube located interiorly of the body and traversing the length thereof, and spaced from the upper and lower and side walls of the body, the axis of the tube being in alignment with the centers of the openings in the end walls of the body, a valve controlled pipe for supplying water to the interior of the body, a float operatively connected with the valve of said pipe, and adapted to control the quantity of water admitted to the body, a damper structure connected with the end of said tube and passing through the opening in the larger end wall of the body, an oil nozzle extending into the chamber and positioned in alignment with the axis of the damper and the tube, and means for conducting steam from the upper portion of the larger end of the body to the nozzle.

In testimony whereof I affix my signature.

JOHN W. WOODS.