

Title (en)
Operating mechanism of rotary electric component

Title (de)
Betätigungsmechanismus eines drehbaren elektrischen Bauteiles

Title (fr)
Mécanisme de commande d'un composant électrique rotatif

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Application
EP 98308697 A 19981023

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Abstract (en)
[origin: EP0917170A2] This invention describes an operation mechanism, in which a rotary electric component is operated by rotation of an operation knob whose position is rotatably restricted by a housing. This mechanism can maintain a satisfactory operational feel of the operation knob for a user, even though the rotary electric component, which is mounted beforehand on a printed circuit board, is fixed to the housing. In the mechanism, an operation knob includes a first operation member (9) and a second operation member (14), in which there are integrally formed: a cylindrical part (11) disposed rotatably in an opening (6) of the housing (4), four flexible members (12) extending from the inner peripheral surface of the cylindrical part (11) toward the center thereof, and a connecting shaft (13) extending vertically in the downward direction from the intersection of the flexible members (12); the second operation member (14) formed of synthetic resin is attached to the cylindrical part (11) by press-fitting. Then, a printed circuit board (1), on which a rotary switch (2) is mounted beforehand, is fixed to the housing (4), and an engaging part (13a) formed at the lower end of a connecting shaft (13) is inserted into an engaging hole (3a) formed on a rotation shaft (3) of the rotary switch (2), whereby the deviation between the center of the rotation shaft (3) and that of the connecting shaft (13) caused by mounting errors which occur at this time is absorbed by swinging of the connecting shaft (13), which accompanies deformations of the flexible members (12). <IMAGE>

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• [XY] DE 1951640 A1 19710708 - SIEMENS AG
• [Y] DE 3939715 A1 19910606 - ELEKTRA TAILFINGEN [DE]
• [YA] WO 9714159 A1 19970417 - SQUARE D CO [US]
• [Y] US 3324267 A 19670606 - EDELSON ROBERT B
• [A] GB 2130438 A 19840531 - BOSCH SIEMENS HAUSGERAETE

Cited by
DE10161539A1; CN104919706A; CN114046482A; FR2913143A1; EP1965400A1; DE10203509A1; DE10203509B4; US7550686B2; US8575501B2; EP1385076B1

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