Claims

What is claimed is:

1. A unit for containing animals on a seat of a vehicle, comprising:

a base structure including a base, the base including a front portion and a rear portion;

a frame structure including:

a front member coupled to the front portion of base;

a rear member coupled to the rear portion of the base; and

containment materials extending at least partially about the frame structure; and

a webbing structure comprising at least first and second spans of webbing, each of the spans comprising a first end coupled to a respective first anchor point defined by the base structure, the spans extending from the respective first anchor point about an exterior of the frame structure and wrapping around the front member to respective second ends of the spans, the second end of each of the spans being configured to couple to a rigid connection on or adjacent to the seat of the vehicle so that the webbing extends about the frame structure along a desired path configured to restrain a pet contained within the unit.

2. The unit of claim 1, wherein the front member comprises a first end coupled to the front portion of the base on a first side and a second end coupled to the front portion of the base on a second side, the front member of the frame structure being shaped in a curve to define in part a front of the unit and define in part a top of the unit and the rear member comprises a first end coupled to the rear portion of the base on the first side and a second end coupled to the rear portion of the base on the second side, the rear member of the frame structure being shaped in a curve to define in part a rear of the unit and define in part the top of the unit, wherein the spans extend along a top portion of the containment materials covering the top of the unit to a second end coupled to a second anchor point.

3. The unit of claim 1, wherein the base structure further includes a base frame mounted to the base and wherein the base frame includes a front member and the first ends of the spans of webbing are coupled to the front member of the base frame interior to the base.

4. The unit of claim 3, wherein the first ends of the spans of webbing are sewn to the front member of the base frame.

5. The unit of claim 3, wherein the containment materials include front containment materials defining in part the front of the unit and supported at least in part by the front member of the frame structure, a front potion of the containment materials covering the front

of the unit, the front portion of the containment materials comprising an exterior surface and an interior surface, the unit further including a top portion of the containment materials covering the top of the unit and supported at least in part by the front member and the rear member of the frame structure,

wherein the spans of webbing are woven through at least part of the front containment materials so that a portion the spans are exterior to the exterior surface of the front containment materials and a further portion of the spans are interior to the exterior surface of the front containment materials,

wherein the containment materials comprise at least two layers and the spans of webbing are woven through a first one of the layers and are not woven through a second one of the layers.

6. The unit of claim 3, wherein the spans wrap around an exterior surface of the front member of the base frame.

7. The unit of claim 1, wherein the frame structure further comprises:

a first middle member and a second middle member, each comprising a first end coupled to the front member and a second end coupled to the rear member, the first and second middle members being exterior to an exterior surface of the containment materials, and wherein the first span of webbing extends across the exterior surface of the containment materials along the first middle member and the second span of webbing extends across the exterior surface of the containment materials along the second middle member.

8. The unit of claim 7, wherein the first middle members and the second middle member of the frame structure each include ring structures through which the spans of webbing are run,

wherein the first middle members and the second middle member of the frame structure each comprise a front middle member and a rear middle member detachable via a sliding actuator, the sliding actuator being translatable between a first position, where the sliding actuator is slid over the front middle member and detaches from the rear middle member, and a second position, where the sliding actuator is slid over the rear middle member and attaches the front middle member and the rear middle member, and

wherein, when the sliding actuator is translated, the ring structures of the sliding actuator slide over the spans of webbing.

9. The unit of claim 1, further comprising:

a tether structure comprising at least two spans, each of the spans of the tether structure comprising a first end coupled to the rear member, the second ends of the spans

joining together at a joint, the tether structure further comprising a unitary span extending from a first end at the joint to a second end on which a tether latch is adjustably positioned,

wherein the tether latch is configured to attach to the rigid connection on or adjacent to the seat of the vehicle, and

wherein the first ends of the spans of the tether structure are adjacent to the second ends of the spans of webbing, or the first ends of the spans of the tether structure are sewn around the rear member.

