June 24, 1947. J. CASH 2,422,950

ELECTRICAL STOVE ARRANGEMENT

Filed Oct. 16, 1945 2 Sheets-Sheet 1

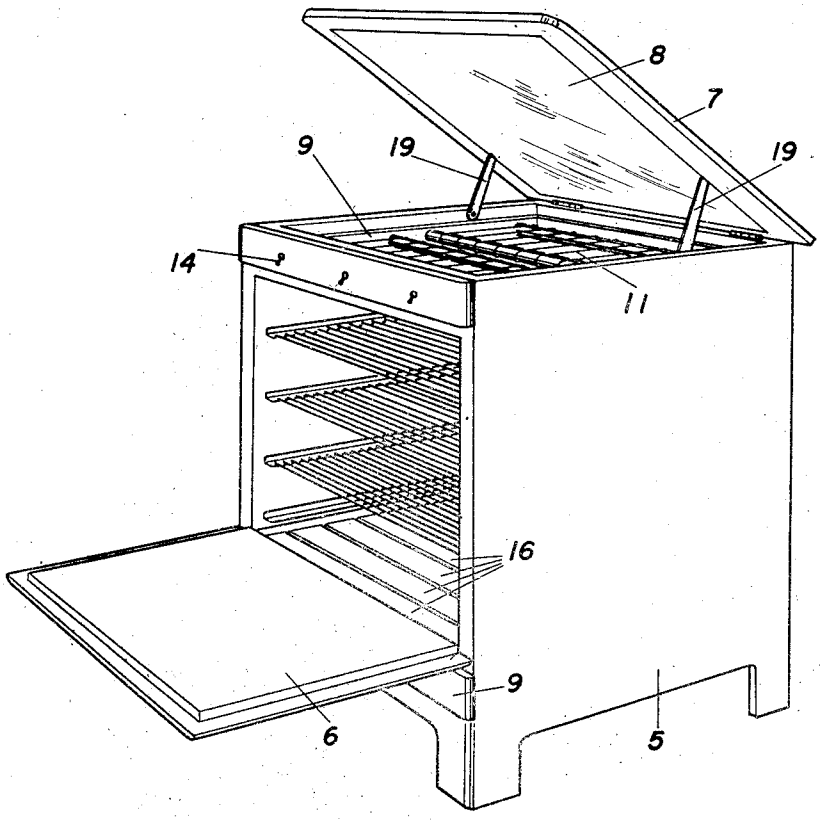


Fig 1

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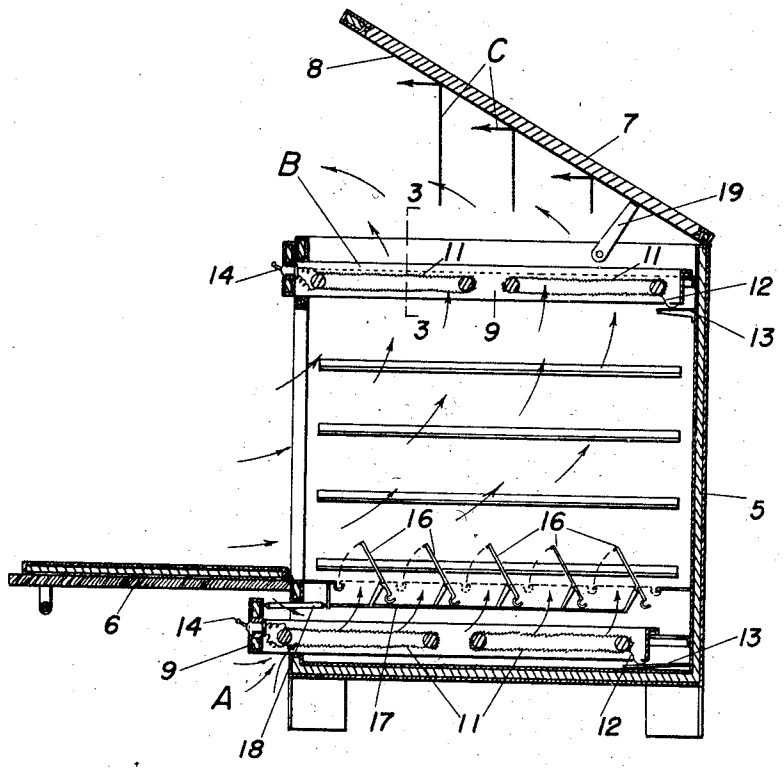


Fig 2

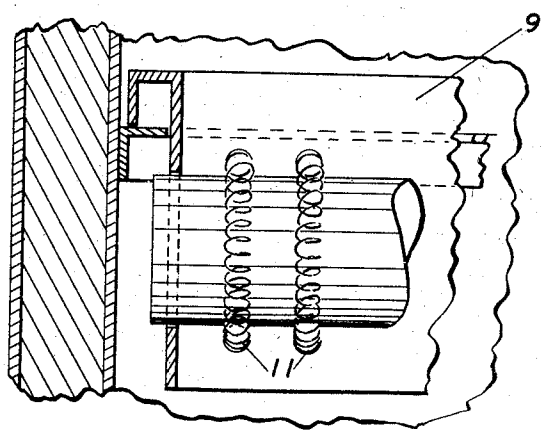


Fig 3

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UNITED STATES PATENT OFFICE

2,422,950

ELECTRICAL STOVE ARRANGEMENT

James Cash, San Francisco, Calif.

