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(71) Applicant: GENERAL SIGNAL CORPORATION [US/US];
High Ridge Park, Stamford, CT 06904 (US).(72) Inventors: BARKER, James, E.; 5795 N.E. River Road,
Sauk Rapids, MN 56379 (US). NEU, Steven, K.; 25056
Mary Street, Paynesville, MN 56362 (US). LAWRENCE,
LaVern, Allen; Apartment 102, 1101 1st Avenue N., Sauk
Rapids, MN 56379 (US).(74) Agents: GALLOWAY, Peter, D.; Ladas & Parry, 26 West 61st
Street, New York, NY 10023 (US) et al.(81) Designated States: AU, CA, CN, JP, SG, European patent (AT,
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(54) Title: BI-DIRECTIONAL VALVE SEAL MECHANISM

(57) Abstract

A valve (1) comprising a valve body (13) having a centrally disposed aperture (15), an annular recess (27) disposed about an outer circumference of the aperture, and a moment arm (25) disposed between the annular recessed portion and the aperture; a rotatable valve shaft (9); a valve disc (17) with a convex-shaped outer edge disposed about a circumference of the valve disc; an annular seating ring (21) having a serpentine configuration, a first end portion and a second end portion, wherein the first end portion has a concave-shaped surface which is in substantially full contact with an adjacent convex-shaped outer edge of the valve body when the valve disc is in the closed position in the aperture; and an annular seating ring retainer (23) comprising an annular recess, and a moment arm disposed between the annular recess of the retainer and the aperture.

