May 27, 1924.

S. D. ROBINSON

1,495,647

COMBINATION PILOT LIGHT AND ILLUMINATING LIGHT FOR ELECTRIC RANGES

Filed May 24, 1923

2 Sheets-Sheet 1

Fig. 1.

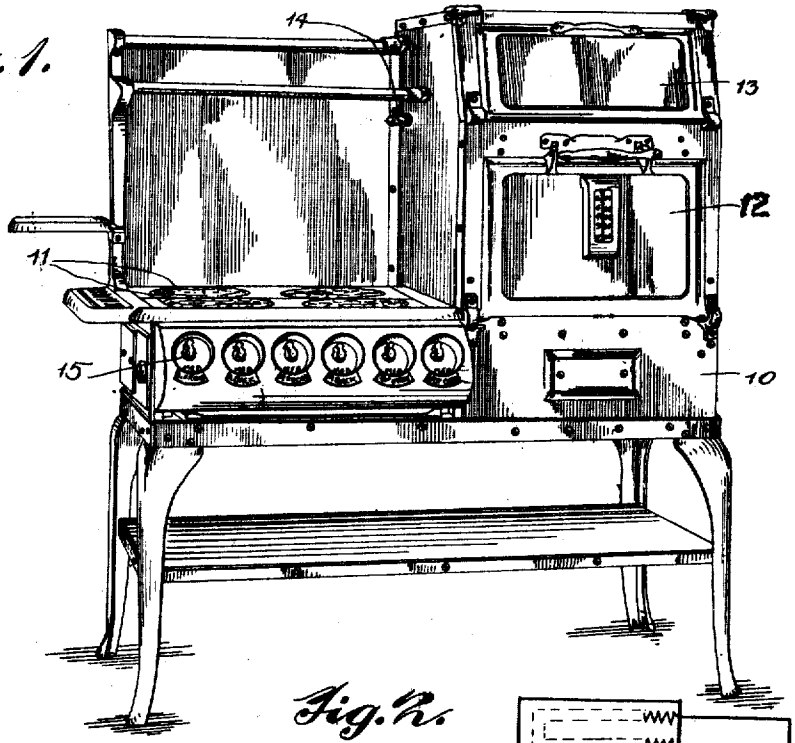
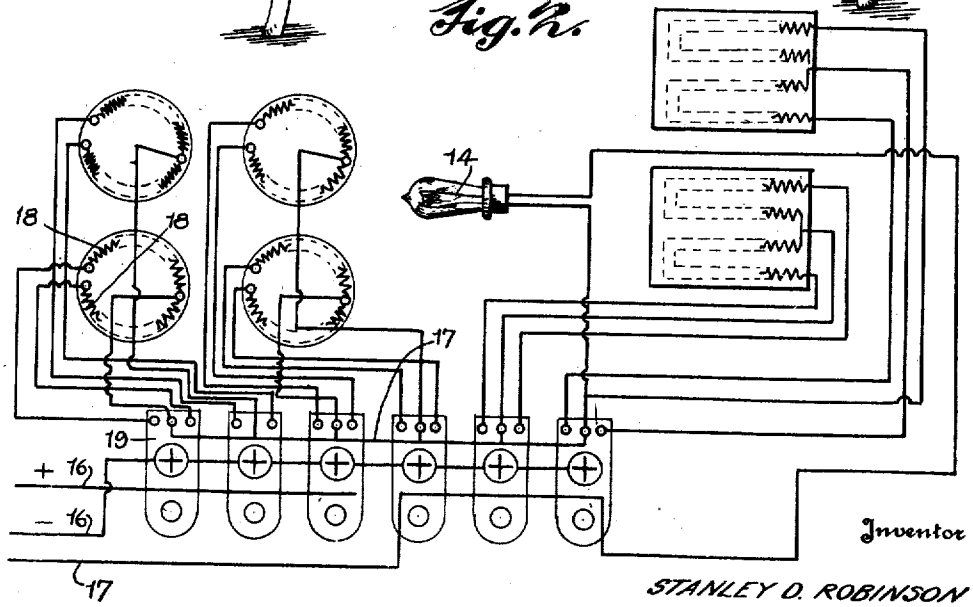


Fig. 2.



