~~CLAIMS~~

WHAT IS CLAIMED IS:

1. An aircraft sanitization system comprising:

a safety belt comprising a first portion affixed to a first fabric part of the safety belt and a second portion affixed to a second fabric part of the safety belt, wherein the first portion is configured to receive the second portion for fastening the safety belt;

a first stowage encasing configured to completely enclose the first portion, wherein the first stowage encasing comprises:

a first inner wall configured to surround an outer surface of the first portion;

a first set of Ultraviolet (UV) Light Emitting Diodes (LEDs) affixed to the first inner wall and configured to sanitize the outer surface of the first portion;

a tongue configured to cooperate with the first portion of the safety belt; and

a second set of UV LEDs attached on a surface of the tongue and configured to sanitize an inner surface of the first portion; and

a second stowage encasing configured to enclose the second portion, wherein the second stowage encasing comprises:

a second inner wall configured to surround the second portion; and

a third set of UV LEDs affixed to the second inner wall and configured to sanitize the second portion.

2. The aircraft sanitization system of claim 1, wherein:

the first stowage encasing further comprises a first slit configured to receive the first fabric part, and wherein the first slit comprises:

a first pair of rollers cooperating with the first fabric part, wherein the first pair of rollers enable the first stowage encasing to slide over the first fabric part to

enclose the first portion, and wherein the first fabric part passes through the first stowage encasing via the first slit; and

the second stowage encasing further comprises a second slit configured to receive the second fabric part, and wherein the second slit comprises:

a second pair of rollers cooperating with the second fabric part, wherein the second pair of rollers enable the second stowage encasing to slide over the second fabric part to enclose the second portion, and wherein the second fabric part passes through the second stowage encasing via the second slit.

3. The aircraft sanitization system of claim 2, wherein:

the first stowage encasing further comprises a first motorized mechanism coupled to the first pair of rollers, and wherein the first motorized mechanism is configured to activate the first pair of rollers to slide the first stowage encasing over the first fabric part; and

the second stowage encasing further comprises a second motorized mechanism coupled to the second pair of rollers, and wherein the second motorized mechanism is configured to activate the second pair of rollers to slide the second stowage encasing over the second fabric part.

4. The aircraft sanitization system of claim 3, further comprising:

a first set of sensors within the first stowage encasing, wherein the first set of sensors is configured to determine complete enclosure of the first portion by the first stowage encasing;

a second set of sensors within the second stowage encasing, wherein the second set of sensors is configured to determine complete enclosure of the second portion by the second stowage encasing; and

a controller communicatively coupled to each of the first set of UV LEDs, the second set of UV LEDs, the third set of UV LEDs, the first set of sensors, the second set of sensors, the first motorized mechanism, and the second motorized mechanism, wherein the controller is configured to:

instruct the first motorized mechanism to slide over the first fabric part to enclose the first stowage encasing, in response to a sanitization activation signal;

instruct the second motorized mechanism to slide over the second fabric part to enclose the second stowage encasing, in response to the sanitization activation signal;

activate each of the first set of UV LEDs and the second set of UV LEDs in response to the first set of sensors establishing complete enclosure of the first portion by the first stowage encasing; and

activate the third set of UV LEDs in response to the second set of sensors establishing complete enclosure of the second portion by the second stowage encasing.

5. The method of claim 4, wherein the controller is further configured to:

instruct the first motorized mechanism to slide over the first fabric part to reveal the first stowage encasing after expiry of a predefined time period; and

instruct the second motorized mechanism to slide over the second fabric part to reveal the second stowage encasing after expiry of the predefined time period.

6. The method of claim 4, wherein the controller is further configured to:

deactivate each of the first set of UV LEDs and the second set of UV LEDs in response to the first set of sensors establishing partial enclosure of the first portion by the first stowage encasing; and

deactivate the third set of UV LEDs in response to the second set of sensors establishing partial enclosure of the second portion by the second stowage encasing.

~~7. An aircraft sanitization system comprising:~~

~~a frame;~~

~~a tray operatively coupled to at least first two corners of the frame and is rotatable about a pivot axis, wherein the tray is configured to be in one of a locked state and an unlocked state based on rotation about the pivot axis, and wherein, in the unlocked state the tray is at an angle greater than zero with respect to the frame and in the locked state the tray is at an angle equal to zero with respect to the frame; and~~

~~a set of Ultraviolet (UV) Light Emitting Diodes (LEDs) attached on an exposed surface of the frame, wherein the set of UV LEDs is configured to sanitize the tray when the tray is in the locked state.~~

~~8. The aircraft sanitization system of claim 7, wherein the frame comprises:~~

~~at least one switch located on an outer periphery of the frame, wherein, in the locked state, the tray encloses and activates each of the at least one switch; and~~

~~a latch cooperating with the tray, wherein in the locked state the latch engages the tray and in the unlocked state the latch disengages the tray.~~

~~9. The aircraft sanitization system of claim 8, wherein the frame further comprises a controller communicatively coupled to the at least one switch and the latch, wherein the controller activates the set of UV LEDs, when a set of conditions are met, wherein the set of conditions comprises each of:~~

~~the tray being in locked state;~~

~~the at least one switch being activated; and~~

the latch engaging the tray.

