CLAIMS

~~1. Positioning and stabilising structure, comprising:~~

~~at least one strap including at least two back straps; and~~

~~a split region defined between the at least two back straps;~~

~~wherein each of the at least two back straps are symmetrical and non-independently adjustable such that the at least two back straps naturally center on respective sides of the crown of the head of a user, and~~

~~wherein the at least two back straps converge to form a side strap portion at respective ends, each side strap portion configured to receive a rigidiser arm.~~

~~2. Positioning and stabilising structure according to claim 1, further comprising at least one rigidiser arm inserted within a portion of at least one strap.~~

~~3~~1. A ~~user~~ patient interface ~~system~~ for sealed delivery of a flow of air at a continuously positive pressure with respect to ambient air pressure to an entrance to the patient's airways including at least entrance of a patient's nares, wherein the patient interface is configured to maintain a therapy pressure in a range of about 4 cmH_2O to about 30 cmH_2O above ambient air pressure in use, throughout the patient's respiratory cycle, while the patient is sleeping, to ameliorate sleep disordered breathing, the patient interface comprising:

a positioning and stabilising structure, comprising:

at least one strap including at least two back straps;

a split region defined between the at least two back straps; and

a rigidiser arm configured to be inserted within a portion of a corresponding one of the at least one strap ~~according to claim 1 or 2~~; and

a ~~user interface~~ seal-forming structure configured to provide the flow of air to the entrance to the patient's airways, the seal-forming structure comprising any one from the group consisting of: a nasal cannula, nasal prongs and a respiratory mask covering nose and/or mouth of a patient,~~wearer~~, ~~to a user's face.~~

wherein each of the at least two back straps are symmetrical and non-independently adjustable such that the at least two back straps naturally center on respective sides of the crown of the head of the patient, and

wherein the at least two back straps converge to form a side strap portion at respective ends, each side strap portion configured to receive the rigidiser arm.

2. A patient interface according to claim 1, wherein the at least one strap comprises a warp-knitted material.

3. A patient interface according to claim 1, wherein the at least one strap comprises a woven material.

4. A patient interface according to any one of claims 1 to 3, further comprising a split region defined between the at least two back straps.

5. A patient interface according to claim 4, wherein the split region initiates at a distal end of each of the at least two back straps.

6. A patient interface according to claim 5, wherein each distal end comprises a reinforced portion adjacent to the split region.

7. A patient interface according to any one of claims 1 to 6, wherein the at least one strap is more stretchable along its longitudinal axis than its lateral axis.

8. A patient interface according to any one of claims 1 to 7, wherein the strap includes at least one opening that is located at a proximal end of each side strap portion, the at least one opening being shaped and dimensioned to receive the rigidiser arm into the side strap portion.

49. ~~Positioning and stabilising~~ A patient interface for sealed delivery of a flow of air at a continuously positive pressure with respect to ambient air pressure to an entrance to the patient's airways including at least entrance of a patient's nares, wherein the patient interface is configured to maintain a therapy pressure in a range of about 4 cmH_2O to about 30 cmH_2O above ambient air pressure in use, throughout the patient's respiratory cycle, while the patient is sleeping, to ameliorate sleep disordered breathing~~structure~~, the patient interface comprising:

a seal-forming structure configured to provide the flow of air to the entrance to the patient's airways, the seal-forming structure comprising any one from the group consisting of: a nasal cannula, nasal prongs, and a respiratory mask covering nose and/or mouth of a patient,

a positioning and stabilising structure, comprising:

a pair of rigidiser arms;

~~at least one strap including:~~

a pair of side straps, each of the side straps including a hollow sleeve for receiving a corresponding one of the rigidiser arms and an opening for receiving the rigidiser arm into the sleeve; and

a pair of back straps positioned between each of the pair of side straps, the pair of back straps configured to pass behind a user's head,

~~a hollow sleeve for receiving a rigid, elongate component, and~~

~~at least one opening, for receiving the rigid, elongate component into the sleeve,~~

wherein the pair of side straps and the pair of back straps ~~are~~ comprise a unitary piece of material.

~~5~~10. A patient interface ~~Positioning and stabilising structure~~ according to claim 49, wherein the unitary piece of material ~~at least one strap~~ comprises a warp-knitted material.

~~6~~11. A patient interface ~~Positioning and stabilising structure~~ according to claim 49, wherein the unitary piece of material ~~at least one strap~~ comprises a woven material.

~~7~~12. A patient interface ~~Positioning and stabilising structure~~ according to any one of claims 49 to ~~6~~11, further comprising a split region defined between the pair of back straps.

~~8~~13. A patient interface ~~Positioning and stabilising structure~~ according to claim ~~7~~12, wherein the split region initiates at a distal end of each of the pair of back straps.

914. A patient interface ~~Positioning and stabilising structure~~ according to claim 813, wherein each distal end comprises a reinforced portion adjacent to the split region.

~~10~~15. A patient interface ~~Positioning and stabilising structure~~ according to any one of claims 4 ~~to~~ 9 to 14, wherein the at least one strap is more stretchable along its longitudinal axis than its lateral axis.

~~11~~16. A patient interface ~~Positioning and stabilising structure~~ according to any one of claims 49 to ~~10~~15, wherein the at least one opening is located at a proximal end of each of the pair of side straps~~, the at least one opening being shaped and dimensioned to receive an insertion of the rigid, elongate component into the sleeve~~.

~~12~~17. A patient interface for scaled delivery of a flow of air at a continuously positive pressure with respect to ambient air pressure to an entrance to the patient's airways including at least entrance of a patient's nares, wherein the patient interface is configured to maintain a therapy pressure in a range of about 4 cmH_2O to about 30 cmH_2O above ambient air pressure in use, throughout the patient's respiratory cycle, while the patient is sleeping, to ameliorate sleep disorder breathing~~Positioning and stabilising structure~~, the patient interface comprising:

a positioning and stabilizing structure, comprising:

a strap including at least two back straps, said at least two back straps being adjustably separable to adjust a tension force of the ~~at least one~~ strap~~,~~; and

a rigidiser arm configured to be inserted within a portion of the strap; and

a seal-forming structure configured to provide the flow of air to the entrance to the patient's airways, the seal-forming structure comprising any one from the group consisting of: a nasal cannula, nasal prongs and a respiratory mask covering nose and/or mouth of the patient,

wherein the tension force of the strap is adjustable ~~only~~ by varying the distance between said at least two back straps.

18. A patient interface according to claim 17, wherein the strap comprises a warp-knitted material.

19. A patient interface according to claim 17, wherein the strap comprises a woven material.

20. A patient interface according to any one of claims 17 to 19, further comprising a split region defined between the at least two back straps.

21. A patient interface according to claim 20, wherein the split region initiates at a distal end of each of the at least two back straps.

22. A patient interface according to claim 21, wherein each distal end comprises a reinforced portion adjacent to the split region.

23. A patient interface according to any one of claims 17 to 22, wherein the strap is more stretchable along its longitudinal axis than its lateral axis.

PATIENT INTERFACE AND METHOD FOR MAKING SAME

ABSTRACT

A patient interface for delivery of a supply of pressurised air or breathable gas to an entrance of a patient's airways comprising: a cushion member that includes a retaining structure and a seal-forming structure permanently connected to the retaining structure; a frame member attachable to the retaining structure; and a positioning and stabilising structure attachable to the frame member.

Fig. 75