A HEADREST SUPPORT ASSEMBLY

FIELD OF INVENTION

[0001] The present invention relates broadly, but not exclusively, to a headrest support assembly and methods of manufacturing and using the same.

BACKGROUND

[0002] A typical seat headrest, such as an aircraft seat headrest, may cater to people of different heights by using sliding mechanisms, such as a rail and track system, a guided rail or a guided rod system, that allow the headrest to travel vertically at a fixed distance. However, the fixed distance of these systems are limited due to dimensional constraints of the seat and the sliding mechanism. In order to provide a wider range of people with different heights, a conventional solution may be to increase the vertical distance by lengthening the rail and track system, the guided rail or the guided rod system.

[0003] However, increasing the length of the track or rails of sliding mechanisms may not be practical, especially for shorter users, as having longer sliding mechanisms may add weight to the headrest and seat. In addition, the track, rails or rod may impede the comfort of the user and the aesthetics of the seat may be greatly reduced.

[0004] Accordingly, a need exists to provide a headrest support assembly that seeks to address some of the above problems.

SUMMARY

[0005] According to a first aspect of the present invention, there is provided a headrest support assembly comprising: a hinge member connectable to a seatback; and a chassis pivotably mounted to the hinge member; wherein the chassis is pivotable between a first position in which the chassis is generally higher than the hinge

member and a second position in which the chassis is generally lower than the hinge member, and wherein the chassis comprises a rectangular plate comprising two horizontal edges and two side edges, and wherein the chassis is pivotably mounted to the hinge member along a horizontal edge of the rectangular plate.

[0006]

[0007] The headrest support assembly may further include first and second side plates each pivotally mounted to the rectangular plate along a respective side edge of the rectangular plate.

[0008] The headrest support may further include a cushion member removably attached to the chassis, wherein, relative to a forward direction of the seatback, a profile of the cushion member in the first position is substantially the same as a profile of the cushion member in the second position.

[0009] The hinge member may be slidable relative to a guide extending along a height direction of the seatback.

[0010] A seatback comprising the headrest support assembly as disclosed in the first aspect.

[0011] According to a second aspect of the present invention, there is provided a method of manufacturing a headrest support assembly, the method comprising: connecting a hinge member to a seatback; and pivotably mounting a chassis to the hinge member such that the chassis is pivotable between a first position in which the chassis is generally higher than the hinge member and a second position in which the chassis is generally lower than the hinge member, wherein the chassis comprises a rectangular plate comprising two horizontal edges and two side edges, and wherein pivotably mounting the chassis to the hinge member comprises mounting along a horizontal edge of the rectangular plate.

[0012]

[0013] The method may further include pivotally mounting first and second side plates to the rectangular plate each along a respective side edge of the rectangular plate.

[0014] The method may further include removably attaching a cushion member to the chassis such that relative to a forward direction of the seatback, a profile of the

cushion member in the first position is substantially the same as a profile of the cushion member in the second position.

[0015] The step of connecting the hinge member to the seatback may include connecting the hinge member to a guide extending along a height direction of the seatback such that the hinge member is slidable relative to the guide.

[0016] According to a third aspect of the present invention, there is provided a height adjustment method for a headrest support assembly, the method comprising: providing the headrest support assembly as disclosed in the first aspect; sliding the hinge member of the headrest support assembly relative to a guide extending along a height direction of a seatback to a selected height; and pivoting the chassis of the headrest support assembly to either the first position in which the chassis is generally higher than the hinge member or the second position in which the chassis is generally lower than the hinge member.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:

[0018] Fig. 1 shows a perspective view of a headrest support assembly, according to an example embodiment.

[0019] Fig. 2A shows a perspective view of the headrest support assembly of Fig. 1 with the chassis at a first position, according to an example embodiment.

[0020] Fig. 2B shows a perspective view of the headrest support assembly of Fig. 1 with the chassis at a second position, according to an example embodiment.

[0021] Fig. 3A shows a perspective view of the headrest support assembly of Fig. 1 with the first and second side plates pivoted forward of the chassis, according to an example embodiment.

CLAIMS

1. A headrest support assembly comprising:

a hinge member connectable to a seatback; and

a chassis pivotably mounted to the hinge member;

wherein the chassis is pivotable between a first position in which the chassis is generally higher than the hinge member and a second position in which the chassis is generally lower than the hinge member, and

wherein the chassis comprises a rectangular plate comprising two horizontal edges and two side edges, and wherein the chassis is pivotably mounted to the hinge member along a horizontal edge of the rectangular plate.

2. The headrest support assembly as claimed in claim 1, further comprising first and second side plates each pivotably mounted to the rectangular plate along a respective side edge of the rectangular plate.

3. The headrest support assembly as claimed in claim 1 or 2, further comprising a cushion member removably attached to the chassis, wherein, relative to a forward direction of the seatback, a profile of the cushion member in the first position is substantially the same as a profile of the cushion member in the second position.

4. The headrest support assembly as claimed in any one of the preceding claims, wherein the hinge member is slidable relative to a guide extending along a height direction of the seatback.

5. A seatback comprising the headrest support assembly as claimed in any one of the preceding claims.

6. A method of manufacturing a headrest support assembly, the method comprising:

connecting a hinge member to a seatback; and

pivotably mounting a chassis to the hinge member such that the chassis is pivotable between a first position in which the chassis is generally higher than the hinge member and a second position in which the chassis is generally lower than the hinge member,

wherein the chassis comprises a rectangular plate comprising two horizontal edges and two side edges, and wherein pivotably mounting the chassis

to the hinge member comprises mounting along a horizontal edge of the rectangular plate.

7. The method as claimed in claim 6, further comprising pivotably mounting first and second side plates to the rectangular plate each along a respective side edge of the rectangular plate.

8. The method as claimed in claim 6 or 7, further comprising removably attaching a cushion member to the chassis such that relative to a forward direction of the seatback, a profile of the cushion member in the first position is substantially the same as a profile of the cushion member in the second position.

9. The method as claimed in any one of claims 6 to 8, wherein connecting the hinge member to the seatback comprises connecting the hinge member to a guide extending along a height direction of the seatback such that the hinge member is slidable relative to the guide.

10. A height adjustment method for a headrest support assembly, the method comprising:

providing the headrest support assembly as claimed in claim 1;

sliding the hinge member of the headrest support assembly relative to a guide extending along a height direction of a seatback to a selected height; and

pivoting the chassis of the headrest support assembly to either the first position in which the chassis is generally higher than the hinge member or the second position in which the chassis is generally lower than the hinge member.