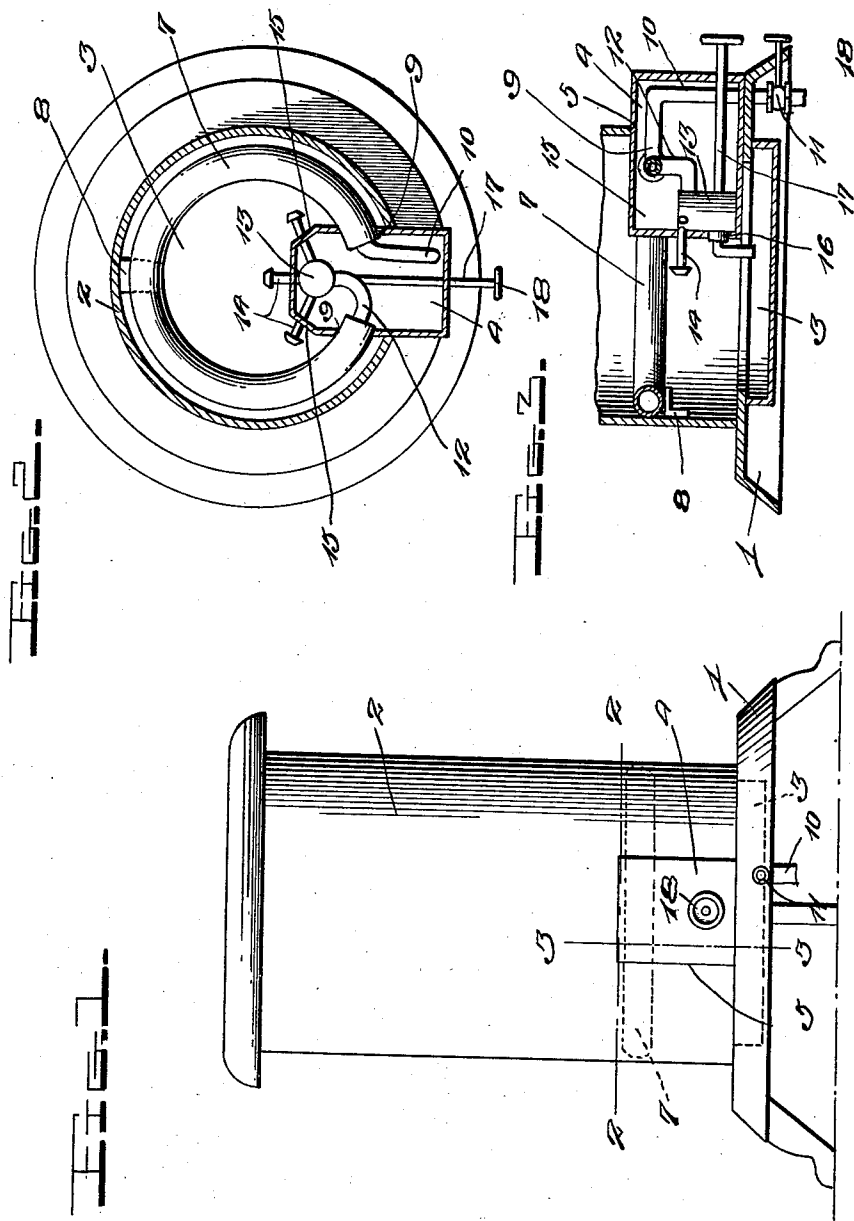


S. B. SARE.
OIL BURNER.
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1,041,517.

Patented Oct. 15, 1912.



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OIL-BURNER.

1,041,517.

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To all whom it may concern:

Be it known that I, STORM B. SARE, a citizen of the United States, residing at Abilene, in the county of Dickinson and State of Kansas, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in oil burners and has for its object to provide a burner of this character whereby the oil is heated and generated into gas before it is burned.

15 Another object of the invention is to provide a burner of this character which will possess advantages in points of efficiency and durability, is inexpensive of manufacture and at the same time is simple in construction and operation.

20 With the above and other objects in view, the invention consists in the novel features of construction, and the combination and arrangement of parts hereinafter more fully described, pointed out in the claims and shown in the accompanying drawing in which,

30 Figure 1 is a side elevation of a stove, showing my improved oil burner applied thereto. Fig. 2 is a horizontal view on the line 2—2 of Fig. 1; and Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Referring more particularly to the drawings, 1 indicates the base portion which supports the body 2 of the stove. A drip pan 3 is secured to said base at the lower side thereof to receive the oil and sediment which remains in the generating pipe after the flow has been turned off. A substantially rectangular casing 4 is arranged in the body of the stove at one side thereof and is particularly located near the opening 5 which is provided for communication with the interior of the stove.

