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[54] **FREE-FLOW BUOYANCY CHECK VALVE FOR CONTROLLING FLOW OF TEMPERATURE CONTROL FLUID FROM AN OVERFLOW BOTTLE**

[75] Inventor: **Thomas J. Hollis**, 5 Roxbury Dr., Medford, N.J. 08055

[73] Assignee: **Thomas J. Hollis**, Medford, N.J.

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[52] **U.S. Cl.** **123/41.08**; 123/41.1

[58] **Field of Search** 123/41.02, 41.08, 123/41.09, 41.1, 41.44

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Primary Examiner—David A. Okonsky

Attorney, Agent, or Firm—Seidel Gonda Lavorgna & Monaco, PC

[57] **ABSTRACT**

A valve for controlling flow of temperature control fluid between a radiator fluid overflow container and a water pump. The valve includes a housing which is in communication with the fluid overflow container and adapted to receive a flow of temperature control fluid therefrom. The housing has a chamber formed in it for channeling a flow of temperature control fluid. The housing is also in communication with the water pump and adapted to channel a flow of temperature control fluid between the chamber and the water pump. In one embodiment, the valve includes a cap attached to the housing and having a channel formed in it which conducts fluid between the fluid overflow container and the valve chamber. A ball is slidably disposed within the valve chamber and is adapted to seal the channel in the cap to prevent fluid flow when the valve housing receives a flow of pressurized fluid from the water pump. The ball is also adapted to seal the housing to prevent flow to the water pump when the fluid overflow container has a low level of fluid contained therein. A spring is located between the ball and the cap and biases the ball away from sealing the channel.

18 Claims, 11 Drawing Sheets