

WHAT IS CLAIMED IS:

1. A headgear for use with a respiratory mask, comprising:
 - a back panel having a trapezoidal shape comprising a top edge, a bottom edge and lateral edges that connect the top edge to the bottom edge,
 - the back panel formed from two layers of 3D fabric folded from a sheet of 3D fabric to have a folded edge,
 - the folded edge forming the bottom edge of the back panel, having a first width W_1 , which extends across the back of a user's neck in use,
 - a sewn edge forming the top edge of the back panel, having a second width W_2 , the first width W_1 being less than the second width W_2 , the sewn edge having a seam allowance having free ends extending radially inwardly within the interior of the back panel,
 - the lateral edges of the back panel being linear towards the folded edge and convex towards the sewn edge,
 - the distance between the lateral edges of the convex region defining a third width W_3 , which is the widest point of the back panel, and
 - the corners of the free ends of the seam allowance defining a fourth width W_4 , the fourth width W_4 being less than the third width W_3 such that the seam allowance does not extend beyond the lateral edges of the back panel; and
 - perimeter portions, formed from a foam laminate material, stitched to the respective lateral edges of the back panel along a join in one of the two layers of the 3D fabric.
2. A headgear as claimed in claim 1, wherein the top edge is linear or curved.
3. A headgear as claimed in either of claim 1 or 2, wherein the bottom edge is linear or curved.
4. A headgear as claimed in any one of the preceding claims, wherein the top edge is positioned slightly below the user's occipital lobe in use.
5. A headgear as claimed in any one of the preceding claims, wherein the back panel is symmetrical across a vertical centreline.

6. A headgear as claimed in any one of the preceding claims, wherein the bottom edge of the back panel also forms a bottom edge of the headgear.

7. A headgear as claimed in any one of the preceding claims, wherein the perimeter portions extend around the two layers of 3D fabric from one end of the folded edge to the other end of the folded edge.

8. A headgear as claimed in any one of the preceding claims, wherein the material of the perimeter portions extends into and forms at least part of a strap of the headgear.

9. A headgear as claimed in any one of the preceding claims, wherein the two layers of 3D fabric are joined together by bonding, stitching or welding at other edges of the back panel.

10. A headgear as claimed in claim 9, wherein the two layers of 3D fabric are joined together by bonding, stitching or welding at all other edges of the back panel.

11. A headgear as claimed in any one of the preceding claims, wherein the 3D fabric has a right side and a wrong side, and is folded so that the wrong side of the fabric is on the inside of the back panel and the right side of the fabric on the outside of the back panel.

12. A headgear as claimed in any one of the preceding claims, wherein the join is located inside the two layers of 3D fabric.

13. A headgear as claimed in any one of the preceding claims, wherein one or more edges of the two layers of 3D fabric other than the folded edge are welded to a portion of the headgear,

wherein one of the two layers of 3D fabric overlaps an edge of the other one of the two layers of 3D fabric so that the weld comprises:

a first region formed from both of the two layers of 3D fabric and the portion of the headgear, and

a second region formed from one of the two layers of 3D fabric and the portion of the headgear.

14. A headgear as claimed in any one of the preceding claims, wherein the 3D fabric is a 3D spacer fabric.