Application October 16, 1945, Serial No. 622,492

1 Claim. (Cl. 219—35)

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The invention relates to improvements in electrical stove arrangement, and has particular reference to a stove which may be used for cooking and baking, as a circulating heater, or as an infra-red radiant heater.

The principal object of this invention is to provide a stove arrangement, wherein the heating elements may be quickly removed and replaced.

A further object is to provide means whereby the stove may be used for cooking purposes, as for instance, baking, roasting and frying, and by rearranging the cover and one of the heating elements, the stove will become a heating stove, in that air will pass therethrough and circulation of warm air will be given off; also an individual sitting in front of the stove may receive all of the benefits of radiant heat which is particularly beneficial in many cases of arthritis, neuritis and muscular disturbances.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a perspective view of my stove with the door open and the top raised.

Fig. 2 is a vertical, cross-sectional view, and Fig. 3 is an enlarged, fragmentary, detailed view taken on the line 3—3 of Fig. 2.

An ordinary stove can be used for only one purpose, as for instance heating, and it, therefore, requires several stoves to accomplish efficiently heating, cooking, etc.

I have therefore provided a stove wherein a pair of removable heating elements can be readily replaced when burned out and will provide means for heating the stove for cooking purposes or for hot air circulation, as in the heating of a room.

I have also provided means whereby the infra-red rays given off by these heating elements may be reflected outwardly from the stove so as to be received by the persons positioned in front thereof, desiring that form of heat.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates the stove housing as a whole, which is provided with a swing door 6 and a hinged cover 7, the inner surface, 8, of which is polished so as to form a reflector.

Positioning in the bottom of the structure thus formed is a sliding frame, 9, in which are positioned heating coils 11, which are connected by suitable brushes 12 to contacts 13.

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This arrangement permits the sliding frame 9 and its heating coils to be pulled outwardly, as shown in Fig. 2, and still have electrical contact whereby when the switch 14 is manipulated, the coils 11 will become heated.

Positioned directly above the sliding frame 9 is a series of pivoted dampers 16, which are actuated by a pull-rod 17, connected by a link 18, to the front of the frame 9, the result being that when the frame 9 is moved forwardly to the position of Fig. 2, then the dampers 16 are in open position, with the result that air may pass, as shown by the arrows A through the heating coils, past the dampers, and upwardly through the stove.

At B I have shown a top heating element, which is exactly the same as that just described, and to which the same numerals have been applied.

The top 7 may be held in elevated position by pivoted braces 19.

The result of this construction is that when the door 6 and the top 8 are closed and the switches 14 turned to energize the heating coils 11, then heat will be generated which will be confined within the stove housing, which heat will serve to heat the oven formed within the housing in order that baking or roasting may be accomplished therein.

At the same time the heat from the coils will also be conducted through the cover 7, so that any pans set thereon will become heated.

When the cover is raised and the lower frame 9 is pulled outwardly this act will pull upon the link 18 and pull-rod 17, to swing the damper 16 to open position, and consequently air may enter around the front of the frame 9, passing along the bottom of the housing upwardly through the heated coils 11; thence through the heated coils in the upper frame and upwardly, as shown by the arrows B.

Also, the heat from the coils, which will at this time be glowing and giving off infra-red rays, will cause these infra-red rays to pass directly upwardly and be reflected from the polished surface 8 of the cover 7, as shown by the black arrows C.

Thus, by arranging the parts as desired, it will be apparent that my stove will accomplish all of the objects above set forth.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size,

shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

In a stove, a housing having a hinged cover, the lower surface of which is polished to form a reflecting surface, a pair of removable, superimposed heating elements and frames therefor positioned in said housing and capable of directing heat against said cover when said cover is in closed position, whereby said heat will be transmitted through said cover, by conduction, and to reflect infra-red rays from the under side of said cover when said cover is raised out of alignment with the top of said housing, and a plurality of pivoted dampers connected to the lower of said heating elements, whereby when said frame is moved outwardly from said housing, said dampers will be swung to open position to permit air circulation therethrough.

JAMES CASH.

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