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GRANTED

(IN511315)
A liquid volume regulating apparatus comprising a novel valve assembly

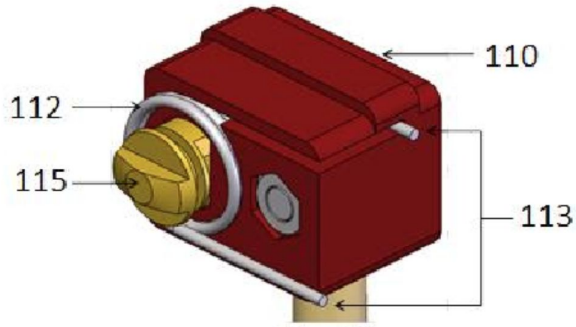

Fig. 3A

NEED

Over 30% of water in Indian storage tanks overflows or is wasted due to faulty float valves and poor flow control. This leads to structural damage, high water bills, and daily inconvenience. But what if there was a valve that reacted with precise timing—without sensors or electronics?

TECHNOLOGY OVERVIEW

This invention offers a passive mechanical valve system for regulating water volume in tanks using an L-port ball valve actuated by a torsional spring and float. Its compact design eliminates electrical parts, improves flow control, and extends system life by reducing wear and leakage in conventional flush and tank mechanisms.

TECHNOLOGY KEY FEATURES

45° rotational L-port valve; float-operated mechanical trigger; torsional spring-based control; leak-proof seating rings; passive flow switching; no electrical components; compatible with existing tanks; prevents overflow; durable; reduces maintenance needs.

Read more here

MARKET ANALYSIS

Indian water management systems market to reach $5.2B by 2033 with 9.4% CAGR. Demand driven by smart cities, housing projects, and plumbing retrofits. Global valve market forecasted at $116.1B by 2033 (7.1% CAGR). (Sources: IMARC, Fortune Business Insights)

Target Industries

, Sanitary hardware OEMs; mechanical valve system integrators; infrastructure firms working in water automation, smart plumbing, and household or commercial plumbing installations.

AT A GLANCE

- SDG 6 (Clean Water and Sanitation), SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities and Communities)

Technology is available for licensing/ co-development.

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