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W. T. KELLEY & C. W. HOFMEISTER.

ATTACHMENT FOR STOVES, BOILERS, BURNERS, AND THE LIKE.

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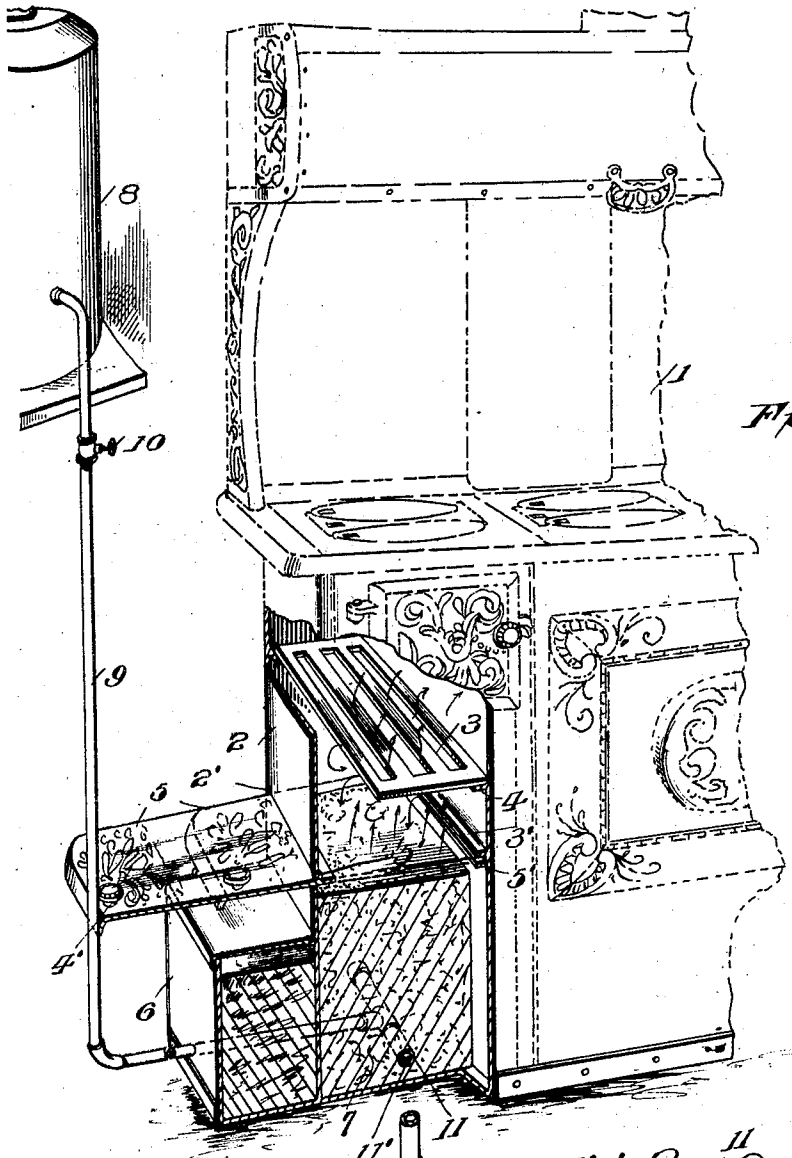

Fig. 1.

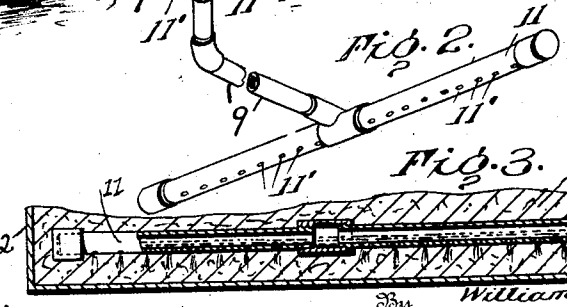

Fig. 2.

Fig. 3.

Witnesses
W. A. Williams.
Daisy Loveless.

Inventors
William Thomas Kelley
Christopher W. Hofmeister.
By Herrick & Herrick Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM THOMAS KELLEY AND CHRISTOPHER W. HOFMEISTER, OF MUSKOGEE, INDIAN TERRITORY, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO KELLEY PETROLEUM GAS GENERATOR COMPANY, A CORPORATION OF ARIZONA TERRITORY.

ATTACHMENT FOR STOVES, BOILERS, BURNERS, AND THE LIKE.

No. 865,647. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed October 27, 1904, Serial No. 230,260. Renewed May 24, 1907. Serial No. 375,457.

To all whom it may concern:

Be it known that we, WILLIAM THOMAS KELLEY and CHRISTOPHER W. HOFMEISTER, citizens of the United States, residing at Muskogee, Indian Territory, have invented new and useful Improvements in Attachments for Stoves, Boilers, Burners, and the Like, of which the following is a specification.

