

Chapter 19

URN, ELECTRIC 2 GALLON G.E.C. TYPE HE33459, Mk. IV

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LEADING PARTICULARS

Urn, electric, (G.E.C. Type HE33459)	Ref. No. 5V 48
<i>Capacity</i>	2 galls
<i>Nominal voltage</i>	28 volts
<i>Electrical loading</i>	1 kW
<i>Heating time</i>	1¼ hr
<i>Indicator lamp filament 28V, 3.5W</i>	Ref. No. 5L/9951273

Introduction

1. The main purpose of this urn an external view of which is shown in Fig. 1 is to boil water for beverage making. A loose container which fits inside the top of the urn is provided for boiling eggs. This urn is fitted in the galley of certain transport aircraft.

DESCRIPTION

2. The inner and outer casing of this urn are of aluminium plate and the space between these are filled with fibre glass lagging. A metal ring is secured near the top of the inner casing and its purpose is to prevent water splashing over the side of the urn: this ring also serves

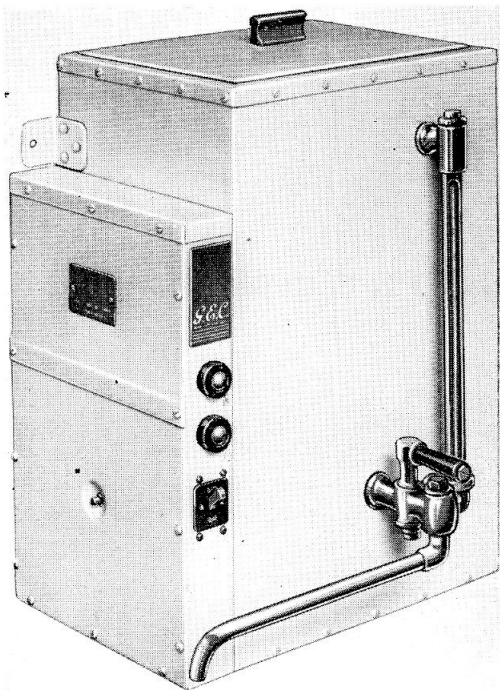


Fig. 1. Urn, external view

as a seating for the egg boiling container. A water level gauge glass is fitted on the front of the urn together with a tap which has a swivel extension outlet.

3. The urn is filled by the removal of the lid

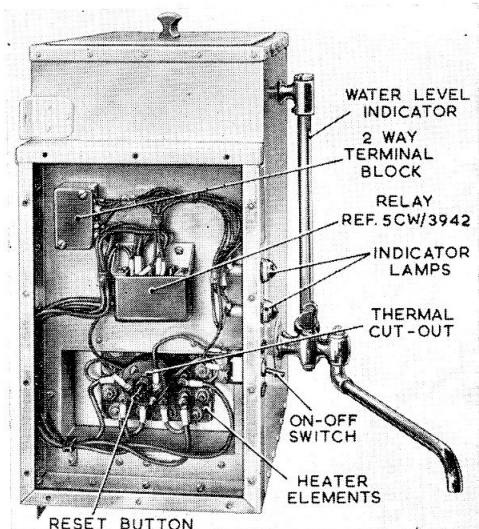


Fig. 2. Side view (covers removed)

and protection from boiling dry is provided by an automatic thermal cut-out. The reset button (fig. 2) for this cut-out is at the side of the urn. When this cut-out operates the urn must be allowed to cool before the cut-out resetting button is pressed.

4. The heater element consists of four 250 watt element loops which are switched through the relay contacts (fig. 3). The coil of this relay is controlled by a single pole ON/OFF switch through a thermal cut-out. Two lamps one in the coil circuit and the other connected to one of the relay contacts, indicate that the coil is energized and the relay contacts made.

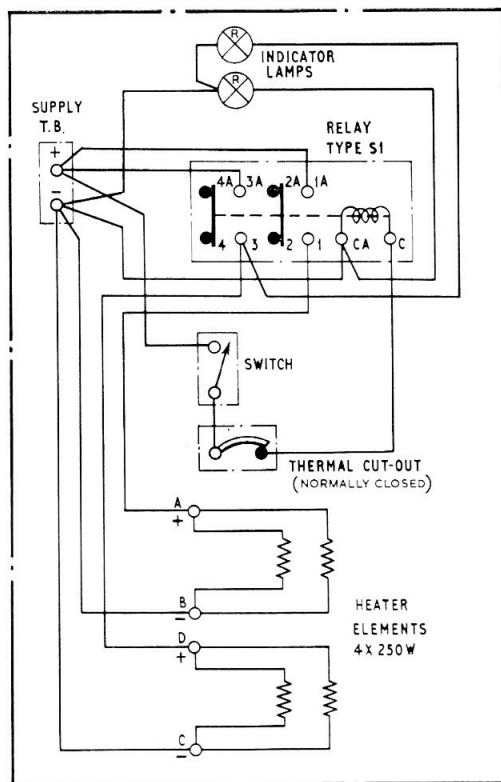


Fig. 3. Circuit diagram

5. In the event of the urn boiling dry it is protected from overheating by a thermal cut-out which opens the relay coil circuit thereby disconnecting the elements from the supply, at the same time both indicating lamps will be extinguished. As stated in para. 3, time must be allowed for the urn to cool and it should be refilled with water before the re-setting button is pressed.

RESTRICTED

6. Access to the electrical components are made by removing the side panels. A two-way terminal block is provided for connecting the urn to supply cables, and entry of these is through a rubber bushed hole at the rear of the electrical compartment. The urn is secured in position by four brackets located at the bottom and side of the urn.

SERVICING

7. Examine the tap and all gasket joints for signs of leaking. Clean the interior of the urn manually, fur lying under the elements should

be brushed away by hand. Sharp metal or harsh abrasives should not be used to remove scale. The relay should be examined in operation, and the contacts inspected for signs of burning or pitting. Individual elements can be tested for continuity and insulation resistance, which should be not less than 1 megohm. If the urn is overhauled and joints renewed it should be filled with water, the water boiled and the urn allowed to stand for one hour after which time all the joints should be examined for signs of leaking. The thermal cut-out should operate between 3 min. 45 sec. and 4 min. 30 sec. Always allow the urn to cool before resetting the thermal cut-out.