

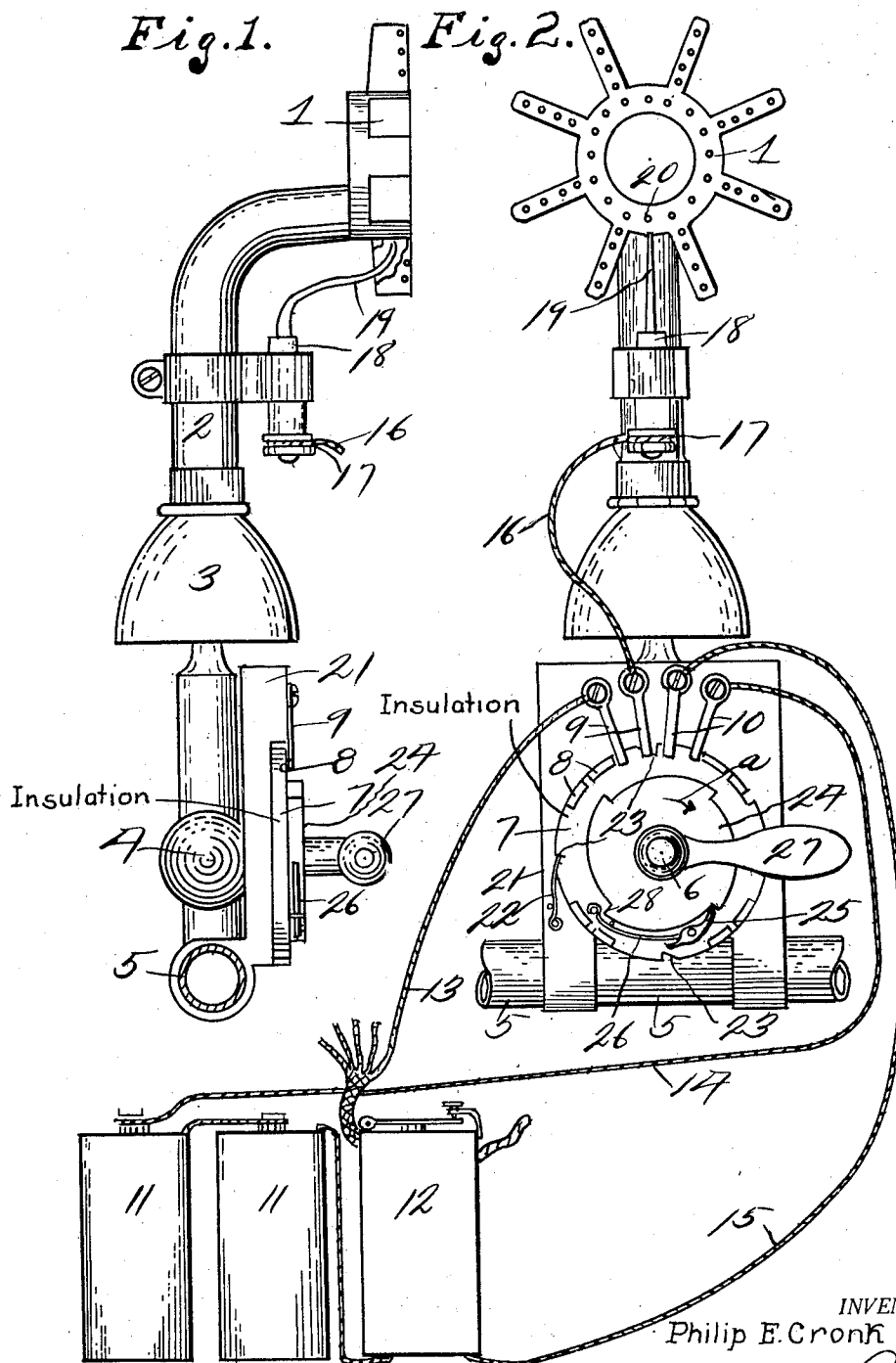
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P. E. CRONK

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BURNER IGNITING DEVICE

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INVENTOR:

Philip E. Cronk

BY

BY
Philip A. H. Fenell
ATTORNEY

ATTORNEY.

