

A. CHAPMAN.
CRUDE OIL BURNER.
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979,259.

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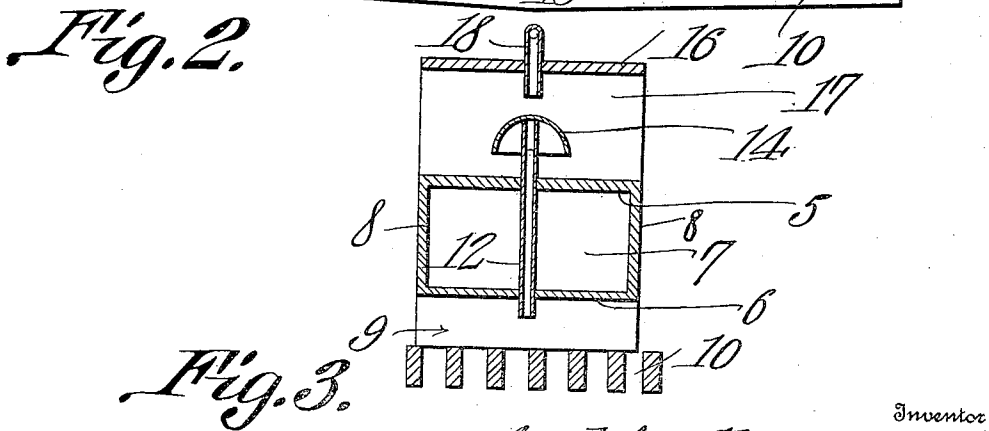
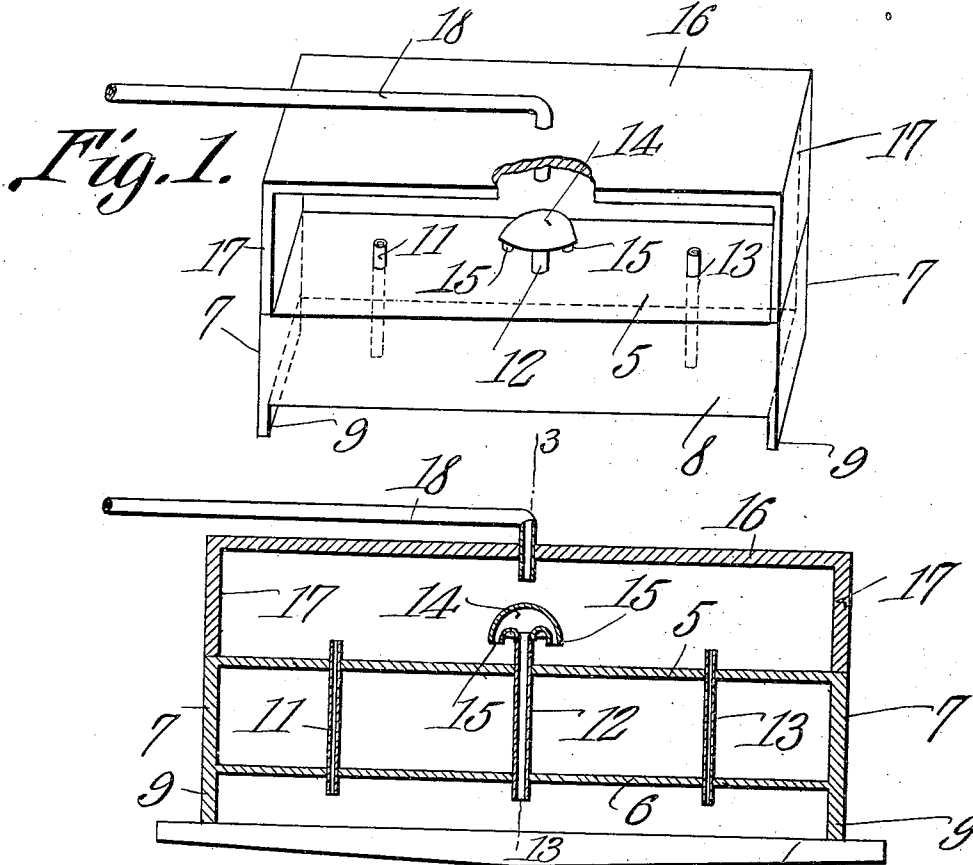


Fig. 3.

