

R. J. WHEELER & H. R. NEIL.
OIL BURNER.

APPLICATION FILED MAY 2, 1910.

974,324.

Patented Nov. 1, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

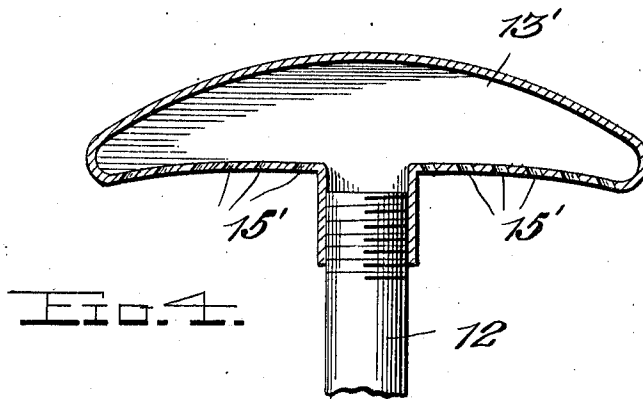
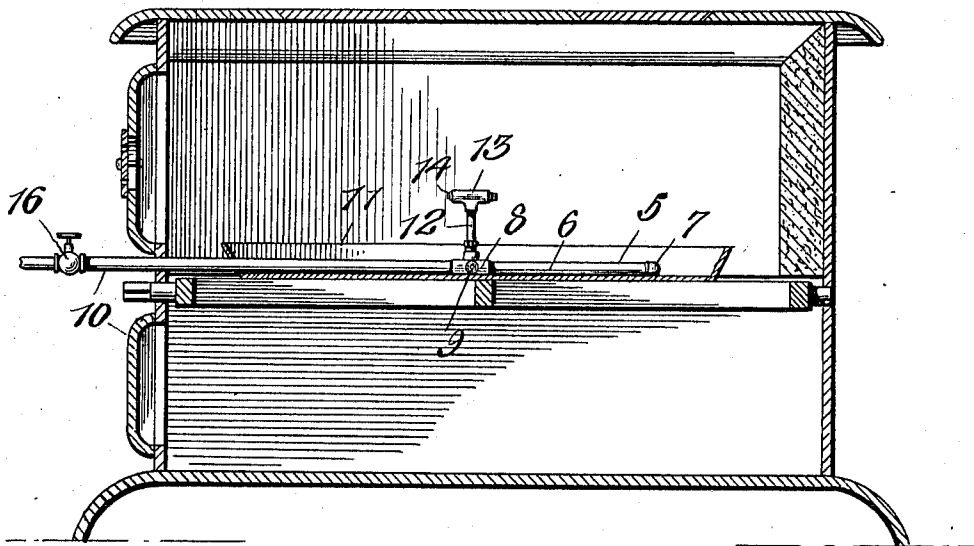


Fig. 4.

Witnesses

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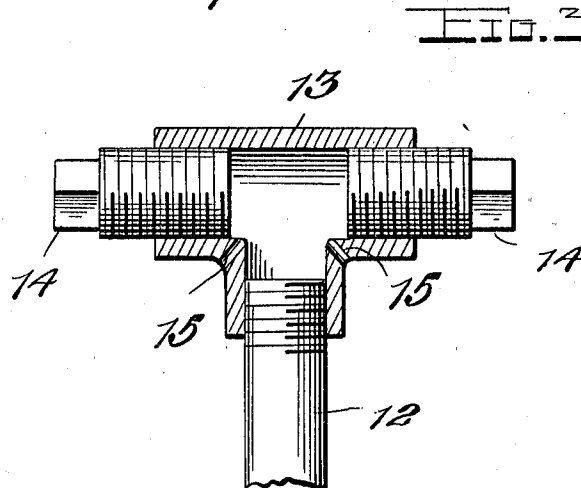
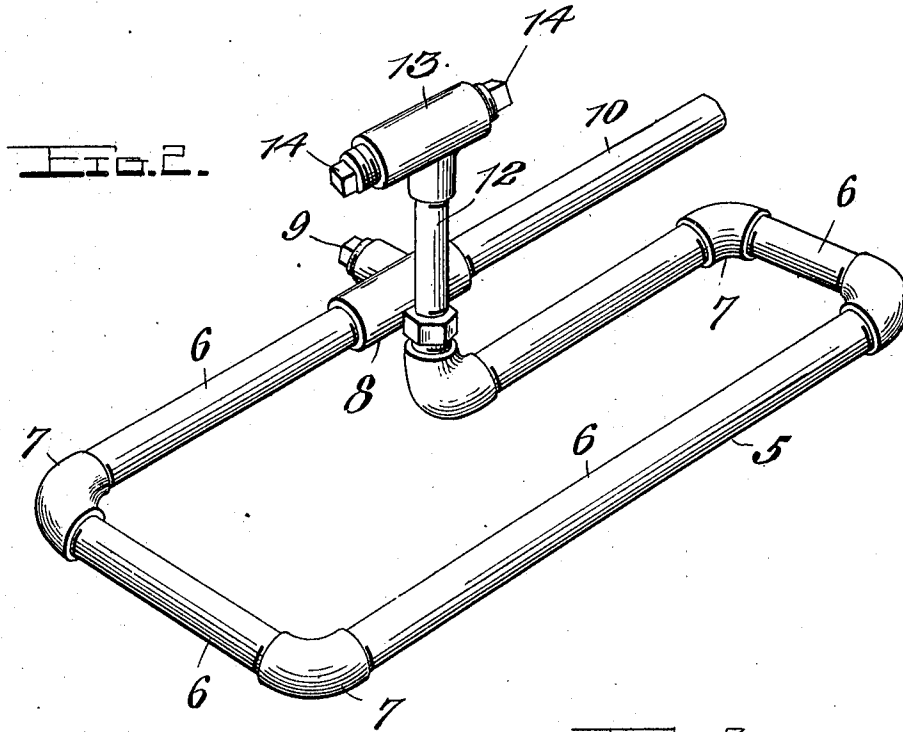
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UNITED STATES PATENT OFFICE.