Inventor

STANLEY O. ROBINSON

By H. S. Thurdy

Attorney

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S. D. ROBINSON

1,495,647

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2 Sheets-Sheet 2

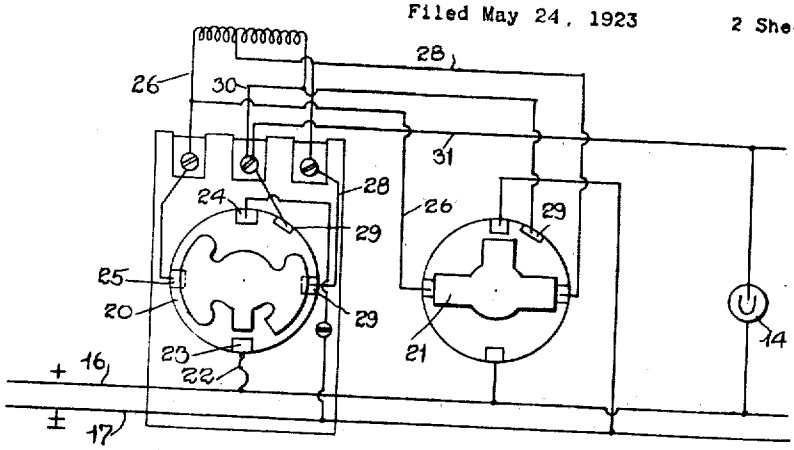


Fig. 3.

OFF

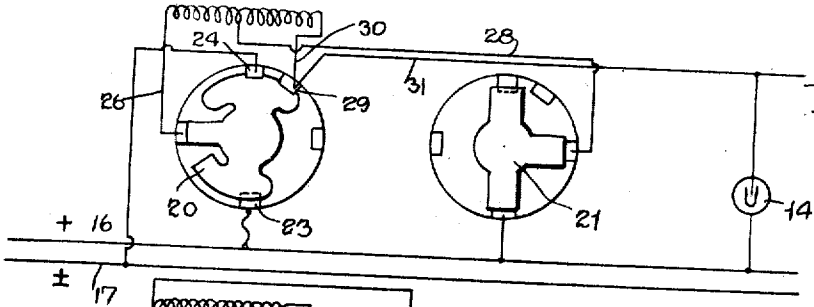


Fig 4

FULL

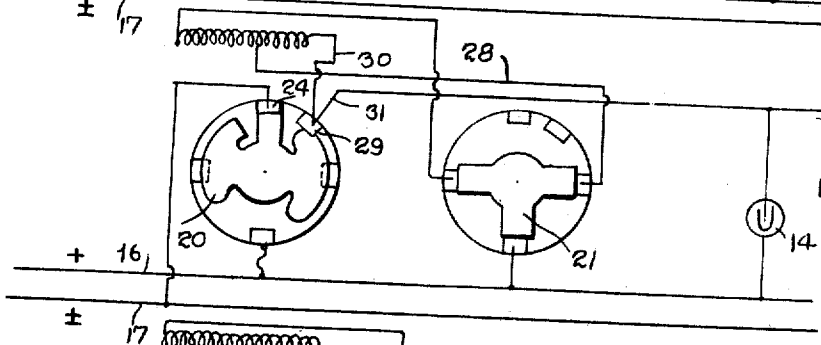


Fig. 5.

MEDIUM

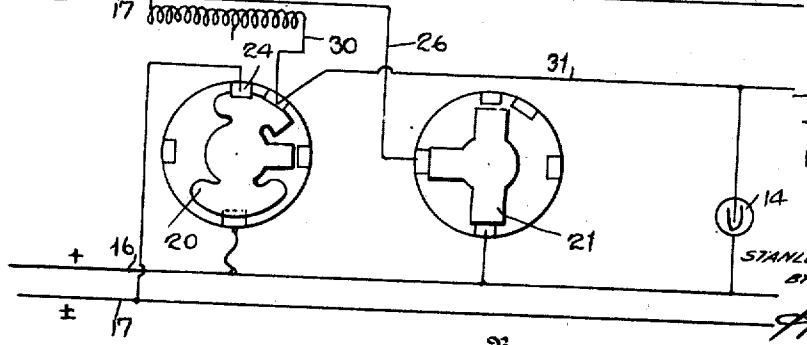


Fig. 6.

