Sept. 7, 1948. E. J. CHRISTENSEN 2,448,956

ELECTRIC PORTABLE STOVE

Filed Aug. 22, 1946

FIG. 1

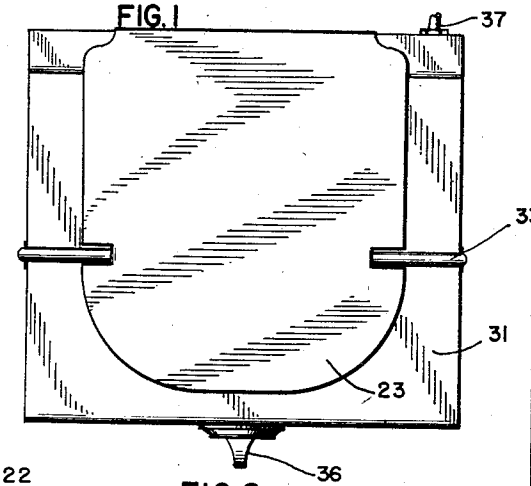


FIG. 2

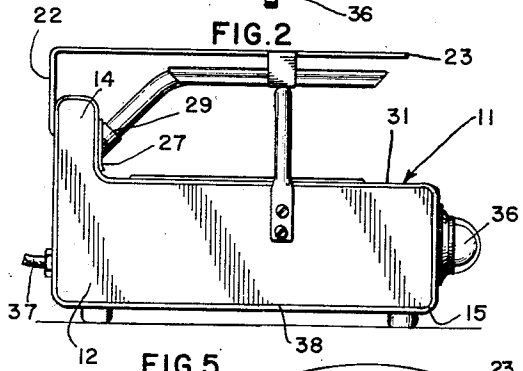


FIG. 4

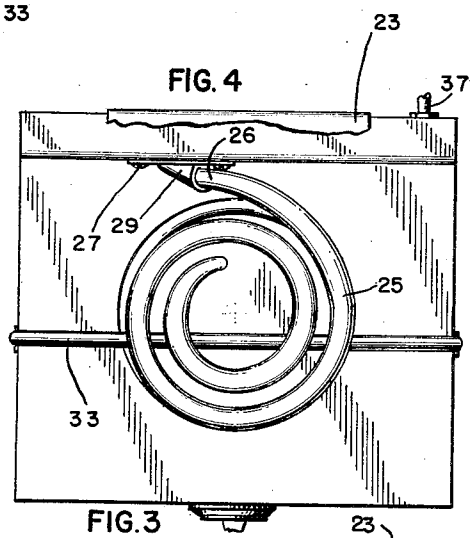


FIG. 3

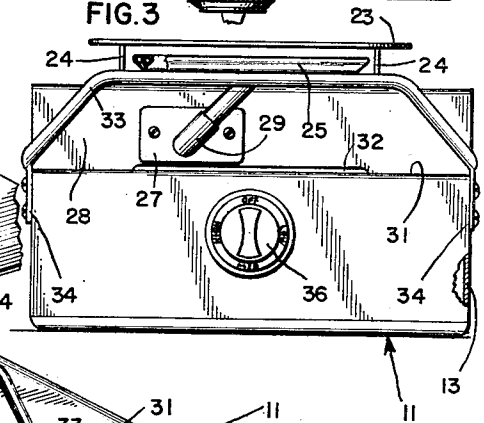
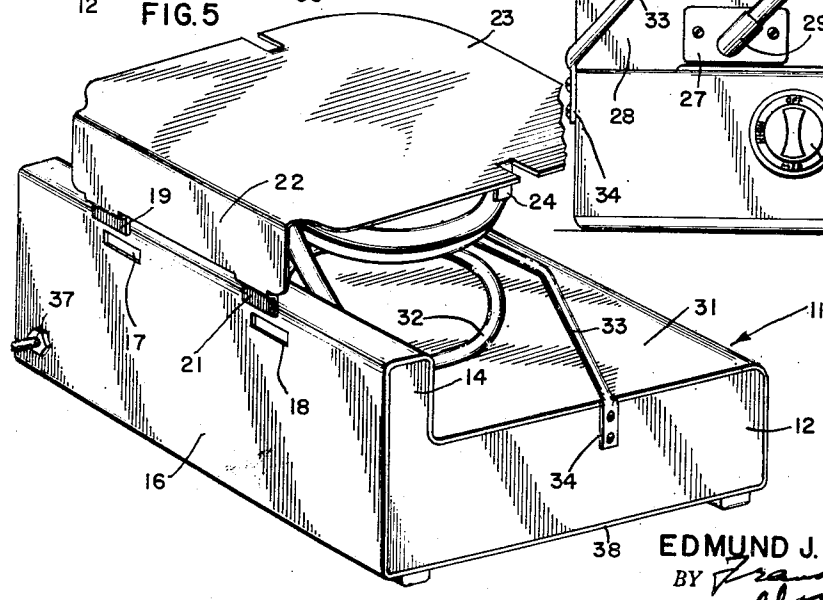


FIG. 5



INVENTOR.

EDMUND J. CHRISTENSEN

BY Frank B. Mallon

ATTORNEY

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ELECTRIC PORTABLE STOVE

Edmund J. Christensen, Chicago, Ill.

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2 Claims. (Cl. 219—37)

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The present invention relates to portable electric heating devices and is more particularly concerned with electric utility stoves which feature compactness in space and lightness in weight.

