CLAIMS

1. A passenger seat, comprising:

a rigid top seat pan having a corrugation pattern; and

a bottom seat pan;

wherein the rigid top seat pan is disposed above the bottom seat pan for partially absorbing a downward loading applied to the rigid top seat pan through deformation of the corrugation pattern of the rigid top seat pan as a result of a counter force applied by the bottom seat pan.

2. The passenger seat as claimed in claim 1, wherein the rigid top seat pan is corrugated along one or more directions thereof.

3. The passenger seat as claimed in claims 1 or 2, wherein the rigid top seat pan has a curvature configured to match a curvature of the bottom seat pan.

4. The passenger seat as claimed in claim 3, wherein the curvature is along a depth of the rigid top seat pan.

5. The passenger seat as claimed in claim 4, wherein the curvature is between opposing ends of the bottom seat pan with an intermediate portion between the opposing ends, the intermediate portion being at a vertically lower position compared to the opposing ends, relative to the passenger seat.

6. The passenger seat as claimed in any one of the preceding claims, wherein the rigid top seat pan is moveable relative to the bottom seat pan in forward and backward directions with reference to the bottom seat pan.

7. The passenger seat as claimed in any one of the preceding claims, wherein the top seat pan is further configured for receiving a force exerted by a seat back of the passenger seat for movement of the rigid top seat pan relative to the bottom seat pan.

8. The passenger seat as claimed in claim 7, wherein the rigid top seat pan is configured to receive a pushing force exerted by the seat back.

9. The passenger seat as claimed in claim 8, wherein the rigid top seat pan is configured to receive the pushing force as a result of reclining of the seat back.

10. The passenger seat as claimed in any one of claims 7 to 9, wherein the rigid top seat pan comprises a flat surface for receiving the pushing force.

11. The passenger seat as claimed in claim 10, wherein the flat surface is disposed at one end of the rigid top seat pan and extending across the corrugation pattern of the rigid top seat pan.

12. The passenger seat as claimed in any one of claims 7 to 9, wherein the rigid top seat pan comprises a surface with a recess formed therein for receiving the pushing force.

13. The passenger seat as claimed in claim 12, wherein the surface with the recess is disposed at one end of the rigid top seat pan and extending across the corrugation pattern of the rigid top seat pan.

14. The passenger seat as claimed in any one of the preceding claims, wherein the rigid top seat pan comprises one or more rollers for engaging the bottom seat pan.

15. The passenger seat as claimed in any one of claims 1 to 13, wherein the rigid top seat pan engages one or more rollers mounted to the bottom seat pan.

16. The passenger seat as claimed in any one of the preceding claims, wherein the rigid top seat pan comprises one or more blocks for engaging and compressing springs mounted on the bottom seat pan.

17. The passenger seat as claimed in any one of claims 1 to 15, wherein the rigid top seat pan comprises one or more springs for engaging and being compressed by blocks mounted on the bottom seat pan.

18. The passenger seat as claimed in any one of the preceding claims, further comprising one or more retaining frames for limiting movement of the rigid top seat pan.

19. The passenger seat as claimed in claim 18, wherein each retaining frame comprises a slot.

20. The passenger seat as claimed in any one of the preceding claims, further comprising biasing means for biasing the rigid top seat pan in a default position.

21. The passenger seat as claimed in claim 20, wherein the biasing means comprises one or more springs.

22. The passenger seat as claimed in any one of the preceding claims, wherein the rigid top seat pan is configured for being moveable relative to a frame structure of the passenger seat independent from movement of a seat back of the passenger seat.