45 A generating pipe 7 is provided and arranged in the body of the stove to replace the usual grate used in coal and wood stoves. This pipe 7 is supported by means of the angular brackets 8 which are secured to the body of the stove. The ends of this pipe are arranged in the openings 9 formed in the side walls of the casing 4, one end of said pipe having an inlet pipe 10 secured thereto, said inlet pipe extending downwardly and passing out through the bottom of the casing 4 and leading to the supply

tank which may be located in any convenient location. A needle valve 11 is arranged in the inlet pipe 10 to control the flow of oil into the generating pipe 7. The end of the pipe 7 opposite the inlet is provided with a reduced end 12 which is connected with the cylindrical reservoir 13. The reservoir 13 is provided at one end with the discharge nozzles 14 so arranged as to distribute the heat on to the pipe 7 so that the oil flowing through this pipe will become vaporized before it reaches the reservoir 13. This reservoir 13 is to be continually filled with gas from this oil which passes out through the nozzles 14 and is burned. These nozzles are arranged so that the central nozzle will send the flame directly across the body of the opposite side, and the side nozzles extend out through the beveled corners of the casing 4 so as to distribute the heat on to the pipe 7 at both sides, thus it will be seen that the pipe will be thoroughly heated all the way around. A drain valve 16 is arranged in the bottom of the reservoir 13 at the front end thereof and is adapted to be operated by means of the stem 17 extending through the reservoir 13 near the bottom and having a hand wheel 18 secured to the outer end thereof to operate said valve. This valve is provided for the purpose of draining the oil and sediment out of the reservoir 13 and the pipe 7 into the pan 3 after the flow of oil has been cut off.

It will be fully understood that the generating pipe 7 may be formed into various shapes to fit the various shapes of stoves.

In starting this burner, the oil is admitted into the pipe 7 through the inlet pipe 10 and then passes around and into the reservoir 13, where the oil is discharged through the nozzles 14, and as the oil passes out of these nozzles it is lighted and burned to heat the pipe 7 and gasify the oil flowing through it. The gas after reaching the reservoir 13 will be discharged through the nozzles 14, the heat from the nozzles being well distributed over the pipe 7 to keep the same heated and maintain a steady flow of gas through the nozzles.

While I have shown and described the preferred form of my invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying my invention into practice without departing

from the principles or sacrificing any of the novel features of the invention.

Having thus described this invention, what is claimed is:—

5 1. The combination with a stove body, of a casing disposed therein and arranged at one side thereof, a generating pipe arranged in the lower side of the stove body, said casing having openings formed in the
10 sides thereof to receive the ends of said pipe, an inlet pipe connected to one end of the generating pipe, means for controlling the flow of oil into the generating pipe, a reservoir connected to the other end of the gen-
15 erating pipe, and nozzles leading from said reservoir through which the gas passes.

2. The combination with a stove body, of a substantially rectangular casing disposed therein and arranged at one side thereof, a
20 generating pipe arranged in the lower side of the stove body, said casing having an opening formed in each side thereof to receive the ends of said pipe, an inlet pipe connected to one end of the generating pipe
25 and extending downwardly through the bottom of the casing, a needle valve arranged in the inlet pipe for controlling the flow of oil into the generating pipe, a cylindrical reservoir connected to the other end of the
30 generating pipe and arranged within said casing, and a plurality of spaced nozzles projecting from one end of said reservoir and disposed through the front end of the casing.

35 3. The combination with a stove body, of a substantially rectangular casing disposed therein, having beveled corners formed at one end thereof, a generating pipe having its ends connected with the interior of said

casing at each side thereof, an inlet pipe 40 connected to one end of the generating pipe, means for controlling the flow of oil into the generating pipe, a cylindrical reservoir connected to the other end of the generating
45 pipe, a plurality of spaced nozzles projecting from one side of the reservoir and disposed through the beveled corners and front face of said casing, and a drain valve arranged in the lower side of said reservoir
50 to drain the oil and sediment from the reservoir and generating pipe when the flow of oil has been turned off.

4. The combination with a base, having a stove body thereon, a drip pan upon said base and arranged in said body, of a casing 55 arranged in the body at one side thereof, a generating pipe disposed in the lower side of said body and having its ends connected with the interior of the casing at each side thereof, an inlet pipe connected to one end
60 of the generating pipe, means for controlling the flow of oil into the generating pipe, a cylindrical reservoir connected to the other end of the generating pipe, a plurality of spaced nozzles projecting from one side of
65 the reservoir and disposed through one end of said casing, and a drain valve arranged in the lower side of said reservoir to drain the oil and sediment from the reservoir and
70 generating pipe, when the flow has been turned off.

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

STORM B. SARE.

Witnesses:

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H. W. ROHRER.