The present invention concerns itself particularly with the provision of a heating apparatus that may be easily packed and carried with traveling luggage, and one which will afford universal utility particularly to the itinerant user or small apartment or hotel dweller. It provides a single heating element of the rod type which is designed with resistance wires internally of a sheathing that may be connected variably under the control of a switch knob so as to afford three degrees of heat. The heating element is supported in cantilever manner from one of its ends and supplementarily upon a transverse truss rod. A table platform of the unit is spaced beneath the truss rod and heating coil at such a distance as to admit the insertion therebetween of downwardly heated utensils, such as broiling pans or grids. A shelf plate and heat reflector is supported from the table structure so as to be poised above the heating unit.

A principal object of the present invention is to provide in a single unitary structure having a minimum number of parts a multiple utility heating device which can perform several different operations simultaneously, and one which when not in use can be stored in a small luggage space.

For a more comprehensive understanding of this invention, reference is now made to the accompanying drawing and to the following detailed specification in which like reference characters designate corresponding parts throughout, and in which

Fig. 1 is a plan view of an apparatus embodying the salient features of the present invention,

Fig. 2 is a side elevational view thereof,

Fig. 3 is a front elevational view of the utility heating device featured in Figs. 1 and 2 having a minor portion broken away to illustrate cross-sectional contour,

Fig. 4 is a plan view taken similarly to the view designated Fig. 1, but with the reflector shelf broken away to reveal the involute curvature of the heating unit, and

Fig. 5 is an exploded perspective view taken from the rear showing the manner in which the latter element is inserted and withdrawable from the main frame of the heating apparatus.

Referring now more particularly to the details in the accompanying drawing, attention is directed to the referenced numeral 11 which indicates generally a rectangular sheet metal inclosure that forms the base of the stove. This portion of the apparatus is economically fabricated by forming two symmetrical side panels 12 and 13. Each side panel has a back bar projection 14, while an inclosure sheet of metal 15 perimetrically profiles the side elements 12 and 13. The assembly may be secured together in any of several manners such as by providing inwardly extending flanges to the side elements or panels 12 and 13 and by welding or riveting thereto the perimetrical element 15.

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In the back wall portion 16 of the perimetrical element 15, there are provided two openings or slits 17 and 18 in horizontal alignment and of predetermined portions so as to receive the bayonet insert lugs 19 and 21, which are extensions of and off-set from the back wall 22 of the reflector shelf 23.

The shelf 23 has integrally struck and downwardly bent therefrom two alignment lugs 24 which straddle the rod type heating unit generally designated 25. The latter is assembled in a manner well-known so that its contained resistance wires course throughout its length and terminate through a single end 26 of the heating element 25 and extend through a mounting bracket 27 which is secured to the inner face 28 of the back bar portion of the base structure. The bracket 27 has an integral horn 29 within which the terminal 26 is securely held.

The floor 31 of the base has in its center a formed seating ring 32, upon which may be supported any heating utensil such as broiling pan or grid apparatus. In order to provide supplementary support to the heat unit while yet insure against losses through conduction, a bail rod 33 bent in the manner best indicated in Fig. 3 is provided. The opposite extremities of this rod are flattened as at 34 and secured thereto by means of thread-cutting screws entering into the respective side plates 12 and 13. The horizontal portion of the bail 33 is preferably in contact with the convolutions of the heating element 25 and is disposed in spaced relation to and above the seating ring 32 so as to admit therebetween various types of broiling implements accessory to the instant apparatus.

In order to afford three degrees of heating, the resistance wires within the rod unit 25 are multiple and terminate in at least four terminal wires, which are connected in well-known manner to a switch designated 36. The latter is capable of four positions, including the off position

and three positions of heating. The main current supply lines preferably enter the back wall 16 as indicated at 37 and during manufacturing assembly all of the electrical connections are made and secured before the sheet 15 is made fast. Alternatively, the unit may be devised so that the bottom sheet 38 is a separate panel and removable by means of screws or other media so as to afford accessibility to the interior of the base 11 for purposes of repair or replacement.

While the present invention has been explained and described with reference to a particular embodiment of structure throughout its several details, it is to be understood, nevertheless, that numerous modifications and variations may be incorporated without departing from the essential spirit or scope thereof. It is not intended, therefore, that the invention is limited nor restricted to any of the details thus recited or illustrated, but instead to be afforded a latitude of interpretation as indicated in the hereunto appended claims.

The invention claimed is:

1. In a portable electric heating apparatus, a rectangular base structure affording a vertically projecting back bar, a rod type heating spiral having a plurality of heat elements and terminal wires extending into said back bar and obtaining electrical source connection therethrough, a supporting bail transverse of said base and anchored to side walls thereof in space relation to a floor panel of said base, and a reflector shelf having severable connection with the rear portion of said vertically projecting back bar and horizontally disposed above said heating element so as to reflect radiant heat downwardly while simultaneously affording lateral support to devices to be heated convectionally.

2. A utility stove electrically heated comprising, a base affording a back wall portion projecting vertically above a principal table surface, a heating element comprising a spiral rod-type member the external terminal of which is anchored in a support horn carried by said back wall portion, a wire bail secured at its ends to said base and affording underlying support to said heating element, and a shelf having a removable connection with said back wall portion comprising a horizontal part overlying said spiral heating element and including opposite downwardly extending projections straddling said heating element and resting for support upon said bail.

EDMUND J. CHRISTENSEN.

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