CLAIMS

What is claimed is:

1. A movable partition, comprising:

a sheet of interconnected panels configured to extend to an extended state and to fold in an accordion fashion to a retracted state, at least two panels of the sheet of interconnected panels being directly coupled to one another, each panel of the at least two panels comprising:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between an enlarged first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between an enlarged second lateral edge of the respective panel and the first major surface of the respective panel;

wherein the first lateral end of one panel of the at least two panels is engaged with the second lateral end of another panel of the at least two panels.

2. The movable partition of claim 1, wherein the at least two panels are capable of extending to a fully extended state in which the at least two panels are at least substantially coplanar while the first lateral end of the one panel remains engaged with the second lateral end of the another panel.

3. The movable partition of claim 1, wherein each panel of the at least two panels comprises a sheet of material having an at least substantially uniform thickness.

4. The movable partition of claim 3, wherein the at least substantially uniform thickness is between about 0.5 mm and about 0.8 mm.

5. The movable partition of claim 3, wherein each of the enlarged first lateral edge and the enlarged second lateral edge of each panel of the at least two panels has an average thickness of between about 180% and about 220% of the at least substantially uniform thickness.

6. The movable partition of claim 1, wherein the first generally cylindrical structure has an average diameter between about 3.0 mm and about 8.0 mm.

7. The movable partition of claim 6, wherein the second generally cylindrical structure has an average diameter between about 4.0 mm and about 9.0 mm.

8. The movable partition of claim 1, wherein the shortest distance across the opening of the first generally cylindrical structure of the first lateral end of each panel is between about 20% and about 60% of an average diameter of the first generally cylindrical structure of the first lateral end.

9. The movable partition of claim 8, wherein the shortest distance across the opening of the second generally cylindrical structure of the second lateral end of each panel is between about 25% and about 65% of an average diameter of the second generally cylindrical structure of the second lateral end.

10. The movable partition of claim 1, wherein the first generally cylindrical structure of the first lateral end and the second generally cylindrical structure of the second lateral end of each panel of the at least two panels is sized and configured such that the at least two panels may be disengaged responsive to lateral forces only when the at least two panels are at an intermediate position between a fully extended state of the at least two panels and a fully collapsed state of the at least two panels.

11. The movable partition of claim 1, wherein a volume of space occupied by the sheet of interconnected panels in a fully collapsed state of the sheet of interconnected panels has a first length, the sheet of interconnected panels extend a second length in a fully extended state of the sheet of interconnected panels, and a ratio of the first length to the second length is about 0.16 or less.

12. The movable partition of claim 11, wherein the ratio of the first length to the second length is about 0.10 or less.

13. The movable partition of claim 12, wherein the ratio of the first length to the second length is about 0.08 or less.

14. The movable partition of claim 1, wherein each of the at least two panels comprises a metal alloy.

15. The movable partition of claim 1, further comprising at least one retention clip attached to at least one of the at least two panels, the retention clip configured to prevent inadvertent disengagement of the at least two panels.

16. A method of forming a movable partition, comprising:

interconnecting a plurality of panels to form a sheet of interconnected panels configured to extend to an extended state and to fold in an accordion fashion to a retracted state;

forming at least two panels of the plurality of panels to comprises:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between an enlarged first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between an enlarged second lateral edge of the respective panel and the first major surface of the respective panel;

engaging the first lateral end of one panel of the at least two panels with the second lateral end of another panel of the at least two panels; and

configuring the enlarged second lateral edge of the second lateral end of the another panel of the at least two panels to abut against the enlarged first lateral edge of the first lateral end of the one panel of the at least two panels as the at least two panels are extended to a fully extended state.

17. The method of claim 16, further comprising forming the at least two panels to be capable of extending to a fully extended state in which the at least two panels are at least substantially coplanar while the first lateral end of the one panel remains engaged with the second lateral end of the another panel.

18. The method of claim 16, further comprising forming the first generally cylindrical structure to have an average diameter between about 3.0 mm and about 8.0 mm.