10. The aircraft sanitization system of claim 9, wherein the frame further comprises at least one sensor configured to generate a deactivation signal based on a predefined criterion, and wherein the controller is communicatively coupled to the least one sensor and is configured to deactivate the set of UV LEDs in response to the deactivation signal generated by the at least one sensor, wherein the at least one sensor is located at the outer periphery of the frame and is enclosed by the tray in the locked state.

11. An aircraft sanitization system comprising:

an armrest comprising a pocket and a top lid, wherein the pocket is configured to store a tray and the top lid is configured to cover the pocket;

a retractable mechanism enclosed in the pocket, wherein a first end of the retractable mechanism is removably attached to the tray and a second end of retractable mechanism is fixed within the pocket, and wherein the retractable mechanism is configured to:

extract the tray from the pocket in an open state, wherein, in the open state the tray is at least partially outside the pocket; and

retract the tray into the pocket in a closed state, wherein, in the closed state the tray is completely inside the pocket;

a first set of Ultraviolet (UV) Light Emitting Diodes (LEDs) affixed on each inner wall of the pocket, wherein the first set of UV LEDs is configured to sanitize each surface of tray, when the tray is in the closed state.

12. The aircraft sanitization system of claim 11, wherein a first end of the top lid is hinged to the armrest to enable rotation of the top lid about a pivot axis and a second end of the top lid cooperates with the armrest to enable the closed state and the open state.

13. The aircraft sanitization system of claim 12, further comprises:

at least one switch located on the armrest, wherein each of the at least one switch is configured to be:

enclosed and activated by the top lid in the closed state; and

disclosed and deactivated by the top lid in the open state;

a locking mechanism, wherein the locking mechanism is configured to cooperate with the second end of the top lid to enable the closed state and the open state, wherein the locking mechanism engages with the top lid in the closed state and disengages with the top lid in the open state; and

a controller communicatively coupled to each of the at least one switch and the locking mechanism, wherein the controller is configured to activate the first set of UV LEDs, when each of the at least one switch is activated and the locking mechanism engages the top lid in the closed state.

14. The aircraft sanitization system of claim 13, further comprises at least one sensor configured to generate a deactivation signal in response to a predefined criterion, wherein the controller is communicatively coupled to the at least one sensor, and wherein the controller is further configured to deactivate the first set of UV LEDs in response to the deactivation signal generated by the at least one sensor.

15. The aircraft sanitization system of claim 11, wherein the tray comprises a plurality of portions hinged to each other, wherein at least one of the plurality of portions is foldable around an associated pivot axis over the remaining plurality of portions.

16. The aircraft sanitization system of claim 15, wherein the pocket further comprises:

at least one tongue located between inner walls of the pocket;

a second set of UV LEDs attached to each face of the at least one tongue and configured to sanitize the at least one of the plurality of portions of the tray.

17. An aircraft sanitization device comprising:

a curved enclosure operatively coupled to a first surface of an enclosed area, wherein at a first position the curved enclosure at least partially encloses a handle affixed to the first surface, and wherein the handle enables access to the enclosed area, the curved enclosure further comprises:

an inner surface facing the first surface at the first position of the curved enclosure; and

an outer surface facing away from the first surface at the first position;

a set of Ultraviolet (UV) Light Emitting Diodes (LEDs) affixed to the inner surface, wherein the set of UV LEDs is configured to sanitize the handle;

at least one switch placed on at least one of the first surface and a second surface of the enclosed area, wherein each of the at least one switch is activated in a closed state of the enclosed area and each of the at least one switch is deactivated in an open state of the enclosed area;

at least one locking mechanism, wherein the at least one locking mechanism is configured to:

engage with the first surface in the closed state; and

disengage with the first surface in the open state; and

a controller communicatively coupled to each of the set of UV LEDs, the at least one switch, and the at least one locking mechanism, wherein the controller is configured to activate the set of UV LEDs, when each of the at least one switch is activated and the locking mechanism engages the first surface in the closed state.

18. The aircraft sanitization device of claim 17, further comprising at least one sensor affixed to the inner surface of the curved enclosure and configured to generate a deactivation signal based on a predefined criterion, wherein the controller is communicatively coupled to the at least one sensor and is further configured to deactivate the set of UV LEDs based on the deactivation signal generated by the at least one sensor.

19. The aircraft sanitization device of claim 18, wherein the predefined criterion comprises detection of a body part of a user.

20. The aircraft sanitization device of claim 17, further comprising a rotating mechanism operatively coupled to the curved enclosure and is configured to move the curved enclosure from the first position to at least one of a second position and at least one intermediate position, wherein at the second position the curved enclosure completely discloses the handle and at each of the at least one intermediate position the curved enclosure partially discloses the handle.

21. The aircraft sanitization device of claim 20, wherein the controller is communicatively coupled to the rotating mechanism and is further configured to:

~~instruct the rotating mechanism to move the curved enclosure to the first position, when each of the at least one switch is activated and the locking mechanism engages the first surface in the closed state; and~~

~~instruct the rotating mechanism to move the curved enclosure to one of the second position and the at least one intermediate position, when at least one of the at least one switch is deactivated and the locking mechanism disengages the first surface.~~

~~22. The aircraft sanitization device of claim 20, wherein the first surface of the enclosed area comprises a slit to enable movement of the curved enclosure through the first surface between the first position, the second position, and at least one intermediate position.~~