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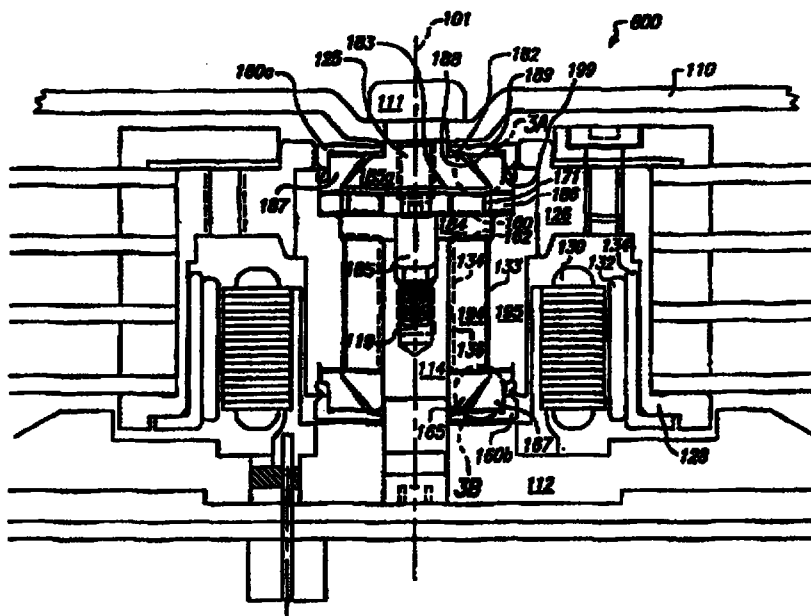
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| <b>(21) International Application Number:</b> PCT/US97/06683<br><b>(22) International Filing Date:</b> 23 April 1997 (23.04.97)<br><br><b>(30) Priority Data:</b><br>08/638,025                      26 April 1996 (26.04.96)                      US<br><br><b>(71) Applicants:</b> QUANTUM CORPORATION [US/US];<br>500 McCarthy Boulevard, Milpitas, CA 95035 (US).<br>MATSUSHITA-KOTOBUKI ELECTRONICS INDUSTRIES, LTD. [JP/JP]; 1220-I, Higashi-Ozu, Ozu City, Ehime 795 (JP).<br><br><b>(72) Inventors:</b> ZANG, Yan; 2046 Fieldcrest Drive, Milpitas, CA 95035 (US). HATCH, Michael, R.; 2163 Woodleaf Way, Mountain View, CA 94040 (US). MINAKUCHI, Shinichi; Matsushita Kotobuki Electronics Industries, Ltd., 1220-I, Higashi-Ozu, Ozu City, Ehime 795 (JP).<br><br><b>(74) Agents:</b> HARRISON, David, B. et al.; Quantum Corporation, 500 McCarthy Boulevard, Milpitas, CA 95035 (US). |           | <b>(81) Designated States:</b> AU, CA, CN, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).<br><br><b>Published</b><br><i>With international search report.</i> |

**(54) Title:** IMPROVED HYDRODYNAMIC BEARING UNIT



**(57) Abstract**

A self-contained hydrodynamic bearing unit is disclosed. Centrifugal capillary seals are angularly defined between an outwardly tapered outer surface of a top screw (111) and an inwardly tapered inner surface of an annular clamp ring (187) at the top of the bearing unit as well as between an outwardly tapered outer surface of a seal plate (165) and an inwardly tapered inner surface of an annular clamp ring (167) at the bottom of the bearing unit.