



(12) **United States Patent**
Ohara et al.

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(54) **FISHING REEL**
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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 110 days.

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(57) **ABSTRACT**
Various embodiments provide a fishing reel having a lightweight, compact and easy-to-assemble magnetic seal mechanism which allows greater freedom in material selection of the rotating member. A fishing reel according to one embodiment comprises a rotating body rotatably supported via a ball bearing and a magnetic seal mechanism for sealing the ball bearing. In one aspect, the magnetic seal mechanism comprises a magnet disposed in parallel with either a magnetic inner or outer ring of the ball bearing, and magnetic fluid disposed between the magnet and said inner or outer ring, magnetic fluid being retained by a magnetic circuit formed therebetween to seal space defined between the magnet and said inner or outer ring.

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See application file for complete search history.

11 Claims, 28 Drawing Sheets