10. The unit of claim 7, wherein the first ends of the spans of webbing are coupled to rigid brackets at the rear portion of the base,

wherein the spans extend from the first end interior to the base structure, wrap around a front portion of the base structure and continue exterior to the exterior surface of a front portion of the containment materials covering the front of the unit.

11. The unit of claim 1, wherein the rigid connection on or adjacent to the seat of the vehicle is a first rigid connection, the unit further comprising:

latches coupled to the frame structure, the latches being configured to couple the frame structure to a second rigid connection on or adjacent to the seat of the vehicle,

wherein the second rigid connection is spaced from the first rigid connection.

12. The unit of claim 1, wherein the second ends of the first and second spans of webbing are configured to directly couple to the rigid connection on or adjacent to the seat of the vehicle.

13. A unit for containing animals on a seat of a vehicle, comprising:

a base structure including a base, the base including a front portion and a rear portion; and

a frame structure that transitions between an expanded state and a collapsed state, the frame structure including:

a front member comprising a first end and a second end, the first and second ends of the front member being rotatably coupled to the front portion of the base, the front member being shaped to define in part a front of the unit and define in part a top of the unit when the frame structure is in the expanded state,

a rear member comprising a first end and a second end, the first and second ends of the rear member being rotatably coupled to the rear portion of the base, the rear member being shaped to define in part a rear of the unit and define in part the top of the unit when the frame structure is in the expanded state,

at least one middle member comprising a first end rotatably coupled to either the front member or the rear member via a rotating joint and a second end that, when the frame structure is in the expanded state, is attached to a corresponding part of the frame structure such that a connection is made between the front member and the rear member via the at least one middle member and, when the frame structure is to be transitioned into the collapsed state, the front member and the rear member are rotated to a collapsed position in which the at least one middle member is within or substantially flush with the front member or the rear member.

14. The unit of claim 13, wherein when the frame structure is to be transitioned into the collapsed state, the second end of the at least one middle member is detached from the corresponding part of the frame structure.

15. The unit of claim 13, wherein the at least one middle member comprises two middle members, each comprising a front middle member and a rear middle member detachable via a sliding actuator, the sliding actuator being translatable between a first position in which the sliding actuator is slid over the front middle member and detached from the rear middle member, and a second position in which the sliding actuator is slid over the rear middle member and to attach the front middle member to the rear middle member,

wherein the sliding actuator comprises a first opening and a second opening for receiving a button extending off an exterior of the front middle member, wherein, in the first position, the button is received in the first opening and, in the second position, the button is received in the second opening.

16. The unit of claim 13, further comprising:

a first front rotating actuator rotatably coupled to the front portion of the base on a first side, a second front rotating actuator rotatably coupled to the front portion of the base on a second side, a first rear rotating actuator rotatably coupled to the rear portion of the base on the first side, and a second rear rotating actuator rotatably coupled to the rear portion of the base on the second side,

wherein, after the at least one middle member is brought to the collapsed position, the first and second front rotating actuators are rotated to a stowed position in which the front member is within or flush with the base structure or with the rear member and the first and second rear rotating actuators are rotated to bring the rear member within or flush with the base structure or with the front member, or

the first and second rear rotating actuators are positioned relative to the base higher than the first and second front rotating actuators so that, when the frame structure is in the collapsed state, the rear member lies flush on top of the front member, or

the first and second front rotating actuators are lockable in a first position in which the front member of the frame structure extends orthogonally to the base and a second position in which the front member extends parallel to the base and wherein the first and second rear rotating actuators are lockable in a first position in which the rear member of the frame structure extends orthogonally to the base and a second position and wherein the rear member extends parallel to the base.

17. The unit of claim 13, wherein at least one middle member is detachable from either the front member or the rear member while remaining attached to the other one of the front member or the rear member so that the at least one middle member can be rotated with the rotating joint or,

wherein at least one middle member is detachable from either the front member or the rear member via a release actuator mounted to the at least one middle member and

the release actuator withdraws at least one pin extending off the at least one middle member from a corresponding recess in the front member or the rear member.