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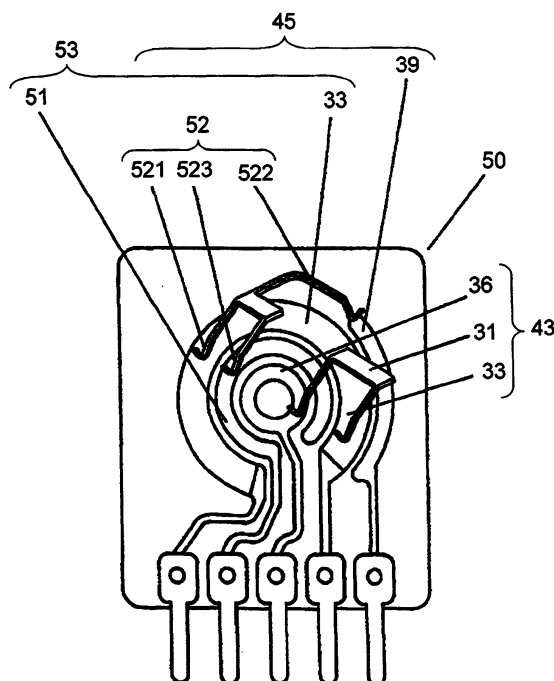
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(54) Rotary variable resistor and output regulator using the same

(57) A rotary variable resistor comprising a resistive film (33) formed on an insulating substrate (302), a current collecting conductive member (36) disposed in such a manner as to be concentric with the resistive film (33) and to be spatially isolated from the resistive film (33) and the lead members (34) thereof (33), a circular arc shaped auxiliary conductive member (39) formed in such a manner as to be concentric with the resistive film (33), and to be spatially isolated from the resistive film (33), the current collecting conductive member (36) and the lead members (34,37) of the patterns (33,36), also to cover a larger angular range than the angular opening of the resistive film (33), a first brush (31) made of an elastic metal plate and fixed to an operation shaft which is repeatedly rotatable, also having first contact portions (42) which respectively elastically contact to the resistive film (33) and to the current collecting conductive member (36), wherein the first brush (31) forms a first resistor unit (43) together with the resistive film (33) and the current collecting conductive member (36), and, a second brush (32) made of an elastic metal plate and fixed to the operation shaft in such a manner as to be electrically isolated from the first brush (31), also having second contact portions (44) which respectively elastically contact to the resistive film (33) and to the auxiliary conductive member (39) in the rotational angular range of the operation shaft, in which a predetermined output voltage is unobtainable from the first resistor unit (43), wherein the second brush (32) forms a second resistor unit (45) together with the resistor film (33) and the aux-

iliary conductive member (39). The above structure simplifies the pattern structure of a resistor board (30) and decreases the number of terminals, also simplify the production process.

FIG. 3





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EUROPEAN SEARCH REPORT

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EP 00 10 5001

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 29 October 2003	Examiner Lescop, E
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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