UNITED STATES PATENT OFFICE

PHILIP EDWARD CRONK, OF OMAHA, NEBRASKA

BURNER IGNITING DEVICE

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The invention relates to burner igniting devices, and has for its object to provide a device of this character particularly adapted for use in connection with gas stove burners and supply valves, and constructed in a manner whereby upon opening of the gas supply valve a circuit will be closed leading to a sparking device, which sparking device will create a spark adjacent the burner for igniting the gas.

A further object is to provide a plurality of contact members, preferably in pairs at ninety degrees, and mounted on a rotatable insulation disc and cooperating with contacts controlling the circuits, and forming means whereby upon rotation of the disc ninety degrees upon opening the valve, the circuit will be closed for igniting the gas. Also to provide a ratchet connection between the valve and the contact disc whereby upon closing of the valve, the contact disc will remain stationary.

A further object is to provide a spring detent cooperating with the contact disc for preventing retrograde rotation thereof upon closing the valve.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:

Figure 1 is a side elevation of a conventional form of gas burner, showing the ignition device applied thereto.

Figure 2 is a top plan view of the burner and the igniting device.

Referring to the drawings, the numeral 1 designates a conventional form of gas burner of the type used in connection with gas stoves, and which burner is provided with a gas supply pipe 2 leading from the mixer 3, into which mixer gas is discharged through the valve 4 from the main gas supply pipe 5. The valve 4 is of the conventional plug valve type wherein the valve is opened upon a rotation

thereof in the direction of the arrow *a*, a distance substantially ninety degrees. Rotatably mounted on the stem 6 of the valve is a disc 7 formed from insulating material, and which disc, at substantially ninety degree intervals is provided with pairs of contacts 8, which contacts are adapted to be moved into engagement with the spaced contact fingers 9 and 10 for closing a circuit from the batteries 11 and the induction coil 12 through the wires 13, 14, 15 and 16; the wire 16 being connected at 17 to a spark plug 18, the point 19 of which terminates adjacent one of the burner apertures 20, whereby a spark will be projected into gas passing from the aperture, consequently the burner will be ignited. The insulation disc 7 constantly rotates in the direction of the arrow *a*, and is intermittently rotated ninety degrees upon successive openings of the valve, whereby the spaced contacts 8 will be moved into engagement with the contacts 9 and 10.

Mounted on a plate 21 carried by the gas supply pipe 5 is a spring detent 22, which engages in the notches 23 of the disc 7, which notches are ninety degrees apart, consequently upon closing the valve, said disc 7 will be held against retrograde rotation. The disc 7 is rotated by means of a ratchet wheel 24, carried by the stem 6, and with which ratchet wheel a detent 25 engages. The detent 25 is held in engagement with the ratchet 24 by means of the spring 26, therefore, it will be seen that as the valve handle 27 is moved in the direction of the arrow *a*, disc 7 will rotate, and as said handle moves in the opposite direction upon the valve closing operation, the ratchet wheel 24 will rotate with the stem 6, and the detent 25 will be received behind the next shoulder 28 of the ratchet wheel.

From the above it will be seen that a gas burner igniting device is provided, which is simple in construction, and a ratchet wheel arrangement used for successively moving a contact disc to positions where contacts will close the circuit, and that said ratchet means will prevent retrograde movement of the contact disc.

The invention having been set forth what is claimed as new and useful is:—

A switch for rotatable valves rotatably mounted in valve casings, said switch comprising a disc carried by and freely rotatable in relation to the valve, spaced pairs of contacts carried by the disc at ninety degree intervals, pairs of contact arms carried by the valve casing adjacent the switch and with which the disc contacts cooperate, detent means cooperating with the contact disc for preventing retrograde rotation thereof, a ratchet wheel carried by the valve, teeth carried by the ratchet wheel at ninety degree intervals, a spring actuated detent carried by the rotatable disc and cooperating with the ratchet teeth and forming means whereby upon rotation of the valve ninety degrees to open position, said rotatable disc will rotate with the valve, and upon rotation of the valve in the opposite direction to closed position, said rotatable disc will remain stationary, under the influence of its detent means.

In testimony whereof I hereunto affix my signature.

PHILIP EDWARD CRONK.

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