

T. M. MORRIS & R. N. LUTJE.

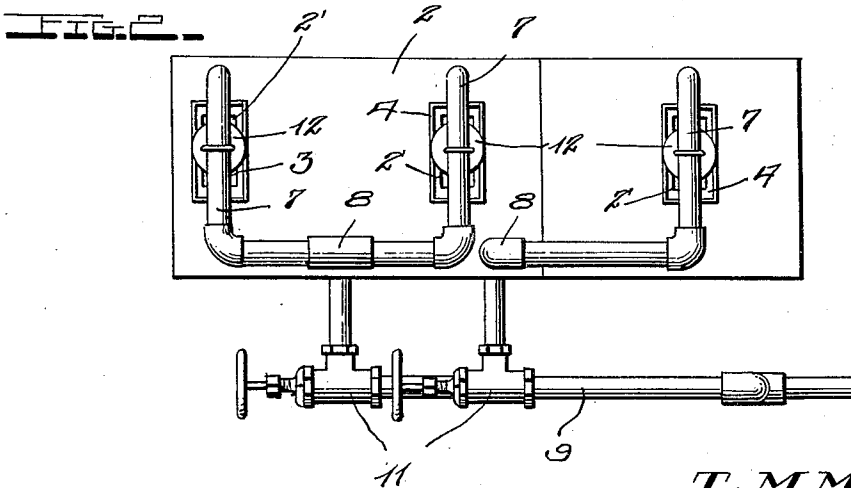
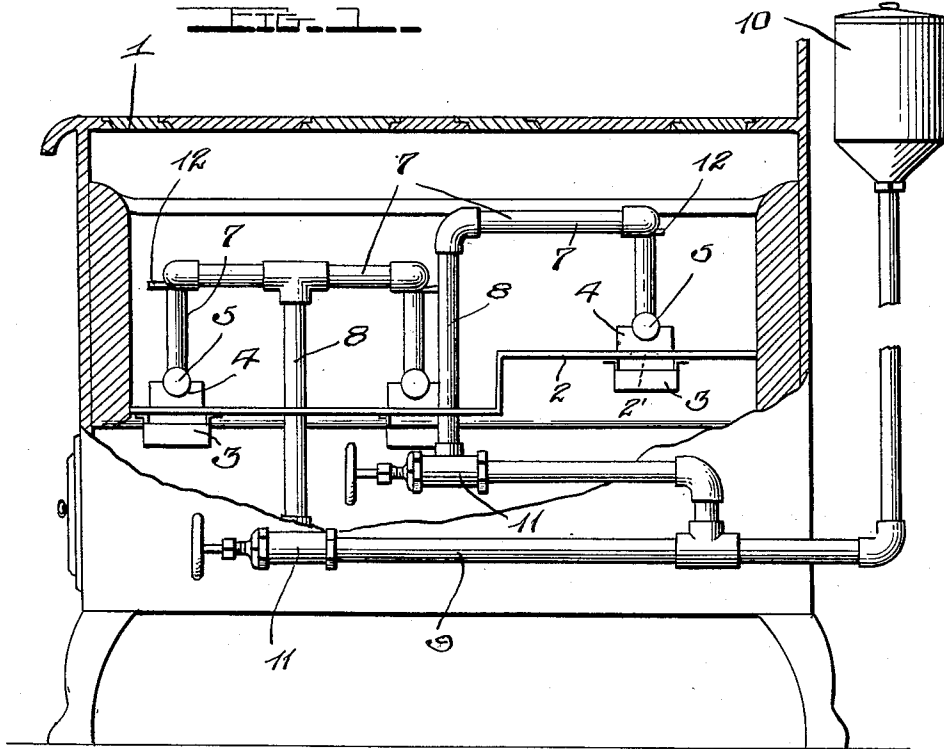
OIL BURNER.

APPLICATION FILED JUNE 5, 1912.

1,058,085.

Patented Apr. 8, 1913.

2 SHEETS-SHEET 1.



Witnesses

Chas. L. Guechauer
A. B. Norton.

By

Inventors
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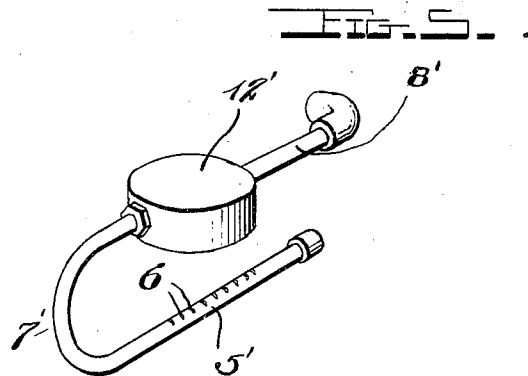
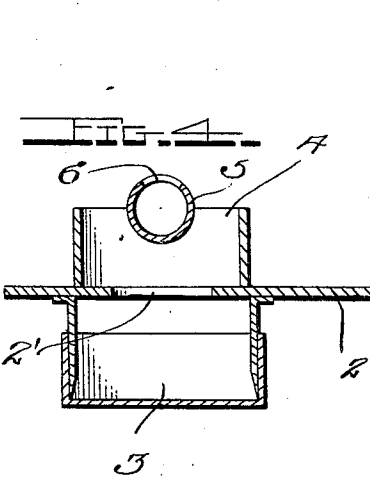
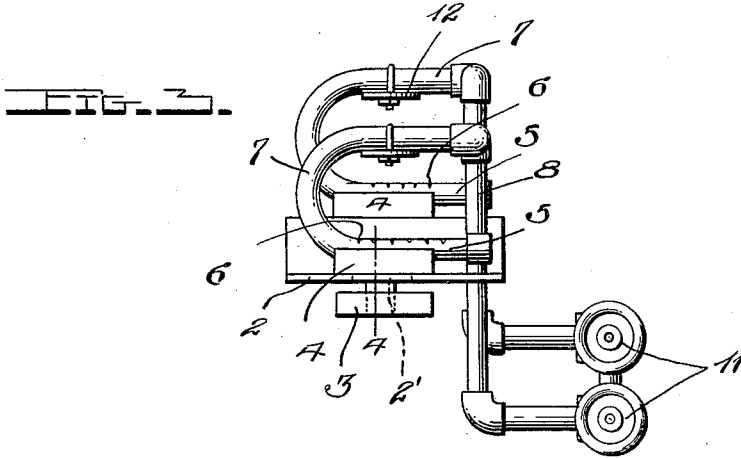
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UNITED STATES PATENT OFFICE.

