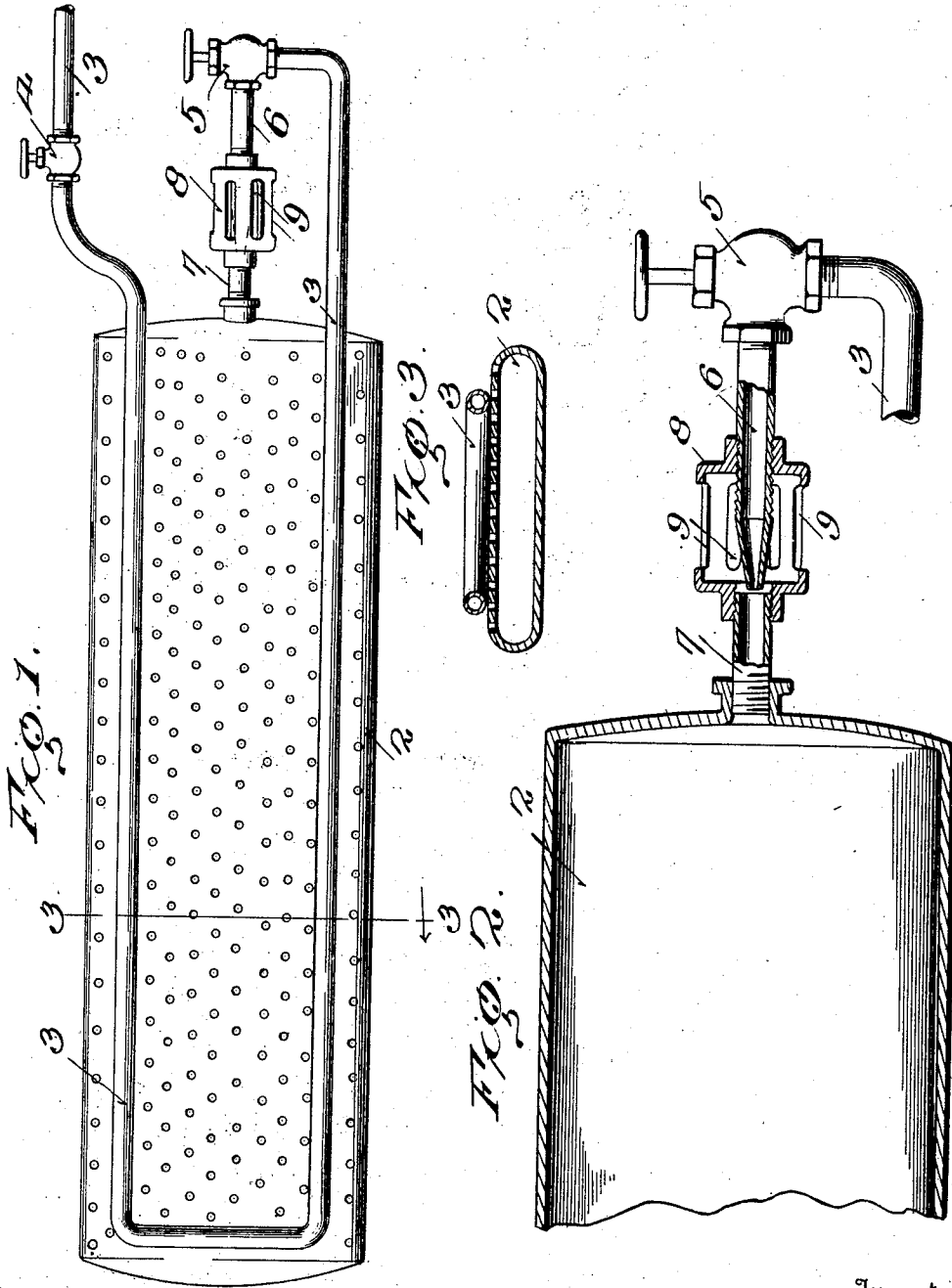


O. A. MAKINSON.
OIL VAPORIZER AND BURNER.
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973,526.

Patented Oct. 25, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

ORAL A. MAKINSON, OF PRATT, KANSAS.

OIL VAPORIZER AND BURNER.

973,526.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ORAL A. MAKINSON, citizen of the United States, residing at Pratt, in the county of Pratt and State of Kansas, have invented certain new and useful Improvements in Oil Vaporizers and Burners, of which the following is a specification.

My invention relates to means for burning oil, and particularly oil of the coarser and cruder kinds, and the object of the invention is to provide a burner which will vaporize the oil prior to its entrance into the burner proper and will mix the vaporized oil with a quantity of air sufficient for its combustion.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a plan view of my improved burner; Fig. 2 is a longitudinal vertical section thereof; and, Fig. 3 is a transverse section on the line 3—3 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to these figures, 2 designates a cast iron hollow burner provided upon its upper surface with a plurality of perforations through which gas contained within the burner issues in the form of jets.

3 designates an oil supply pipe leading from any suitable reservoir and provided with the valve 4. This supply pipe is disposed preferably upon the upper face of the burner 2 and extends entirely around the margin of the burner or across the face of the same so that the oil within the supply pipe may be subjected to a degree of heat sufficient to thoroughly heat and vaporize the oil prior to its entrance into the burner chamber 2. The supply pipe 3, after it is extended around the burner 2, extends laterally and is there provided with a valve 5 whereby the supply of oil to the burner may be regulated.

Extending from the valve 5 is a nozzle

6 which extends into the inlet pipe 7 which in turn leads into the interior of the burner 2. It will be seen that the pipe 7 is considerably larger than the nozzle 6, this pipe 7 and the nozzle being surrounded by a chamber 8 provided with a number of air inlet openings 9. The indraft of vaporized oil through the nozzle 6 causes an indraft of air through the openings in the casing, and this air will be thoroughly mixed with the vaporized oil so as to thoroughly carburet the same in the pipe 7 leading into the oil-burning chamber.

My invention provides a very simple and effective means for burning oil, and provides particularly for the burning of relatively crude oils. The heating of the oil prior to its passage through the valve tends to thoroughly liquefy it so that the valve will not clog, and puts the oil in the best condition for combustion. By mixing the vapor with air prior to its combustion, I secure a very perfect combustion and a much greater heat, together with a more economical use of the oil.

I have shown my burner 2 as oblong in form, but it is to be understood that the form of this burner will depend upon the stove or other heater in which the burner is to be used. If this heater is circular in plan, the burner will be circular.

Having thus described the invention, what I claim is:—

In a device of the character described, a hollow burner having an upper approximately flat face, an oil vaporizing pipe extending over the face of the burner longitudinally along one edge thereof, then extending transversely across the burner along the end margin of the same, and then longitudinally along the base of the burner parallel to the opposite side margin of the same and being supported thereon, said pipe having a uniform diameter throughout its length, the face of the burner being provided with perforations in the space between the oppositely disposed portions of the pipe and perforations extending along the margin of the plate exterior to the pipe, a valve to which the end of the supply pipe is connected, a pipe extending from the valve to

ward the burner, an inlet pipe opening into the interior of the burner, a nozzle extending from said valve to the inlet pipe and contracted at its end to a diameter smaller
5 than the inlet pipe, and a casing surrounding the end of the nozzle and the adjacent end of the inlet pipe and supporting the nozzle and inlet pipe in their relative posi-

tions, said casing being formed with a plurality of air inlet openings. 10

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

ORAL A. MAKINSON. [L. s.]

Witnesses:

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