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## (54) Vacuum pump

(57) A vacuum pump has an oil housing (14), which defines a pump chamber (43) and an oil zone (331) adjacent to the pump chamber (43). A rotary shaft (19, 20) extends from the pump chamber (43) through the oil housing (14) and projects to the oil zone (331). A non-contact sealing element (67, 68, 72) is attached to the rotary shaft (19, 20) to integrally rotate with the rotary shaft (19, 20). The element (67, 68, 72) prevents oil from entering the pump chamber (43). The vacuum pump draws gas by operating a gas conveying body (23) in the pump chamber (43) through rotation of the rotary shaft (19, 20). When the rotary shaft (19, 20) shifts from an operation state to a stopped state, the pressure difference occurs between the pump chamber (43) and the oil zone (331). Rotation of the rotary shaft (19, 20) is controlled such that the pressure difference becomes maximum before the rotary shaft (19, 20) completely stops.

**Fig.1 (a)**

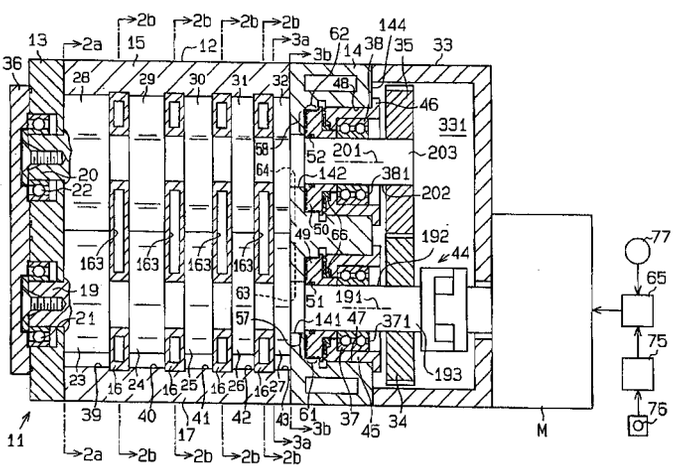


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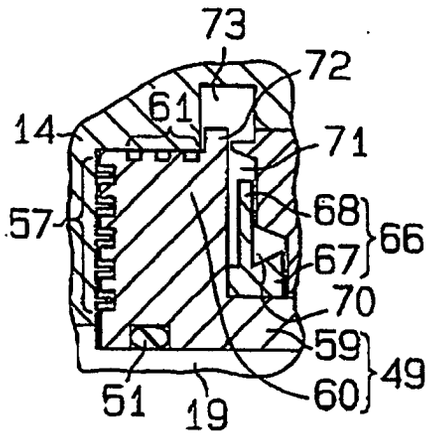
Fig.1 (b)



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# EUROPEAN SEARCH REPORT

Application Number
EP 02 02 3201

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F04C

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
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