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**Van Buskirk**

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(54) **ORIFICE PLATES**

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**F15D 1/02** (2006.01)  
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- (52) **U.S. Cl.**  
CPC ..... **F15D 1/025** (2013.01); **F15D 1/001** (2013.01); **G01F 1/42** (2013.01)

- (58) **Field of Classification Search**  
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See application file for complete search history.

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(57) **ABSTRACT**

Implementations of an orifice plate used to regulate flow through a conduit are provided. In some implementations, a balanced restriction orifice (BRO) plate configured to maximize pressure loss is provided. In some implementations, the BRO plate may be configured to limit pipe and plate noise, erosion, cavitation, shear stress, etc. while maximizing pressure loss, and limiting flow to required values. In some implementations, openings through a BRO plate may be configured to satisfy the Velocity-Head Pressure-Loss equation:  $\Delta P = k_p V^2 / 2G_c$ .

**16 Claims, 12 Drawing Sheets**