LOW

Inventor
STANLEY D. ROBINSON
BY -

By

Attorney

Patented May 27, 1924. 1,495,647

UNITED STATES PATENT OFFICE.

STANLEY D. ROBINSON, OF HAMILTON, ONTARIO, CANADA, ASSIGNOR TO D. MOORE COMPANY, LIMITED, OF HAMILTON, ONTARIO, CANADA.

COMBINATION PILOT LIGHT AND ILLUMINATING LIGHT FOR ELECTRIC RANGES.

Application filed May 24, 1923. Serial No. 641,132.

To all whom it may concern:

Be it known that STANLEY D. ROBINSON, a subject of the King of Great Britain, residing at Hamilton, in the county of Wentworth and Province of Ontario, Canada, has invented certain new and useful Improvements in Combination Pilot Lights and Illuminating Lights for Electric Ranges, of which the following is a specification.

This invention relates to stoves, and has special reference to an electric stove.

More particularly the invention relates to a pilot light arrangement for such stoves.

It is a well known fact that housewives and others who use electric stoves, frequently leave the current turned on to one or more of the heating elements when the stove is not in use. This not only wastes current, but shortens the useful life of the heating elements. Moreover, it is frequently desirable that provision be made over the top of the stove for illuminating the same, and in the ordinary kitchen, the usual illumination consists of a central drop light or chandelier, while the stove is generally positioned against a side wall so that the cook throws a shadow on the stove during the cooking operations at night.

The principal and most important object of the present invention is to provide a novel arrangement of pilot light and illuminating means for use in connection with an electric stove, the arrangement being such that no matter which one of several heating elements may be turned on, the pilot light will be lit, and will only give out when all of the heating elements are turned off.

Another object of the invention is the provision of means of this character particularly for use in connection with a three wire system.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Fig. 1 is a perspective view of a stove equipped in accordance with this invention.

Fig. 2 is a view showing a wiring diagram for such a stove.

Figure 3 is a diagram showing the circuit connection of a pilot light when an ordinary three heat, three wire switch is used, the switch being in "off" position.

Figure 4 is a similar view with the switch in full "on" position.

Figure 5 is a view showing the switch in medium position.

Figure 6 is a view with the switch in "low" position.

In the embodiment of the invention herein illustrated there is shown a stove having six heating elements which are of the ordinary form embodying a resistance coil having wiring connections at each end and at a middle point, the body of the stove being indicated at 10. These heating elements are arranged beneath the top plates 11 and in the oven 12 and the broiler 13. The oven 12 and broiler 13, in this particular stove, are arranged at one side of the open cooking portion, and supported on the side wall of the oven and broiler is a pilot light 14. Along the front of the stove are arranged the switches 15.

These switches 15 are of the ordinary three heat type such as are required by the regulations of the Underwriters' Association in the United States and Canada for the purpose and to illustrate the manner in which the pilot light will at all times remain fully lit in all "on" positions of the switch, Figures 3 to 6 are shown.

Considering now Fig. 2, it will be seen that there is disclosed a three wire system having positive and negative mains 16, and a return main 17. Heating resistances 18 are connected to these mains through switches 19, and it will be observed that the switches shown are so arranged that one or the other of the resistances 18 may be connected in circuit alone, both in multiple or both in series so that the heat given off

by the heating element may be varied at will within certain limits in the manner common in stoves of this type. It will also be seen that each of the heating elements is connected to the return main 17 in multiple.

Furthermore, it will be noted that the lamp 14 is at all times connected to one of the wires 16. Under this arrangement, it will be obvious that whenever any one of the heating elements is turned on either for low or high heat, current will necessarily pass through the pilot lamp 14 and light this lamp and that, by reason of the location of the lamp, the top of the stove will be illuminated thereby.

