CLAIMS

I/We claim:

1. An aircraft system, comprising:

a line capture device body having a line slot, the line slot having an open end and a closed end;

a retainer positioned proximate to the line slot, the retainer including a rotor having a plurality of rotor arms positioned to extend at least partially across the line slot as the rotor rotates relative to the body;

a joint rotatably coupling the rotor to the body;

a ratchet device operably coupled to the rotor to allow the rotor to rotate in a first direction and at least restrict the rotor from rotating in a second direction opposite the first.

2. The system of claim 1 wherein the line capture device body includes a base portion and a cover portion carried by the base portion, with at least part of the base portion spaced apart from at least part of the cover portion to define, at least in part, a rotor slot, and wherein the rotor is rotatably positioned between the base portion and the cap portion in the rotor slot.

3. The system of claim 2 wherein the ratchet device includes a tab projecting inwardly into the rotor slot from at least one of the base portion and the cover portion, the tab being sloped inwardly into the rotor slot in a direction generally tangential to the first direction.

4. The system of claim 2 wherein at least one of the base portion and the cover portion includes a tab and wherein the other of the base portion and the cover portion includes an alignment slot positioned to receive the tab and resist relative motion between the cover portion and the base portion.

5. The system of claim 1 wherein the line capture device body has a first surface and a second surface facing away from the first surface, and wherein the rotor is a first rotor positioned adjacent to the first surface, and wherein the system further comprises a second rotor positioned adjacent to the first surface and rotatably coupled to the line capture device body, the second rotor having a plurality of rotor arms positioned to extend at least partially across the line slot as the second rotor rotates relative to the line capture device body.

6. The system of claim 1 wherein individual rotor arms have ends positioned radially outwardly from the pin, and wherein the ratchet device includes a spring positioned to successively engage with the ends of corresponding individual rotor arms as the rotor rotates relative to the line capture device body.

7. An aircraft system, comprising:

a line capture device body having a line slot, the line slot having an open end and a closed end; and

a retainer coupled to the line capture device body, the retainer including a first wire-shaped element positioned across the line slot and a second wire-shaped element positioned across the line slot, the first and second wire-shaped elements each being independently movable between a first position and a second position, with the wire-shaped elements positioned to at least restrict access to the line slot when in the first position, and positioned to allow a flexible recovery line to enter the line slot when in the second position, the first and second elements being spaced apart by a distance sufficient to receive the recovery line, the second element being spaced apart from the closed end of the slot by a distance sufficient to receive the recovery line.

8. The system of claim 7 wherein the each of the first and second elements is rigidly attached to the line capture device body and twists between the first and second positions.

9. The system of claim 7 wherein the line slot is narrower toward the closed end than toward the open end.

10. The system of claim 7 wherein the line capture device body includes a first receptacle positioned at the line slot to receive the first element when the first element is in its second position, and wherein the wherein the line capture device body includes a second receptacle positioned at the line slot to receive the second element when the second element is in its second position.

11. The system of claim 7, further comprising an aircraft having a fuselage and a wing, and wherein the line capture device body is attached to the wing.

12. The system of claim 7 wherein the line capture device body has a first surface and a second surface facing away from the first surface, and wherein at least one the first and second elements has a first end and a second end, the first end being received in a first opening in the first surface, the second end being received in a second opening in the second surface.

13. The system of claim 12 wherein the first and second openings are spaced apart from each in a plane generally parallel to the first surface.

14. The system of claim 12 wherein the first and second openings are coaxial in a plane generally parallel to the first surface.

15. The system of claim 12 wherein the line capture device body has a leading edge, and wherein the leading edge is swept aft relative to the fuselage.

16. The system of claim 7, further comprising:
the recovery line; and
a support carrying the recovery line.

17. An aircraft system, comprising:

a line capture device body having a line slot, the line slot having an open end and a closed end; and

a retainer coupled to the line capture device body, the retainer including a single wire-shaped element positioned across the line slot, with the wire-shaped element positioned to at least restrict access to the line slot when in the first position, and positioned to allow a flexible recovery line to enter the line slot when in the second position, the wire-shaped element being spaced apart from the closed end of the line slot by a distance sufficient to receive the recovery line.

