

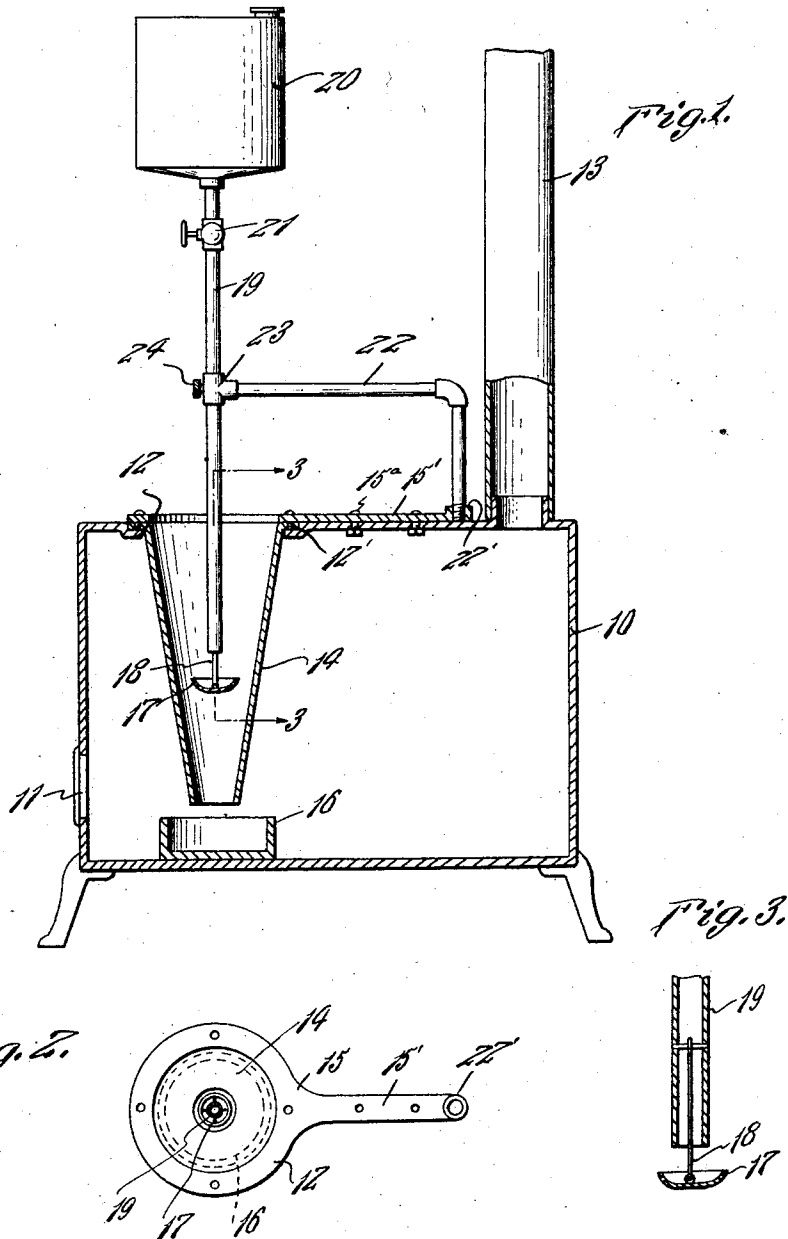
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OIL BURNER

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UNITED STATES PATENT OFFICE.

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OIL BURNER.

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This invention relates to oil burners especially adapted for heating purposes, an object being to provide a burner which may be arranged within a stove for the generation of heat in an efficient and economical manner.

Another object of the invention is the provision of a burner which will burn crude oil, distillates or oil of any character, provision being made for thoroughly heating and mixing the oil and air to form a highly combustible fuel mixture.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a sectional view partly in elevation showing the improved burner applied to a stove.

Figure 2 is a sectional view taken directly above the top of the stove casing and showing the attaching frame in plan.

Figure 3 is an enlarged fragmentary sectional view taken substantially on the line 3—3 of Figure 1.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates the casing of a stove which may be of any size or shape and which is provided with a door 11 in one of its walls and an opening 12 in the top, while extending from the top is a smoke flue 13. The opening 12 is surrounded by an annular seat 12'.

The burner, which constitutes the present invention comprises a cone-shaped member 14 which is mounted within the stove and held in position by means of an attaching frame 15. The upper enlarged end of the cone-shaped member is provided with a flange to which this frame is secured and the latter comprises an annular member having an arm 15' extending therefrom. This frame may merely rest upon the top of the stove but is preferably secured to the latter by means of fastening devices 15^a. When in position, the flange at the upper end of the cone-shaped member 14 occupies the seat 12', while the arm 15' of the frame 15 extends along and is supported by the top of the stove.

Located within the bottom of the stove is a generating pan 16 which is positioned directly beneath and spaced from the lower restricted end of the cone-shaped member 14.

Located within the cone-shaped member 14 is a distributor 17 which is supported by a rod 18 from an oil supply pipe 19. This pipe extends from a suitable source of fuel supply, for example, a tank or reservoir 20 and is controlled by a valve 21. A substantially L-shaped supporting arm 22 has one of its ends secured within an internally threaded boss 22' at the end of the arm 15' of the supporting frame, while the opposite end of the arm 22 carries a sleeve 23 through which the pipe 19 passes. The pipe is capable of sliding adjustment in the sleeve 23 and is held in adjusted position by a set screw 24. By adjusting the pipe 19 the position of the distributor 17 within the cone-shaped member 14 may be regulated. The distributor 17 may be of any shape or design best adapted for the purpose and may be positioned at any height within the cone-shaped member, or if desired may be positioned beneath the lower end of said cone-shaped member and in the upper part of the generating pan 16.

Oil passing from the pipe 19 is deflected by the distributor and is broken up and mixed with air entering from the top of the cone-shaped member 14. This mixture of oil and air is heated by contact with the walls of the member 14, the latter reaching an intense heat so as to vaporize the mixture in its passage to the generating pan 16, at which point the flame is deflected outward towards the walls of the stove or casing 10.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. An oil burner comprising in combination with a casing having an opening in the top thereof, an inverted hollow cone-shaped member open at both ends and extending downwardly from the opening into the casing, a pan spaced below said member, a fuel supply tank, a pipe extending

from the tank into the upper open end of the cone-shaped member, a distributor carried by and spaced from the end of the pipe and a support adjustably engaging the pipe
5 to adjustably position the distributor within said cone-shaped member.

2. An oil burner comprising in combination with a casing having an opening in the top thereof, an inverted hollow cone-shaped
10 member extending into the casing through the opening, a frame secured to the top of the cone-shaped member, an arm extending from the frame, a pan spaced below said

cone-shaped member, a fuel supply pipe extending downwardly into said cone-shaped
member, a distributor supported at the inner end of the pipe within the cone-shaped
member, a supporting arm having one end secured to the frame carried arm and means
to adjustably support the supply pipe at
the outer end of the supporting arm to adjustably position the distributor within the
cone-shaped member.

In testimony whereof I affix my signature.

SAMUEL WATSON COKER.