RUFUS J. WHEELER AND HENRY R. NEIL, OF BAKERSFIELD, CALIFORNIA.

OIL-BURNER.

974,324.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed May 2, 1910. Serial No. 558,763.

To all whom it may concern:

Be it known that we, RUFUS J. WHEELER and HENRY R. NEIL, citizens of the United States, residing at Bakersfield, in the county of Kern and State of California, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to oil burners of that type which are adapted to convert the liquid into gas to burn the latter, and the object of our invention is to improve the construction of burners of this character, to increase their efficiency and durability and to provide a burner of extremely simple construction whereby the cost of manufacture is materially reduced.

With this and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view through the fire box of a stove showing our improved burner arranged therein; Fig. 2 is a perspective view of the burner removed; Fig. 3 is an enlarged detail section of the burner head; and Fig. 4 is a similar view of a modified form of the head.

Referring more particularly to the drawings 5 indicates our improved burner which is adapted to be arranged in the fire box of a stove as clearly shown in Fig. 1. The burner comprises a plurality of pipe sections 6 which are arranged in a coil and connected by the elbows 7. While but one such pipe coil is shown in the accompanying drawings, it will be obvious that any desired number of such coils may be employed. One of the pipe sections 6 has a T-shaped coupling 8 threaded on its end. The central lateral arm of this coupling is closed by means of a screw threaded plug 9, and an oil supply pipe 10 is threaded into the end of the body of the coupling and extends through the front end of the stove. By providing the T-shaped coupling 8, the supply pipe may be extended through the side of the stove and connected to the lateral arm of said coupling, the threaded plug 9 being removed and inserted into the end of the coupling. Also the coupling may be turned upon the end of the pipe section and the

supply pipe extended upwardly through the bottom of the stove and connected thereto in a similar manner.

An oil pan 11 is arranged in the fire box beneath the pipe coil and is adapted to receive a sufficient amount of oil to thoroughly heat the coil and convert the oil in its passage therethrough into gas. A stand pipe 12 is connected to the end of the pipe coil and is centrally disposed within the fire box. Upon the upper end of this pipe 12 a burner head 13 is threaded. This head is substantially T-shaped in form and has its body portion disposed in parallel relation to the pipe coil. The ends of said head are closed by means of the threaded plugs 14, which are adapted to be removed so that pipe sections may be threaded into the head to extend the same whereby the gases are distributed over a larger area. The head 13 is provided upon each side of the vertical attaching arm thereof with a downwardly extending angularly disposed opening 15. These openings are adapted to spray the gas outwardly and downwardly upon the pipe coil to keep the same highly heated for the proper conversion of the fuel into gas. The supply pipe 10 is provided with the usual cut-off valve 16 whereby the supply of oil may be controlled.

The burner is adapted to be arranged in cook stoves, heating stoves or furnaces and a quantity of oil ignited in the pan 11. The oil is admitted to the coil from the source of supply and as the pipes become highly heated, this oil is gradually converted into gas. It flows through the vertically disposed stand pipe 12 and into the burner head 13 from which it is sprayed outwardly and downwardly as above described. The stove is of course provided with the usual draft plate which is adapted to be adjusted to permit the entrance of a certain amount of air to the fire box. This air mixes with the gas which is discharged through the openings 15 of the burner head and is ignited, the flames being directed downwardly upon the coils of the pipe, and the heat currents carried off from the stove in the usual manner for the purpose of heating the various apartments of a dwelling.

In Fig. 4 we have illustrated a slightly modified construction of the generating head. In this form a concavo-convex hollow sheet metal head 13' is employed. This head is

preferably of circular form in plan and is provided in its bottom with a plurality of openings 15'. These openings are angularly disposed in opposite directions upon opposite sides of the center of said head and direct the gases outwardly and downwardly in substantially the same manner as the head 13. This form of generating head would preferably be utilized in cases where the burner is to be employed in large stoves or ranges which have an extended area of heating surface.

From the foregoing it is believed that the construction and operation of our improved burner will be readily understood without requiring any further description. The device is extremely simple, and is highly efficient and durable in use.

The construction of the burner is capable of many minor modifications without departing from the essential features or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:—

A burner of the character described comprising a pipe coil adapted to be arranged in the fire box of a stove, a supply pipe connected to one end of said coil, a vertically positioned pipe connected to the other end of said coil and extending centrally above the same, a T-shaped burner head upon the upper end of said vertical pipe, removable plugs threaded in the opposite ends of the horizontally disposed portion of said head, said head having opposite angularly disposed openings at the point of juncture of the vertical and horizontal portions of the head, the gases generated in the coil being directed outwardly and downwardly upon said coil through the openings, substantially as and for the purpose specified.

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

RUFUS J. WHEELER.
HENRY R. NEIL.

Witnesses:

A. A. WILLIAMS,
J. W. RUSSELL.