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UNITED STATES PATENT OFFICE.

ARCHIE CHAPMAN, OF PLEASANTVILLE, OHIO.

CRUDE-OIL BURNER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARCHIE CHAPMAN, a citizen of the United States, residing at Pleasantville, in the county of Fairfield and State of Ohio, have invented a new and useful Crude-Oil Burner, of which the following is a specification.

This invention relates to liquid fuel burners designed more particularly for burning crude oil, and it has for its object to provide in a burner of this kind novel and improved air feeding means, and also to provide a structure which enables the burner to be readily applied to any ordinary cooking or heating stove.

With these objects in view, the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the accompanying drawing forming a part of this specification in which—

Figure 1 is a perspective view of the burner. Fig. 2 is a longitudinal section showing the burner in position on the grate of the stove. Fig. 3 is a cross section on the line 3—3 of Fig. 2.

Referring to the drawing, the main body of the burner comprises a casing having a top 5, a bottom 6, end walls 7, and side walls 8. The bottom of this casing, at its ends, is provided with legs 9, whereby it is supported on the grate 10 of the stove, as shown in Figs. 2 and 3. The casing serves as a support for the air feeding pipes to be presently described, and the top 5 thereof serves as burner pan.

Extending through the casing, and opening through the top and bottom thereof, are three air feeding pipes 11, 12 and 13, respectively. These pipes are spaced from each other, and extend in alinement between the ends of the casing, and midway between the sides thereof. Each pipe rises a suitable distance above the top of the casing. The upper end of the middle pipe is fitted with a dome shaped cap 14 formed with a pair of downwardly directed discharge nozzles 15. The air passing up the pipe 12 enters the cap, and is discharged downwardly in the direction of the top of the casing, through the nozzles. The air passing through the

pipes 11 and 13 is discharged upwardly. Air to support combustion is therefore discharged in two directions, which results in a more thorough commingling of the same with the vapor.

On the top of the casing is mounted a cover comprising a top 16, and end walls 17 spacing the said top a suitable distance from the discharge ends of the air feeding pipes 11, 12 and 13. The cover is open at the sides so that the products of combustion can escape. Extending through the top 16 of the cover is an oil supply pipe 18. This pipe leads to a suitable source of supply, and is downwardly directed through the top 16 so as to discharge on the cap 14.

In operation, a small quantity of oil is run on the cap 14, from which it drips on the top 5 of the casing. This oil is ignited, whereupon the cap and the top of the casing become highly heated, so that the oil thereafter dropping on the cap and on the top of the casing is at once vaporized. Air to support combustion passes through the pipes 11, 12 and 13. The air passing through the pipe 12 is highly heated before it issues from the nozzles 15, and said nozzles also direct this heated air to the oil burning on the top of the casing. The air supply is obtained through the spaces between the grate bars, and the draft is regulated by adjusting the ordinary dampers of the stove.

A burner constructed as herein described can be readily applied to any ordinary heating or cooking stove, no special stove structure being required. The cover is removable, which makes the air pipes 11, 12 and 13 readily accessible for the purpose of cleaning the same. The flames from the burning oil escape through the open sides of the cover, and are thus spread through the fire pot of the stove. The burner generates an intense degree of heat, and is economical in its consumption of oil. The legs 9 space the bottom 6 of the casing from the grate so that there is an unobstructed flow of air to the pipes 11, 12 and 13.

What is claimed is:

A liquid fuel burner comprising a plate, an air supply pipe passing therethrough,

100

and having its discharge end fitted with a cap provided with discharge nozzles extending in a direction to discharge downwardly toward the plate, additional air supply pipes
5 opening through the plate, and discharging upwardly, and an oil supply pipe discharging on the cap.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ARCHIE CHAPMAN.

Witnesses:

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L. M. HEISTON.