19. The method of claim 18, further comprising forming the second generally cylindrical structure to have an average diameter between about 4.0 mm and about 9.0 mm.

20. The method of claim 16, further comprising forming the opening of the first generally cylindrical structure of the first lateral end of each panel such that the shortest distance across the opening is between about 20% and about 60% of an average diameter of the first generally cylindrical structure of the first lateral end.

21. The method of claim 20, further comprising forming the opening of the second generally cylindrical structure of the second lateral end of each panel such that the shortest distance across the opening is between about 25% and about 65% of an average diameter of the second generally cylindrical structure of the second lateral end.

CLAIMS

1. A movable partition, comprising:

a sheet of interconnected panels configured to extend to an extended state and to fold in an accordion fashion to a retracted state, at least two panels of the sheet of interconnected panels being directly coupled to one another, each panel of the at least two panels comprising:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between an enlarged first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between an enlarged second lateral edge of the respective panel and the first major surface of the respective panel; and

wherein the first lateral end of one panel of the at least two panels is engaged with the second lateral end of another panel of the at least two panels; and

wherein a volume of space occupied by the sheet of interconnected panels in a fully collapsed state of the sheet of interconnected panels has a first length, the sheet of interconnected panels extend a second length in a fully extended state of the sheet of interconnected panels, and a ratio of the first length to the second length is about 0.16 or less.

wherein a volume of space occupied by the sheet of interconnected panels in a fully collapsed state of the sheet of interconnected panels has a first length, the sheet of interconnected panels extend a second length in a fully extended state of the sheet of interconnected panels, and a ratio of the first length to the second length is about 0.16 or less.

2. The movable partition of claim 1, wherein the at least two panels are configured to extend to a fully extended state in which the at least two panels are at least substantially coplanar while the first lateral end of the one panel remains engaged with the second lateral end of the another panel.

3. The movable partition of claim 1, wherein each panel of the at least two panels comprises a sheet of material having an at least substantially uniform thickness.

4. The movable partition of claim 3, wherein the at least substantially uniform thickness is between about 0.5 mm and about 0.8 mm.

5. The movable partition of claim 3, wherein each of the enlarged first lateral edge and the enlarged second lateral edge of each panel of the at least two panels has an average thickness of between about 180% and about 220% of the at least substantially uniform thickness.

6. The movable partition of claim 1, wherein the first generally cylindrical structure has an average diameter between about 3.0 mm and about 8.0 mm.

7. The movable partition of claim 6, wherein the second generally cylindrical structure has an average diameter between about 4.0 mm and about 9.0 mm.

8. The movable partition of claim 1, wherein the shortest distance across the opening of the first generally cylindrical structure of the first lateral end of each panel is between about 20% and about 60% of an average diameter of the first generally cylindrical structure of the first lateral end.

9. The movable partition of claim 8, wherein the shortest distance across the opening of the second generally cylindrical structure of the second lateral end of each panel is between about 25% and about 65% of an average diameter of the second generally cylindrical structure of the second lateral end.

10. The movable partition of claim 1, wherein the first generally cylindrical structure of the first lateral end and the second generally cylindrical structure of the second lateral end of each panel of the at least two panels is sized and configured such that the at least two panels may be disengaged responsive to lateral forces only when the at least two panels are at an intermediate position between a fully extended state of the at least two panels and a fully collapsed state of the at least two panels.

11. The movable partition of claim 1, wherein the ratio of the first length to the second length is about 0.10 or less.

12. The movable partition of claim 11, wherein the ratio of the first length to the second length is about 0.08 or less.

13. The movable partition of claim 1, wherein each of the at least two panels comprises a metal alloy.

14. The movable partition of claim 1, further comprising at least one retention clip attached to at least one of the at least two panels, the retention clip configured to prevent inadvertent disengagement of the at least two panels.

