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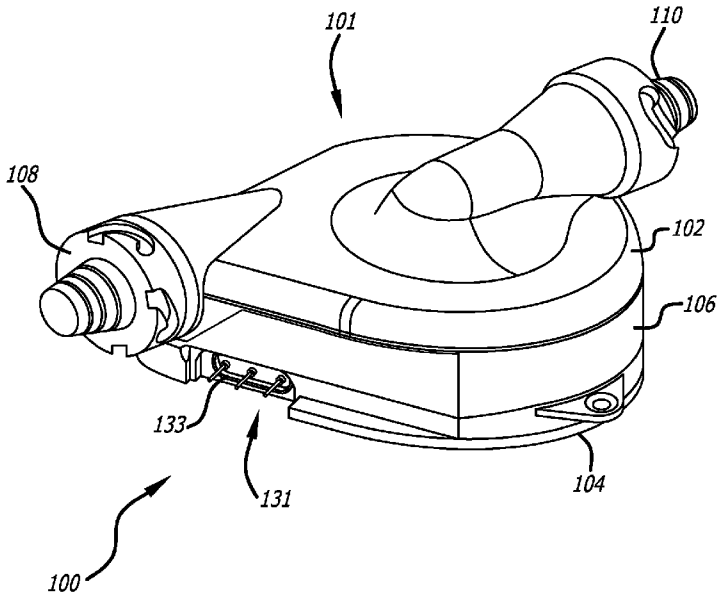
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(54) **Title:** ROTARY BLOOD PUMP



(57) **Abstract:** The present invention provides a rotary blood pump with both an attractive magnetic axial bearing and a hydrodynamic bearing. In one embodiment according to the present invention, a rotary pump includes an impeller assembly supported within a pump housing assembly by a magnetic axial bearing and a hydrodynamic bearing. The magnetic axial bearing includes at least two magnets oriented to attract each other. One magnet is positioned in the spindle of the pump housing while the other is disposed within the rotor assembly, proximate to the spindle. In this respect, the two magnets create an attractive axial force that at least partially maintains the relative axial position of the rotor assembly. The hydrodynamic bearing is formed between sloping surfaces that form tight clearances below the rotor assembly.

WO 2007/115222 A2