The diagram of the wiring as shown on sheet 1 of the drawings, is a true wiring diagram used by the applicant on his electric ranges now being manufactured, and is the same diagram which is given to his mechanics in the shop from which the ranges are wired. In order that the matter may be more clearly understood, the diagrammatic Figures 3 to 6 inclusive have been used. In these figures there is illustrated an ordinary commercial three heat switch, such as is sold by the Hart Manufacturing Co. of Hartford, Conn., and is catalogued by them and sold under the No. 1935–1. Such switches have upper and lower plates and for purposes of illustration these have been shown as separated, the upper plate being indicated at 20 and the lower at 21. One of the wires 16 is connected through a fuse 22 to a terminal 23, the wire 17 being connected to a terminal 24, these terminals also being shown as contacts for the plates. At the left of the switch a contact 25 is connected by a wire 26 with one end of the resistance of the heater 18. At the right a contact 27 connects by a wire 28 with the central point of said resistance and a fifth contact 29 is connected by a wire 30 with the remaining end of the resistance and with the lamp 14 by a wire 31, the lamp also being connected to the wire 16.

In Figure 3 it will be seen that the switch is open and consequently both the heater and the lamp are out of circuit.

In Figure 4 current flows through the lamp as follows; main 16 through lamp 14 to wire 31, contact 29, plate 20, contact 24 to main 17. Current also follows this circuit in Figures 5 and 6, and thus the lamp is lit in all closed positions of the switch.

The heater connections are those common with this type of switch. In Figure 4 the heater circuit is established from main 16, through plate 21, wire 28 to center of heater resistance, both ways through the ends of the resistance, through wires 30 and 26 to plate 20 and to main 17, thus giving full heat.

The heater circuit in Figure 5 runs from main 16 through plate 21, wire 28, right hand end of resistance, wire 30, plate 20 and to main 17, heating one-half of the resistance for the production of a medium heating effect.

In Figure 6 the heating circuit is traced from main 16, through plate 21, wire 26, the full length of the heating resistance, wire 30, and plate 20 to main 17, thus giving low heat.

It is to be noted that each of the switches is connected to the heater which it controls in the same manner and that all switches are connected in multiple to the lamp through the wire 31 so that turning current on for any heater will light the lamp and that so long as current flows through any switch the lamp will glow.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without in any way departing from the spirit of the invention. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:

1. In a device of the class described, a source of current, a plurality of electrical translating devices, a multiposition switch for connecting said translating devices in different relations, a pilot lamp and connections between said switch and lamp and directly between said source and lamp for lighting said pilot lamp at the full voltage of said lamp in any of the circuit closing positions of said switch.

2. In combination, supply mains, a plurality of sets of translating devices connected in multiple across said mains, a corresponding plurality of multiposition switches each connecting the translating devices of its respective set in different relations, a pilot lamp, and connections between one of the mains and said lamp and between the lamp and the switches in multiple for lighting said lamp in any one of the closed positions of any of the switches.

3. In an electric stove, a source of current, a heating element consisting of a plurality of resistances, a multiposition switch for connecting one of said resistances singly, or both together in series or both in parallel, a pilot lamp, and connections between said switch and pilot lamp and directly between said source and lamp for lighting said lamp under full voltage in any of the circuit closing positions of said switch.

4. In an electric stove, supply mains, a plurality of heating elements connected in

multiple across said mains and each consisting of a plurality of heating resistances, a corresponding plurality of multiposition switches each connecting one of the resistances of the respective elements, alone, both together in series or both in parallel, a pilot lamp, and connections between the lamp and the switches in multiple for lighting said lamp in any one of the closed positions of any of the switches.

In testimony whereof I have affixed my signature.

STANLEY D. ROBINSON.

Witnesses:
H. G. HENDRY,
V. D. EARLE.

DISCLAIMER.

1,495,647.—*Stanley D. Robinson*, Hamilton, Ontario, Canada. COMBINATION PILOT LIGHT AND ILLUMINATING LIGHT FOR ELECTRIC RANGES. Patent dated May 27, 1924. Disclaimer filed April 2, 1925.

Hereby enters this disclaimer to the entire claim as set out in the said specification and claims.

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