

A BALLONET SYSTEM FOR A LIGHTER-THAN-AIR VEHICLE**ABSTRACT**

The invention is a ballonet system for a lighter-than-air-vehicle, the vehicle having a lift producing gasbag and a longitudinal, vertical and lateral axis. In detail, the ballonet system includes a plurality of ballonets (34A) located within the gasbag (12) positioned along the longitudinal axis (18) and on each side of the vertical axis (19) of the vehicle (10). Each of the ballonets (34A) include a flexible sheet (40) joined at its periphery (43) thereof to a portion of the wall (44) of the gasbag. A ballonet pressurization system (45) is coupled to each ballonet (34A) for pressurizing them with air that includes the portion of the wall (44) of the gasbag (12) forming the ballonet having a plurality of holes (54) therethrough. A manifold (60) having an inlet port (64) is joined to the wall covering the holes (54) therein and is adapted to diffuse the pressurized air entering therein. Also included is at least one fan (46) having an inlet port (50) coupled to ambient atmosphere and an outlet port (51) coupled to the inlet port (64) of the manifold (60) for providing pressurized air to the interior thereof. A check valve (52) located in the outlet port (51) of the fan (46) is provided for preventing air from flowing from the interior of the manifold out the inlet port of the fan. A ballonet venting system (70) is included for venting the interior of the ballonet to ambient atmosphere.