18. The system of claim 17 wherein the wire-shaped element is rigidly attached to the line capture device body and twists between the first and second positions.

19. The system of claim 17, further comprising an aircraft having a fuselage and a wing, and wherein the cleat body is attached to the wing.

20. The system of claim 19 wherein the line capture device body has a leading edge, and wherein the leading edge is swept aft relative to the fuselage.

21. The system of claim 17, further comprising:

the recovery line; and

a support carrying the recovery line.

22. The system of claim 17 wherein the line capture device body includes a receptacle positioned at the line slot to receive the wire-shaped element when the element is in its second position.

23. An aircraft system, comprising:

a line capture device body; and

a retainer slideably coupled to the line capture device body, at least one of the retainer and the line capture device body having a line slot, the line slot

having an open end and a closed end, the retainer being slideable relative to the line capture device body between a first position and a second position, with the retainer positioned to at least restrict access to or from the line slot when in the first position, and positioned to allow a flexible recovery line to enter the line slot when in the second position.

24. The system of claim 23 wherein the line slot is carried by the line capture body.

25. The system of claim 24 further comprising a guide pin carried by the line capture device body, and wherein the retainer includes:

a strike plate pivotably coupled to the line capture device body;

a closing tab having a slot in which the guide pin is received; and

a pivot joint between the strike plate and the closing tab.

26. The system of claim 23 wherein the line slot is carried by the retainer.

27. The system of claim 26 wherein the line capture device body has a guide slot, and wherein the retainer carries at least one guide pin received in the guide slot, and wherein the retainer is slideable along the guide slot between the first position and the second position.

28. The system of claim 27 wherein the line capture device body includes a tab and wherein the retainer include two spaced-apart ears, and wherein the ears are positioned to allow access to the line slot through the open end when the retainer is in the first position, and wherein the ears are positioned on opposing sides of the tab to at least restrict access to the slot through the open end when the retainer is in the second position.

29. The system of claim 23, further comprising a ratchet device operably coupled between the line capture device body and the retainer to releasably restrict relative movement between the retainer and the line capture device body.

CLAIMS

I/We claim:

1. An aircraft system, comprising:

a line capture device body having a line slot, the line slot having an open end and a closed end;

a retainer positioned proximate to the line slot, the retainer including a rotor having a plurality of rotor arms positioned to extend at least partially across the line slot as the rotor rotates relative to the body; a joint rotatably coupling the rotor to the body;

a ratchet device operably coupled to the rotor to allow the rotor to rotate in a first direction and at least restrict the rotor from rotating in a second direction opposite the first.

2. The system of claim 1 wherein the line capture device body includes a base portion and a cover portion carried by the base portion, with at least part of the base portion spaced apart from at least part of the cover portion to define, at least in part, a rotor slot, and wherein the rotor is rotatably positioned between the base portion and the cover portion in the rotor slot.

3. The system of claim 2 wherein the ratchet device includes a tab projecting inwardly into the rotor slot from at least one of the base portion and the cover portion, the tab being sloped inwardly into the rotor slot in a direction generally tangential to the first direction.

4. The system of claim 2 wherein at least one of the base portion and the cover portion includes a tab and wherein the other of the base portion and the cover portion includes an alignment slot positioned to receive the tab and resist relative motion between the cover portion and the base portion.

5. The system of claim 1 wherein the line capture device body has a first surface and a second surface facing away from the first surface, and wherein the

rotor is a first rotor positioned adjacent to the first surface, and wherein the system further comprises a second rotor positioned adjacent to the second surface and rotatably coupled to the line capture device body, the second rotor having a plurality of rotor arms positioned to extend at least partially across the line slot as the second rotor rotates relative to the line capture device body.

6. The system of claim 1 wherein individual rotor arms have ends positioned radially outwardly from the joint, and wherein the ratchet device includes a spring positioned to successively engage with the ends of corresponding individual rotor arms as the rotor rotates relative to the line capture device body.

7. The aircraft system of any preceding claim wherein the rotor is operable to rotate such that initially a first rotor arm of the plurality of rotor arms is positioned to extend across the line slot and none of the remaining rotor arms extends into the line slot, and subsequently a second rotor arm of the plurality of rotor arms is positioned to extend across the line slot instead of the first rotor arm.