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## (54) Title: INTEGRATED BALLOON CATHETER INFLATION SYSTEM

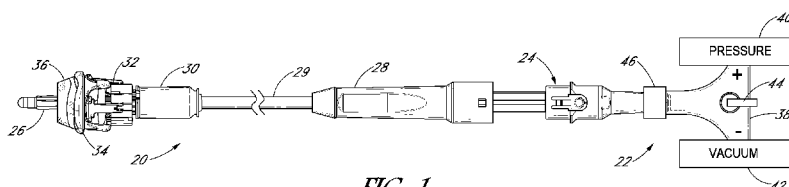


FIG. 1

(57) Abstract: An inflation system having two pressure vessels integrated into a balloon catheter. A pressurized chamber and a vacuum chamber are integrally attached to proximal end of the balloon catheter and activated by a common valve or switch. Pressure or vacuum is selectively transmitted to the balloon depending on the valve/switch position. The working fluid may be air, or a combination of air and saline with an intermediate piston/cylinder assembly. The balloon catheter may be a part of a heart valve delivery system with a balloon-expandable heart valve crimped onto the balloon.