ABSTRACT

IMPROVEMENTS IN OR RELATING TO DEFORMABLE NON-ROUND MEMBRANE ASSEMBLIES

A deformable membrane assembly comprises an at least partially flexible fluid-filled envelope, one wall of which is formed by an elastic membrane that is held around its edge by a resiliently bendable supporting ring, a fixed support for the envelope and selectively operable means for causing relative movement between the supporting ring and the support for adjusting the pressure of the fluid in the envelope, thereby to cause the membrane to deform. The bending stiffness of the ring varies round the ring such that upon deformation of the membrane the ring bends variably to control the shape of the membrane to a predefined form. The moving means comprise a plurality of ring-engaging members that are arranged to apply a force to the ring at spaced control points. There are at least three control points, and there is a control point at or proximate each point on the ring where the profile of the ring that is needed to produce the predefined form upon deformation of the membrane exhibits a turning point in the direction of the force applied at the control point between two adjacent points where the profile of the ring exhibits an inflection point or a turning point in the opposite direction.

FIG. 8

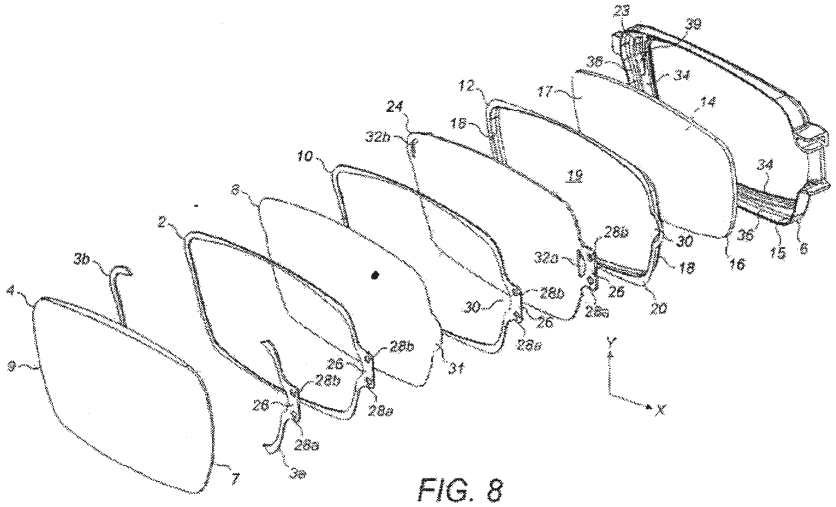

FIG. 8