15. A movable partition, comprising:

a sheet of interconnected panels configured to extend toward an extended state and to fold in an accordion fashion toward a retracted state, at least two panels of the sheet of interconnected panels being directly coupled to one another, each panel of the at least two panels comprising:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between a first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between a second lateral edge of the respective panel and the first major surface of the respective panel;

wherein the first lateral end of one panel of the at least two panels is engaged with the second lateral end of another panel of the at least two panels, and the at least two panels are configured to extend to a fully extended state in which the at least two panels are at least substantially coplanar while the first lateral end of the one panel remains engaged with the second lateral end of the another panel.

16. The movable partition of claim 15, wherein the first generally cylindrical structure has an average diameter between about 3.0 mm and about 8.0 mm.

17. The movable partition of claim 16, wherein the second generally cylindrical structure has an average diameter between about 4.0 mm and about 9.0 mm.

18. The movable partition of claim 17, wherein the shortest distance across the opening of the first generally cylindrical structure of the first lateral end of each panel is between about 20% and about 60% of an average diameter of the first generally cylindrical structure of the first lateral end.

19. The movable partition of claim 18, wherein the shortest distance across the opening of the second generally cylindrical structure of the second lateral end of each panel is between about 25% and about 65% of an average diameter of the second generally cylindrical structure of the second lateral end.

20. The movable partition of claim 15, wherein the first generally cylindrical structure of the first lateral end and the second generally cylindrical structure of the second lateral end of each panel of the at least two panels is sized and configured such that the at least two panels may be disengaged responsive to lateral forces only when the at least two panels are at an intermediate position between a fully extended state of the at least two panels and a fully collapsed state of the at least two panels.

21. The movable partition of claim 20, wherein a volume of space occupied by the sheet of interconnected panels in a fully collapsed state of the sheet of interconnected panels has a first length, the sheet of interconnected panels extend a second length in a fully extended state of the sheet of interconnected panels, and a ratio of the first length to the second length is about 0.16 or less.

22. A movable partition system, comprising:

a movable partition including a first sheet of interconnected panels and a second sheet of interconnected panels positioned side-by-side one another, each of the first sheet of interconnected panels and the second sheet of interconnected panels comprising at least two panels directly coupled to one another, each panel of the at least two panels comprising:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between a first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between a second lateral edge of the respective panel and the first major surface of the respective panel;

wherein the first lateral end of one panel of the at least two panels is engaged with the second lateral end of another panel of the at least two panels;

wherein a volume of space occupied by the movable partition in a fully collapsed state of the movable partition has a first length, the movable partition extends a second length in a fully extended state of the movable partition, and a ratio of the first length to the second length is about 0.16 or less.

23. The movable partition system of claim 22, wherein the first lateral edge comprises an enlarged first lateral edge, and the second lateral edge comprises an enlarged second lateral edge.

24. The movable partition system of claim 22, wherein the at least two panels are configured to extend to a fully extended state in which the at least two panels are at least substantially coplanar while the first lateral end of the one panel remains engaged with the second lateral end of the another panel.

25. The movable partition system of claim 22, wherein the first generally cylindrical structure has an average diameter between about 3.0 mm and about 8.0 mm.

26. The movable partition system of claim 25, wherein the second generally cylindrical structure has an average diameter between about 4.0 mm and about 9.0 mm.

27. The movable partition system of claim 26, wherein the shortest distance across the opening of the first generally cylindrical structure of the first lateral end of each panel is between about 20% and about 60% of an average diameter of the first generally cylindrical structure of the first lateral end.

28. The movable partition system of claim 27, wherein the shortest distance across the opening of the second generally cylindrical structure of the second lateral end of each panel is between about 25% and about 65% of an average diameter of the second generally cylindrical structure of the second lateral end.

29. The movable partition system of claim 22, wherein the first generally cylindrical structure of the first lateral end and the second generally cylindrical structure of the second lateral end of each panel of the at least two panels is sized and configured such that the at least two panels may be disengaged responsive to lateral forces only when the at least two panels are at an intermediate position between a fully extended state of the at least two panels and a fully collapsed state of the at least two panels.