The present invention relates to an improvement in stoves and burners, especially adapted for the employment of crude petroleum or oil in the place of ordinary fuel such as coal and wood. The structure hereinafter set forth may also be employed in connection with upright boilers, locomotive engines and in fact wherever a cheap and efficient method of producing heat is desirable, it being understood that the invention has a wider field of utility than its application as illustrated in connection with a stove.

The object of the invention is to provide a simple and useful means for the use of petroleum as a fuel, a full and more particular description of which will appear in the following description and as illustrated in the accompanying drawing.

In the drawing Figure 1 discloses the invention as employed in connection with a stove, this view being partly in section to more clearly show the parts of the structure. Fig. 2 is a detail view showing the feed pipe. Fig. 3 is a cross section showing the discharge pipe embedded in ashes.

Referring more particularly to the drawing 1 represents an ordinary wood or coal stove having a fire box 2. Near the top of this fire box is arranged a series of deflecting grate bars 3 which are supported upon flanges 4 formed integral with the interior of the fire box 2. These grate bars 3 are for the purpose of deflecting the flame downwardly to produce a hotter fire within the fire box and also to prevent the burning out of the exposed part of the boiler.

Beneath the grating or grate bars 3 there is formed in the outer face of the fire box an opening 2′, while opposite thereto on the inner wall of the fire box is formed a supporting flange 3′ having a groove formed therein. Extending through the opening 2′ of the fire-box and adapted to engage in the flange 3′ is the slidably mounted damper 5. This damper is provided with a retaining lug 5′ which prevents the entire withdrawal of the damper and with a knob or handle of any suitable character 4′ mounted upon the outer portion of the damper or slide. The object of this damper is to permit the free burning of the fuel in its outer position and to extinguish the flames when moved into its position within the fire box 2 and engagement with the flange 3′. Upon the outer face of the fire box 2 and extending to a point slightly below the opening 2′ thereof, there is formed a compartment 6 to receive fire clay. Within the fire box and filling the same to a point adjacent the damper 5 are disposed ashes, such as wood ashes or cinders which form a packing 7, the object of which will appear hereinafter.

There is provided a supply tank 8 for the crude petroleum or oil from which leads a feed or discharge pipe 9 upon which is located a suitable valve 10 for controlling the feed of the petroleum. The lower portion of this feed pipe 9 extends through the clay filled compartment 6 into the lower portion of the fire box 2. The compartment 6 prevents the spreading of the heat towards the engineer who is attending to the boiler. On the end of the pipe 9 is mounted a discharge portion 11 provided with suitable discharge openings 11′ therein, which openings are disposed in the bottom face of the discharge portion. This pipe 9 and discharge portion 11 lie adjacent the bottom of the fire box 2 and are thoroughly embedded in the ashes which form an absorbent packing within the fire box. It is understood that the fire box with its packing of ashes, the feed and discharge pipe and the supply tank constitute an attachment which may be placed upon either a stove as shown in the present instance, or combined with and attached to, any type of engine, steam boiler or heater.

Upon opening the valve 10 the petroleum is fed through the pipe 9 and out of the discharge opening 11′ which open directly downward away from the ignition surface, discharging the petroleum at the bottom of the packing of absorbent material and works its way upwardly therefrom. The petroleum or oil is lighted at the top surface of the packing and supplies the necessary heat, the damper being opened upon the lighting of the fuel. To extinguish the flames the damper is pushed inwardly thereby cutting off the air supply.

Variations may be introduced in the structure of the present device, but are thought to come within the scope of the invention, the novel features whereof are further set forth in the appended claims.

What we desire to protect and secure by Letters Patent is:—

1. In combination with a heating chamber, of a firebox disposed below said chamber and filled with a mass of absorbent material, a fuel supply pipe arranged longitudinally of the firebox and immediately above its bottom, said pipe being enveloped in the absorbent material and formed with discharge openings arranged to discharge the fuel toward the bottom of the firebox only and in a vertical direction directly away from the ignition surface or top of the absorbent material, a compartment secured contiguous the firebox and containing material to prevent radiation of heat, and a damper slidably arranged within the firebox in close proximity to the ignition surface of the absorbent material therein.

2. The attachment for stoves, boilers and burners, comprising a fire-box, an absorbent packing in the lower portion of the fire-box, a valve controlled oil supply pipe

embedded in the absorbent packing below the top ignition surface of the packing, a controlling slide damper in proximity to the ignition surface of the packing, and a deflecting grated bar above the damper, substantially as described.

3. The attachment for stoves, boilers and burners comprising a fire-box, an absorbent packing in the lower portion of the box, a fuel supply pipe embedded in the packing below the ignition surface of the packing and having openings arranged to discharge the fuel into the packing between the pipe and bottom of the box, and a controlling damper arranged in proximity to the ignition surface of the packing, substantially as described.

In testimony whereof we have affixed our signatures, in presence of two subscribing witnesses.

WILLIAM THOMAS KELLEY.
CHRISTOPHER W. HOFMEISTER.

Witnesses:
A. R. HIBBS,
Mrs. R. G. NIXON.