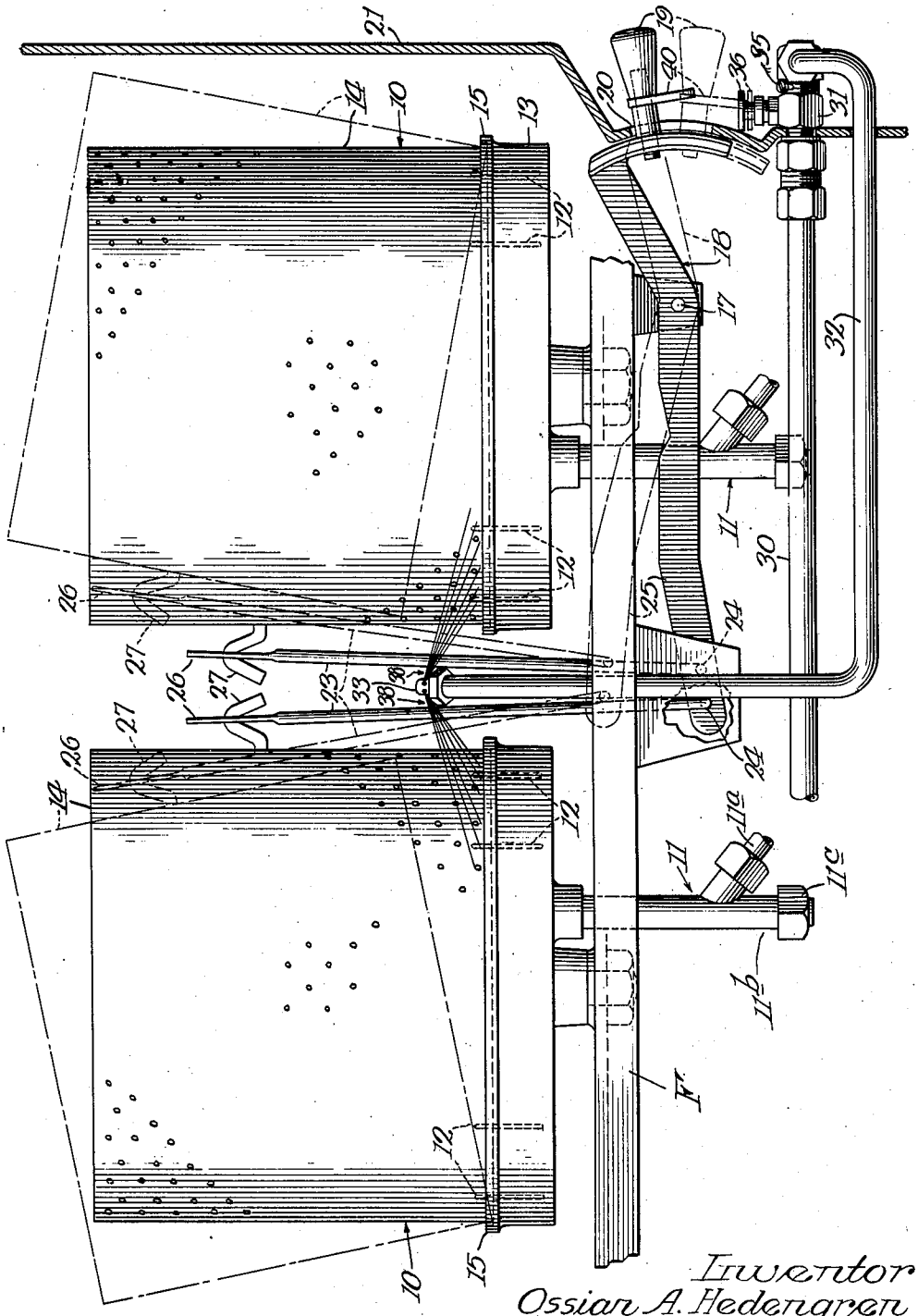
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IGNITION DEVICE FOR OIL RANGES

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IGNITION DEVICE FOR OIL RANGES

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This invention relates to oil ranges and to combination oil and gas ranges, and is concerned more particularly with the ignition of oil burners.

It has heretofore been necessary to ignite oil range burner wicks or kindlers by hand, requiring either raising the cylinder or other shield of the burner and applying a lighted match and then lowering the shield or projecting the lighted end of a long rod down into the shield. In localities where gas is available this inconvenience may be avoided by equipping the range with mechanism of my invention.

Further objects and advantages of my invention will appear as the description proceeds.

In the accompanying drawing the figure is a fragmentary elevation showing oil burners or the like combined with automatic igniting means of my invention.

The burners 10 may be mounted on any suitable frame F and are supplied with kerosene or other liquid fuel through vertical feed tubes 11, the fuel being introduced to the tubes laterally, as at 11*a*. The tubes 11 terminate at their bottoms in "carbon legs" 11*b*, each closed by a screw cap 11*c*, whereby carbon and other solids settling out of the fuel may be removed. The burners are provided with asbestos or other suitable kindlers 12 projecting freely upward from the fuel containers or bases 13 of the burners, said bases supporting perforated shields such as cylinders or drums 14 which surround the free tips of the kindlers. The bottoms of the shields are surrounded by flanges 15 on the bases of the burners.

