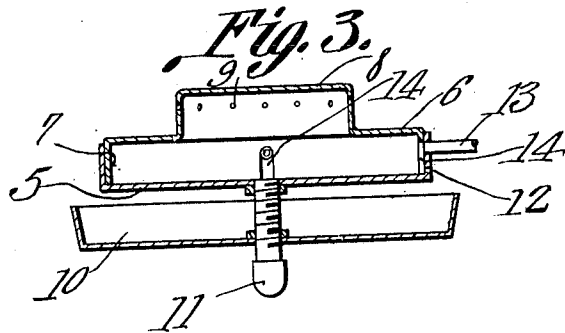
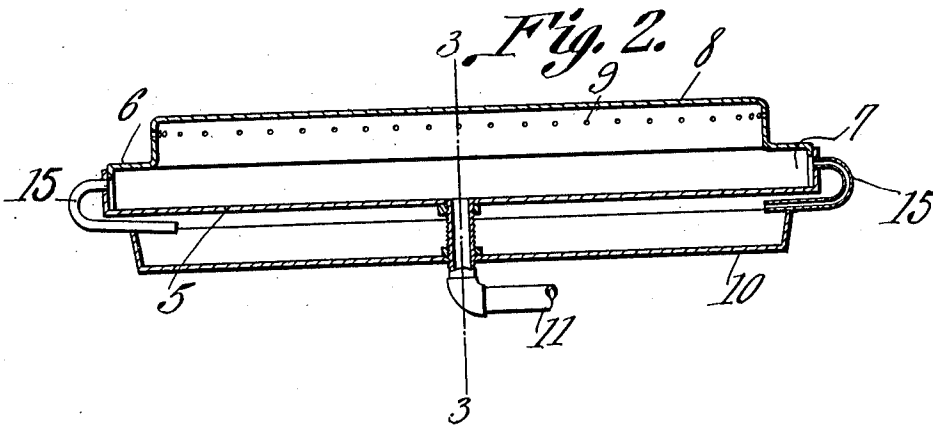
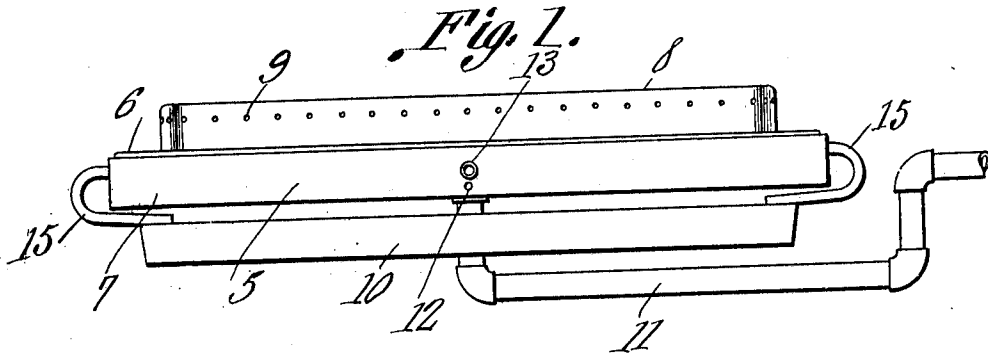


J. P. HOLLENBECK.
LIQUID FUEL BURNER.
APPLICATION FILED MAY 23, 1910.

970,335.

Patented Sept. 13, 1910.



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Witnesses

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UNITED STATES PATENT OFFICE.

JACOB P. HOLLENBECK, OF FREDERICK, OKLAHOMA, ASSIGNOR OF ONE-HALF TO JOHN W. FONDREN, OF FREDERICK, OKLAHOMA.

LIQUID-FUEL BURNER.

970,335.

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To all whom it may concern:

Be it known that I, JACOB P. HOLLENBECK, a citizen of the United States, residing at Frederick, in the county of Tillman and State of Oklahoma, have invented a new and useful Liquid-Fuel Burner, of which the following is a specification.

