

J. C. DUNHAM & F. A. TURNER.
HYDROCARBON BURNER.
APPLICATION FILED JULY 28, 1911.

1,030,843.

Patented June 25, 1912.

Fig. 1.

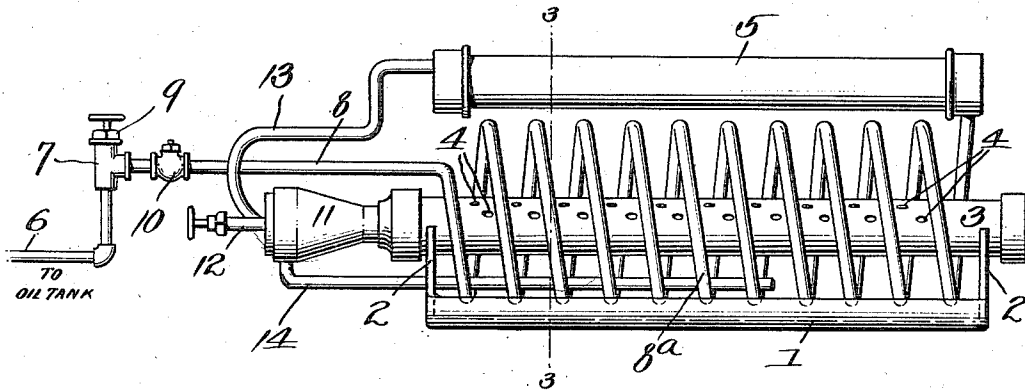


Fig. 2.

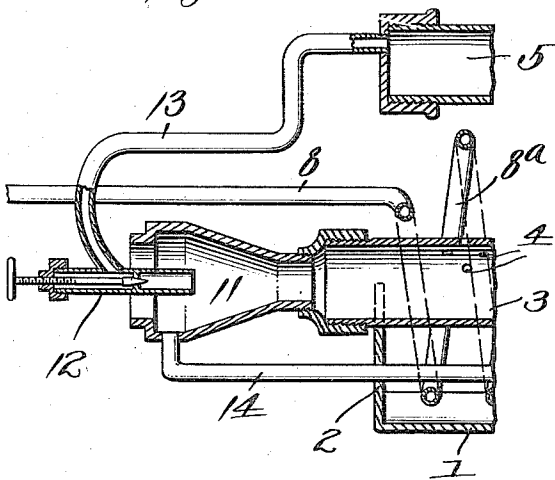
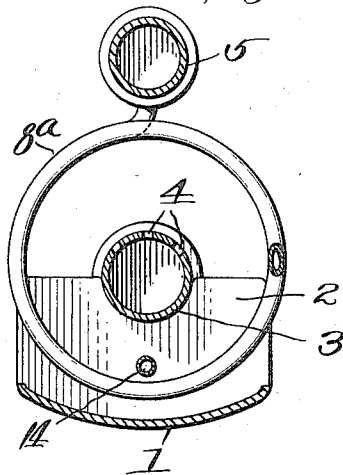


Fig. 3.



Witnesses

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HYDROCARBON-BURNER.

1,030,843.

Specification of Letters Patent.

Patented June 25, 1912.

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To all whom it may concern:

Be it known that we, JOHN C. DUNHAM and FRANK A. TURNER, citizens of the United States, residing at Greenville, in the county of Darke and State of Ohio, have invented a new and useful Improvement in Hydrocarbon-Burners, of which the following is a specification.

This invention relates to an oil burner and vaporizer, designed especially for use in combination with any suitable form of heating or cooking stove.

The object of the invention is to vaporize oil and to feed the vapor generated to a burner in such a manner that a steady flame will be produced and also in such manner that there will be no back pressure from the vapor upon the oil tank. In carrying out these objects we provide a construction hereinafter described, set forth in the claims and shown in the accompanying drawings.

Figure 1 is a side elevation. Fig. 2 is an enlarged longitudinal section through an end portion of the device. Fig. 3 is an enlarged cross section upon the line 3—3 of Fig. 1.

In these drawings 1 represents a suitable drip pan, having vertically arranged end portions 2 which form supports for a cylindrical burner 3 provided with suitable perforations 4 upon its upper side, and closed at the rear end.

Arranged above the burner is a suitable vapor storage tank and generator 5, which we have shown circular in cross section but which can be of any desired shape.

From a suitable oil supply tank, not shown, leads a pipe 6 to which is connected by means of a suitable coupling 7 a pipe 8 and the flow of oil through said pipe is controlled by a suitable valve 9 arranged in the coupling 7, and the pipe is also provided with a check valve 10 to prevent back pressure of vapor. The pipe 8 is coiled at 8^a about the burner 3 to a point adjacent the rear end of the burner and then passes upwardly and enters the storage tank 5. The front end of the burner 3 is provided with a mixing funnel 11 in which is arranged a valve controlled inwardly directed discharge nozzle 12, which has communication with the upper front end of the tank 5 by means of a vapor pipe 13. From the said funnel there also leads a pipe 14 which conveys oil

to the drip pan. Upon opening the valve 9 oil will flow through the coil, the tank 5, pipes 13 and 14 to the pan 1 where it is ignited. The burning of this oil will vaporize the oil in the coil 8^a of the pipe 8 and the tank 5 will be filled with vapor, the original oil supply being forced out to the drip pan 1, or what is left being vaporized by heat from the burner 3. After the burner has been started the oil will be converted into vapor in the coil 8^a and the tank 5 will act as a storage receptacle for this vapor, and consequently there will be a steady flow of vapor from the tank 5 to the burner, as the vapor held in said tank will equalize any variations in the supply of vapor generated in the coil 8^a.

What we claim is:—

1. In a device of the kind described, a burner perforated upon its upper side and closed at one end, a funnel arranged at the open end of the burner, an inwardly directed discharge nozzle held centrally with respect to said funnel, an oil supply pipe, a portion of said pipe being coiled about said burner, a tank arranged above said coil and communicating at its rear end with the coil, a drip pan arranged beneath the coil, a feed pipe leading from the front end of the tank to the discharge nozzle and a second pipe leading from the underside of the funnel to said drip pan.

2. In a device of the kind described, a drip pan, a burner arranged above the drip pan, a tank arranged above the burner, an oil supply pipe, a regulating valve therein, a pipe connected thereto, said pipe having a portion coiled about the burner and connected with the end of the tank, a check valve arranged in said last mentioned pipe between the first mentioned valve and the coil, a funnel arranged at the front end of the burner and admitting an air thereto, a valve controlled discharge nozzle extending into said funnel, a pipe leading from the tank to said discharge nozzle, and a pipe leading from said funnel to the drip pan, as and for the purpose set forth.

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Witnesses:

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