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Experiment : 7

Object :

To study the constructional principle of working electrical circuits and possible faults of following electrical appliances

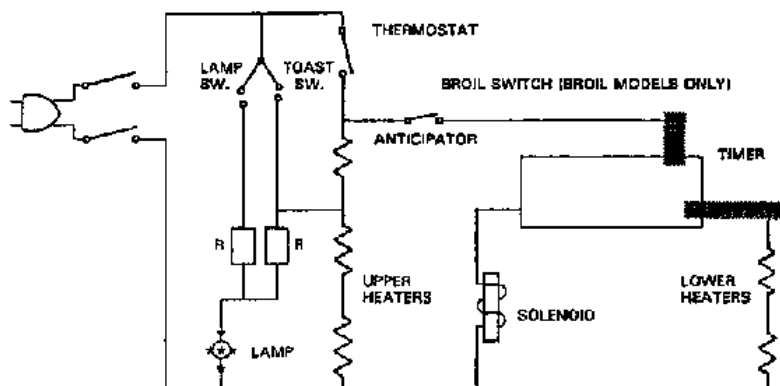
- 1 Sandwich Toaster
- 2 Pop-up Toaster

Apparatus required:

Insulated combination pliers (150 mm),
Screwdriver (150mm),
Connectors,
Insulated nose pliers (150mm),
Test lamp with testing leads of 2m each,
Insulating material mica pieces,
Porcelain beads porcelain cleats-flat and
Round as per requirement.

Theory :

These are of two types-> Non-automatic and automatic and are manufactured for testing the two slices. The automatic toasters consist of automatic service, controlling the testing and bread rising mechanism. When the testing is complete, the automation by a heating element controlled by a timer switch when the bimetal strip is overheated. It bends to a certain extent and breaks the circuit through a timer switch.



SCHEMATIC DIAGRAM

Possible Faults :

- 1) Open Circuit: - Means breakage in the element or burnt element, disconnection of elements ends at the terminals, breakage of wires in the plug top or connector.
- 2) Short Circuit: - Means touching of elements ends together, leakage of current due to broken clots.
- 3) Earth Fault: - Means any part of the element or elements ends touching the metal part of body of the toasters.
- 4) Broken cleats, broken beads, broken plug top or connector old mica comes under the other faults.

Result :

Sandwich toaster and Pop up toaster have been studied successfully.

Precautions :

- 1) Insulate yourself on the dry wood at the time of testing.

- 2) Do the testing in series of the supply to avoid the risk of failure of supply.
- 3) Never connect direct supply unless we are sure that there is no fault in the toaster to avoid the risk of failure of supply.