

CLAIMS

What is claimed is:

1. A system for transporting a payload, comprising:
an unmanned aerial vehicle (UAV) including a payload coupling apparatus; and
a containment apparatus having an aerodynamic shape and including first and second openings, the containment apparatus located external to the UAV and attached to an underside of the UAV,
wherein the payload coupling apparatus passes through the first and second openings of the containment apparatus to couple with the payload, and the payload passes through the second opening to be positioned inside or outside the containment apparatus.
2. The system of claim 1, wherein the containment apparatus comprises a first containment apparatus and further comprising a second containment apparatus different from the first containment apparatus, wherein the second containment apparatus is attached to the underside of the UAV and the first containment apparatus is detached from the UAV.
3. The system of claim 2, wherein the first containment apparatus is configured for a first payload and the second containment apparatus is configured for a second payload having a different shape or size from the first payload.
4. The system of claim 1, wherein the payload coupling apparatus passes through the first opening when the payload is positioned inside the containment apparatus.
5. The system of claim 1, wherein the containment apparatus includes first and second portions, each of the first and second portions pivotally attached to the underside of the UAV, and wherein the containment apparatus is configurable in an open position when the first and second portions are separated from each other and configurable in a closed position when the first and second portions are in contact with each other.
6. The system of claim 5, wherein the second opening of the containment apparatus is absent when the containment apparatus is in the closed position.

7. The system of claim 1, wherein the containment apparatus comprises a unitary structure.
8. The system of claim 1, wherein the first opening is provided at a first side of the containment apparatus adjacent to the underside of the UAV and the second opening is provided at a second side different from the first side of the containment apparatus.
9. The system of claim 1, wherein the aerodynamic shape comprises a substantially teardrop aerofoil shape.
10. The system of claim 1, wherein the payload has one or both of a size larger than a payload space internal to the UAV and a non-aerodynamic shape.
11. A payload containment apparatus comprising:
an aerodynamic exterior;
a hollow interior; and
first and second openings included at the aerodynamic exterior, wherein the aerodynamic exterior selectively attaches to an unmanned aerial vehicle (UAV), and wherein a payload coupling apparatus included in the UAV passes through the first and second openings of the containment apparatus to couple with a payload, and the payload passes through the second opening to be positioned inside or outside the hollow interior.
12. The apparatus of claim 11, further comprising a coupling mechanism configured to selectively attach and detach the aerodynamic exterior with the UAV.
13. The apparatus of claim 12, wherein the coupling mechanism comprises a coupling mechanism common to a plurality of payload containment apparatuses with the UAV, and wherein each payload containment apparatus of the plurality of payload containment apparatuses is associated with a particular size or shape of payload to be transported within the respective payload containment apparatus.
14. The apparatus of claim 11, wherein the payload coupling apparatus passes through the first opening when the payload is positioned within the hollow interior.

15. The apparatus of claim 11, wherein the aerodynamic exterior comprises first and second portions, each of the first and second portions pivotally attached to an underside of the UAV, and wherein the first and second portions are configurable in an open position when the first and second portions are separated from each other and configurable in a closed position when the first and second portions are in contact with each other.

16. The apparatus of claim 15, wherein the second opening is absent when the first and second portions are in the closed position.

17. The apparatus of claim 11, wherein the aerodynamic exterior comprises a unitary structure.

18. The apparatus of claim 11, wherein the first opening is provided at a first side of the aerodynamic exterior adjacent to an underside of the UAV and the second opening is provided at a second side different from the first side of the aerodynamic exterior.

19. The apparatus of claim 11, wherein the aerodynamic exterior comprises a substantially teardrop aerofoil shape.

20. The apparatus of claim 11, wherein the payload has one or both of a size larger than a payload space internal to the UAV and a non-aerodynamic shape.