CLAIMS

1. A cushion for a respiratory interface assembly, the cushion comprising:

a rim configured for attachment to a housing of the respiratory interface assembly;

a resilient side wall extending from the rim;

a resilient end wall extending inwardly from the resilient side wall, the resilient end wall defining a sealing surface to seal with a user's face and an opening to receive the nose and/or mouth of the user, in use; and

a pair of elongate thickened portions, the pair of elongate thickened portions each extending from a first end at or adjacent or near to respective lower corners of the resilient side wall at or adjacent or near to the rim, to a second end at or adjacent or near to the resilient end wall on respective opposing sides of the opening.

2. The cushion of Claim 1, wherein the pair of elongate thickened portions diverge from the first ends towards respective intermediate portions of the pair of elongate thickened portions.

3. The cushion of Claim 1 or 2, wherein the pair of elongate thickened portions converge from respective intermediate portions of the pair of elongate thickened portions towards the second ends.

4. The cushion of any one of Claims 1 to 3, wherein each of the pair of elongate thickened portions are curved in a direction substantially normal to their respective major surfaces.

5. The cushion of any one of claims 1 to 4, wherein the pair of elongate thickened portions extend into an interior of the cushion.

6. The cushion of any one of claims 1 to 5, wherein a thickness of the pair of elongate thickened portions, relative to adjacent portions of the resilient side wall or the resilient end wall, is uniform along a length of the pair of elongate thickened portions.

7. The cushion of any one of claims 1 to 6, wherein portions of the cushion comprising the pair of elongate thickened portions are thicker than adjacent portions of the resilient side wall and/or the resilient end wall by between about 0.1 and 0.6 mm, preferably by between about 0.1 and 0.3 mm, and more preferably by about 0.2 mm.

8. The cushion of any one of claims 1 to 5, wherein portions of the cushion comprising the pair of elongate thickened portions have an absolute thickness which is substantially uniform along the length of the pair of elongate thickened portions, and preferably about 1.2 mm thick.

9. The cushion of any one of claims 1 to 8, wherein the pair of elongate thickened portions curve in an upward direction at intermediate portions of the pair of elongate thickened portions at a transition of the cushion from the resilient side wall to the resilient end wall.

10. The cushion of any one of claims 1 to 9, wherein the elongate thickened portions each form a substantial plane curve.

11. The cushion of any one of claims 1 to 10, wherein the pair of elongate thickened portions extend substantially rearwardly before curving upwardly and terminating at the second end in the resilient end wall adjacent respective cheek surfaces of the sealing surface.

12. The cushion of any one of claims 1 to 11, comprising a reinforcement in the form of at least one thickened band extending inwardly from an interior surface of the cushion, the thickened band positioned along the resilient side wall and comprising a lower region on each lateral side of the cushion and a connecting portion that extends between the lower regions by extending around an upper portion of the interior surface of the cushion.

13. The cushion of claim 12, wherein the pair of elongate thickened portions terminate at the second ends vertically above, and horizontally spaced from, the respective lower regions of the thickened band.

14. The cushion of any one of claims 1 to 13, comprising lower thickened corners at or adjacent the respective lower corners of the resilient side wall, wherein the resilient side wall tapers over a relatively short distance upwardly from the lower thickened corners and tapers over a relatively longer distance downwardly from the lower thickened corners, and the pair of elongate thickened portions extend under, and terminate at the first ends vertically below and spaced from, the respective lower thickened corners.

15. The cushion of any one of claims 1 to 14, wherein a minimum spacing between the pair of elongate thickened portions and the opening is at least 4 mm, preferably between about 5 and 6 mm, and more preferably between about 5.2 and 5.5 mm.

16. The cushion of any one of claims 1 to 15, wherein the first ends are narrower than the second ends of the pair of elongate thickened portions, preferably by at least 50%, more preferably by between 50% and 60%, and yet more preferably by about 54%.

17. The cushion of any one of claims 1 to 16, wherein an upper portion of the cushion is configured to pivot or hinge relative to a lower portion of the cushion about a hinge axis or hinge region to allow pivotal movement of the upper portion of the cushion in a forward direction.

18. A respiratory interface assembly for a respiratory therapy system supplying breathing gases to a user for positive airway pressure or non-invasive ventilation therapy, the respiratory interface assembly comprising:

the cushion of any one of claims 1 to 17;

a relatively rigid housing, wherein the cushion is permanently connected or removably connectable to the housing;

a frame, wherein the housing is configured to interface with the frame; and

a headgear arrangement configured to be coupled to the frame to secure the respiratory interface assembly in place on the user.