

Title (en)

Microwave oven's door opening and closing detection apparatus using photo-detecting sensor.

Title (de)

Apparat mit Photodetektor zur Feststellung des Öffnens und Schliessens der Tür eines Mikrowellenherdes.

Title (fr)

Appareil pour détecter l'ouverture et la fermeture d'une porte de four à micro-ondes, utilisant une sonde photo-déetective.

Publication

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Application

EP 91100007 A 19910102

Priority

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Abstract (en)

The invention relates to a microwave oven's door opening and closing detection apparatus using a photo-detecting sensor in order to detect a defect of a mechanical switch. It comprises a mechanical switch (20) for controlling a magnetron, a lever (5) actuated by a hook (2) attached to the door of the oven, a photo-detecting sensor (30) operating according to the lever (5) and a microprocessor receiving the output signals of the photo-detecting sensor (30) as well as the mechanical switch (20) and processing them for controlling the microwave oven by applying power to a transformer. It detects the state of the door by using the photo-detecting sensor (30) as well as the mechanical switch (20) and controls the microwave oven according to the state of the door by using the mounted microprocessor. <IMAGE>

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F24C 7/02; H05B 6/76

IPC 8 full level

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CPC (source: EP)

H05B 6/6417 (2013.01)

Citation (search report)

- [AD] US 4638137 A 19870120 - KAZUMI HIRAI [JP]
- [A] US 4504719 A 19850312 - TAYLOR JR BENSON T [US], et al
- [A] US 4511780 A 19850416 - OKAMURA YOSHIO [JP]

Cited by

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