Pivotally supported at 17 from the frame or other suitable part of the structure is a lever 18 having at one end a knob 19 projecting to the outside through an opening 20 in the casing 21. Links 23 pivoted at 24 to the other arm 25 of the lever have forked ends 26 in whose crotches hooks 27, attached to adjacent portions of the drums 14, are received. Now it will be observed that the knob 19 is normally held in the position shown in full lines, as are the other parts cooperating therewith, and upon depression of the knob the drums are tilted as indicated in dot-dash lines, the flanges 15 preventing dislocation of the drums. When the knob is released, gravity will return the parts to their full line positions. If desired structural means could be provided for this purpose.

An important feature of my invention involves the application of a flame to the kindlers while they are exposed by the tilted drums. To this end a pipe 30 from a suitable source of gas leads to a valve 31 from which extends a pipe 32 which projects up between the burners and terminates in a pilot 33. A small pilot flame is normally kept burning, the size of the flame being controlled by means of a by-pass screw 35. A push button valve stem 36 associated with the valve 31 is urged outward to closed position by a spring (not shown) in the valve body. When the stem 36 is depressed, there is an increase in flow of gas to the pilot so that jets of flame as shown at 38 are emitted and so directed as to strike the kindlers of the burners when unobstructed by the cylinders 14.

If desired, the knob could be depressed to tilt the cylinders to the desired extent and then the attendant could press the stem separately with his finger until the pilot flame jets ignite the kindlers, whereupon both knob and stem could be released. The knob and stem thus could be located apart or adjacent each other. However, I prefer to provide means whereby both actions may be effected merely by moving the knob 19.

I accordingly provide the knob with a lug 40 arranged to impinge upon the valve stem 36 before the knob has completed its actuating movement and so that when such movement is completed the cylinders 14 are adequately tilted and the jets of flame directed to and ignite the adjacent kindlers of the burners. This requires but a moment or two, and then the knob is released, allowing the shields to be returned, the receding lug 40 permitting the stem 36 to be returned by the valve spring to its closed position so that the small pilot flame continues to burn, the parts being thus ready for the next lighting operation without further ado. Of course, the same result could be obtained in various ways, as, for example, by extending the height of the stem and allowing the knob to depress it.

If desired, separate elevating means could be provided for each cylinder, either with a common pilot or separate pilots. The links may be readily removed from the lever, or disconnected from the hooks 27, so that either cylinder may be elevated without the other. The mechanism is accordingly applicable to a single burner or any desired number of burners.

Although I have illustrated burner construction of the blue flame type, it will be appreciated that my invention is applicable to burners of all types employing drums or equivalent shields.

I am aware that many changes may be made and numerous details of construction varied through a wide range without departing from the principles of my invention, and I therefore do not

purpose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim:

1. A burner having a fuel container and a shield movably associated with said container, means for shifting said shield to expose said fuel, means providing a pilot gas flame in such proximity to said fuel that a jet formed from said flame will ignite said fuel, and means for projecting said flame into the form of a jet igniting said fuel while so exposed, said flame projecting means being so arranged as to be operated by said shifting means.

2. A plurality of burners, each having a fuel container and a shield movably associated therewith, means for shifting all of said shields to expose the fuel in each container, and means operated by said shifting means for simultaneously igniting the fuel in all of said containers while so exposed.

3. A plurality of burners, each having a fuel container and a movable shield therefor, means for shifting said shields to simultaneously expose the fuel in all of said containers, means providing a gas flame pilot in such proximity to the fuel that jets formed from said flame will ignite the fuel in all of said containers, and means operated by said shifting means for projecting said flame into a plurality of jets simultaneously igniting the fuel in all of said containers while so exposed.

4. The combination in an oil burning stove, of a burner including combustion tube means arranged to be elevated for lighting the burner, means for elevating said combustion tube means including a manually operable pivotally mounted lever, and a flame projecting gas lighter directed toward said burner including a control valve arranged to be actuated by said lever for operating the lighter as an incident to movement of said lever for elevating said combustion tube means.

5. The combination in an oil burning range or the like, of a burner including a vaporizing bowl having an open top recess therein adapted to contain a supply of combustible fuel and surrounded by an upstanding annular flange, a combustion tube assembly removably positioned on said bowl over said recess and within said flange, an operating lever pivoted intermediate its ends, and means including a link pivotally connected to one end portion of said lever and to a side wall portion of said combustion tube assembly for tilting the latter about an edge portion of said flange without disengaging the same in response to movement of said operating lever to thereby expose a portion of said recess for ignition of the fuel therein.

6. The combination in an oil burning stove, of burners including combustion tube means arranged to be elevated for lighting said burners, means including a manually operable element for elevating said combustion tube means simultaneously, and igniting means applicable simultaneously to said burners and including a control member arranged to be actuated by said element for operating said igniting means to ignite said burners simultaneously as an incident to movement of said element for elevating said combustion tube means.

7. The combination in an oil burning stove, of a burner including combustion tube means arranged to be elevated for lighting said burner, means including a manually operable element for elevating said combustion tube means, and igniting means applicable to said burner and including a control member arranged to be actuated by said element for operating said igniting means to ignite said burner as an incident to movement of said element for elevating said combustion tube means, said igniting means when operated being positioned in operative relation to said burner so that the movement of said manually operated element to elevate said combustion tube will be effective to ignite said burner.

8. The combination in an oil burning stove, of a burner including combustion tube means arranged to be elevated for lighting said burner, means including a manually operable element for elevating said combustion tube means, and igniting means fixedly positioned in operative relation to said burner and including a control member arranged to be actuated by said element for operating said igniting means to ignite said burner as an incident to movement of said element for elevating said combustion tube means so that the movement of said manually operated element to elevate said combustion tube will be effective to ignite said burner.

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