This invention relates to liquid fuel burners of that class in which the oil or other liquid fuel is run into a heated chamber wherein it is vaporized, and mixed with air to produce a highly combustible mixture.

It is the object of the invention to provide in a burner of this kind improved means for heating the vaporizing chamber, and also to provide a burner, the several parts of which are so constructed that they can be readily assembled and mounted in the stove, and also separated for cleaning purposes.

In order that the invention may be better understood, reference is had to the accompanying drawing forming a part of this specification, in which,

Figure 1 is an elevation of the burner. Fig. 2 is a central longitudinal section. Fig. 3 is a cross section on the line 3—3 of Fig. 2.

The vapor generating chamber of the burner, is in two parts, to wit, a shallow tray 5, and a cover 6 therefor, the latter fitting on the top of the tray, and having a depending marginal flange 7 fitting inside the tray. The cover also has a central raised portion 8 having in its sides a plurality of vapor outlet openings 9.

Beneath the tray 5 is located an overflow pan 10. The fuel supply pipe 11 passes through the pan 10, and opens into the tray 5, through the bottom thereof. The pan and tray are suitably fastened on the fuel supply pipe, and the latter therefore serves to support said parts.

In one of the side walls of the tray 5 is an overflow opening 12. The pan 10 is so located with respect to this opening, that the oil passing through said opening may drop into the pan. The overflow opening is located close to the bottom of the tray so that a thin film of oil will be maintained therein. Above the overflow opening, the tray is entered by an air supply pipe 13,

the flange 7, adjacent to said pipe, being notched as indicated at 14 to clear the outlet end of the pipe.

In the end walls of the tray 5 are mounted vapor conducting tubes 15, said tubes extending in a downward bend from the ends of the tray, and terminating in inward bends so that their discharge ends will be located beneath the tray. The pan 10 is spaced a sufficient distance from the bottom of the tray so that the tubes 14 may extend beneath the latter as stated. The flanges 7 are suitably notched so that they may clear the inlet ends of the tubes.

In operation, the oil or other liquid fuel is turned on and permitted to run into the tray 5 until it overflows through the opening 12 into the pan 10, in which it is ignited, the fuel supply being first turned off. The burning fuel in the pan 10 quickly heats the bottom of the tray 5, so that when the fuel is again turned on it will be at once vaporized upon coming in contact with the bottom of the tray. The vapor or gas thus formed is mixed with air entering the tray through the pipe 13, the combustible mixture thus formed issuing from the openings 9 where it is ignited. A portion of the combustible mixture also flows through the tubes 15, and is ignited beneath the tray, thus keeping the latter heated so that the vaporization of the fuel within the tray may continue uninterruptedly while the fuel is kept turned on. Any excess of fuel in the tray passes through the opening 12 into the pan 10, in which it is vaporized and consumed.

By the structure herein described, a simple and efficient burner is had which is adapted for crude and other oils. The parts can be readily assembled, and they are also separable so that they may be readily cleaned. If desired the air feeding pipe 13 may be dispensed with. The shape of the burner may be varied according to the kind of stove to which it is applied. Thus, for cooking stoves it may be rectangular, whereas for heating stoves it may be made circular.

What is claimed is:

1. A liquid fuel burner comprising a vapor generating chamber consisting of a tray



having a cover provided with vapor outlet openings, a fuel supply pipe entering the tray through the bottom thereof, and said tray having an overflow outlet, and an overflow pan located beneath the tray.

2. A liquid fuel burner comprising a vapor generating chamber having a fuel inlet, and vapor outlets, said chamber also having an overflow outlet, a pan located beneath the chamber to receive the overflow, and

vapor outlet tubes leading from the chamber, and discharging beneath the same.

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

JACOB P. HOLLENBECK.

Witnesses:

ROBERT E. WEATHERS,
R. H. WESSEL.