THOMAS M. MORRIS AND REIMER N. LUETJE, OF AUGUSTA, GEORGIA.

OIL-BURNER.

1,058,085.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed June 5, 1912. Serial No. 701,921.

To all whom it may concern:

Be it known that we, THOMAS M. MORRIS and REIMER N. LUETJE, citizens of the United States, residing at Augusta, in the county of Richmond and State of Georgia, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to new and useful improvements in oil burners and more particularly to a burner for use in stoves, furnaces and various other heaters wherein coal and wood are the customary fuel therefor, and the primary object of the invention resides in providing a device which generates a gas at the burner proper, thereby intensifying the heat.

A further object of the invention resides in providing means for causing the burner proper to be heated previous to the ignition of the oil emitted therefrom and a still further object resides in providing means whereby air may be supplied at the point of the burner.

Still another object of the invention resides in providing a device which is extremely simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawings forming a part of this application, Figure 1 is a side elevation partly in section showing our device applied to use. Fig. 2 is a top plan view of our improved device removed from the stove. Fig. 3 is an end elevation thereof. Fig. 4 is a vertical section as seen on line 4-4, Fig. 3; and Fig. 5 is a perspective view of a slightly modified form of the invention.

In describing our invention, we shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates a stove or range of any desired type, wherein wood and coal are the usual fuel therefor, and within the fire box of which is mounted a plate 2 formed of two flat portions, one at a higher elevation than the other, said plate having a plurality of open-

ings 2' therein which lead to the drip pans 3 secured to the under face of said plate 2. The stove or range, therefore forms a casing or the like for the plate 2 and mounted on the upper face of said plate surrounding the openings therein, are the framelike members 4 which support the burners 5 and form air feeding means therefor. These burners which are each provided with outlet openings 6 are formed from the continuation of curved pipes or conduits 7, said conduits 7 being connected to the vertical supporting pipes 8 which, in turn, lead to a main supply pipe 9. This main supply pipe 9 leads to a reservoir 10, which is disposed in a plane above the furnace and the branch connections between said main pipe 9 and the pipes 8 are provided with manually operated valves 11, whereby the supply of oil to said burners may be readily controlled.

Adjustably and removably carried on the arcuate pipes 7, immediately over the outlet openings 6 in the burners are the flame deflectors 12, which obviously spread the flame and cause maximum amount of heat to be obtained.

In operation, the valves 11 are first opened to allow a certain amount of oil to drop from the burners into the drip pans 3, whereupon said valves are closed and the oil in said pans 3 ignited. The ignition of this oil in the drip pans, will cause the flame to be directed toward and around the burners 5, thereby heating the same to a considerable extent and after the same have been heated sufficiently, the valves 11 are again opened and as the oil flows from the outlets in the burners, the same will be caused to form a gas, through the aid of the air supplying means 4, and ignited. The formation of the oil into a gas at this point, will obviously provide greater heat and as the flame is spread by means of the deflectors 12, a maximum amount of heat will be obtained from a minimum amount of fuel.

In Fig. 5 of the drawing, we have shown a slightly modified form of the invention, wherein the intake pipe 8' which leads from any source of supply connects with a cylindrical receptacle or oil container 12'. Leading from this container 12' is the connection 7', the outer end of which is bent downwardly and inwardly so that the burner 5' which is formed at the free end thereof will be disposed below said container or receptacle 12'. From this con-

struction it will be seen that the container or receptacle 12' will not alone form a deflector for the flame, but will also form a generator.

5 From the foregoing it will be seen that we have provided a simple, inexpensive and efficient means for carrying out the objects of the invention and while we have particularly described the elements best adapted to
10 perform the functions set forth, it is obvious that various changes in form proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the
15 invention.

Having thus described this invention, what we claim is:—

20 In a heating device of the class described, a casing, a horizontal plate mounted therein and formed of a pair of flat portions, one at a higher elevation than the other, said plate being provided with a plurality of openings

therein, drip pans secured to the under face of said plate and surrounding said openings, supporting frames secured to the upper face
25 of said plate surrounding said openings, conduit pipes extending vertically through the plate in said casing and having communication with a source of supply, burners mounted on said supporting frames over the openings
30 in said plate and having communication with said vertical pipes, deflectors supported immediately above said burners, and means to control the supply of fuel to said vertical
35 pipes.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

THOMAS M. MORRIS.
REIMER N. LUETJE.

Witnesses:

FRANK B. CARR,
CON GALLAGHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."