30. A method of forming a movable partition, comprising:

interconnecting a plurality of panels to form a sheet of interconnected panels such that the sheet of interconnected panels is configured to extend to a fully extended state and to fold in an accordion fashion to a retracted, fully collapsed state, a volume of space occupied by the sheet of interconnected panels in the fully collapsed state of the sheet of interconnected panels having a first length, the sheet of interconnected panels extending a second length in the fully extended state, a ratio of the first length to the second length being about 0.16 or less;

forming at least two panels of the plurality of panels to comprise:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between an enlarged first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between an enlarged second lateral edge of the respective panel and the first major surface of the respective panel;

engaging the first lateral end of one panel of the at least two panels with the second lateral end of another panel of the at least two panels; and

configuring the enlarged second lateral edge of the second lateral end of the another panel of the at least two panels to abut against the enlarged first lateral edge of the first lateral end of the one panel of the at least two panels as the at least two panels are extended to a fully extended state.

31. The method of claim 30, further comprising forming the at least two panels to be configured to extend to a fully extended state in which the at least two panels are at least substantially coplanar while the first lateral end of the one panel remains engaged with the second lateral end of the another panel.

32. The method of claim 30, further comprising forming the first generally cylindrical structure to have an average diameter between about 3.0 mm and about 8.0 mm.

33. The method of claim 32, further comprising forming the second generally cylindrical structure to have an average diameter between about 4.0 mm and about 9.0 mm.

34. The method of claim 30, further comprising forming the opening of the first generally cylindrical structure of the first lateral end of each panel such that the shortest distance across the opening is between about 20% and about 60% of an average diameter of the first generally cylindrical structure of the first lateral end.

35. The method of claim 34, further comprising forming the opening of the second generally cylindrical structure of the second lateral end of each panel such that the shortest distance across the opening is between about 25% and about 65% of an average diameter of the second generally cylindrical structure of the second lateral end.

36. The method of claim 30, further comprising configuring the first generally cylindrical structure of the first lateral end and the second generally cylindrical structure of the second lateral end of each panel of the at least two panels such that the at least two panels may be disengaged responsive to lateral forces only when the at least two panels are at an intermediate position between a fully extended state of the at least two panels and a fully collapsed state of the at least two panels.

37. A method of repairing a movable partition comprising a sheet of interconnected panels, comprising:

removing a first panel from each of a second panel and a third panel adjoined directly to the first panel on opposing sides thereof in the sheet of interconnected panels without removing the second panel from a fourth panel adjoined directly to the second panel on a side thereof opposite the first panel, and without removing the third panel from a fifth panel adjoined directly to the third panel on a side thereof opposite the first panel, each of the first panel, the second panel, and the third panel comprising:

a top edge;

a bottom edge;

a first major surface;

an opposite, second major surface;

a first lateral end extending between the top edge and the bottom edge, the first lateral end comprising a first generally cylindrical structure, the first generally cylindrical structure comprising a first opening extending linearly between the top edge and the bottom edge, the first opening comprising a gap between a first lateral edge of the respective panel and the first major surface of the respective panel; and

an opposite, second lateral end extending between the top edge and the bottom edge, the second lateral end comprising a second generally cylindrical structure, the second generally cylindrical structure comprising a second opening extending linearly between the top edge and the bottom edge, the second opening comprising a gap between a second lateral edge of the respective panel and the first major surface of the respective panel;

wherein removing the first panel from each of the second panel and the third panel comprises:

disengaging the first generally cylindrical structure of the first lateral end of the first panel from the generally cylindrical structure of the second lateral end of the second panel by applying lateral forces between the first lateral end of the first panel and the second lateral end of the second panel; and

disengaging the second generally cylindrical structure of the second lateral end of the first panel from the generally cylindrical structure of the first lateral end of the third panel by applying lateral forces between the second lateral end of the first panel and the first lateral end of the third panel.