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(54) Title: REFUELING DEVICE

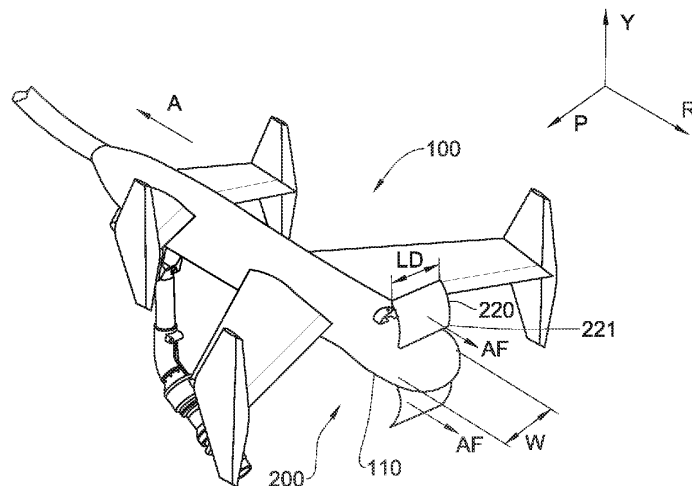


FIG. 1(a)

(57) Abstract: Refueling devices for use in in-flight refueling operation are provided, including a body configured for being towed by a tanker aircraft and having a boom member that has a fuel delivery nozzle, a spatial control system and a longitudinal control system. The longitudinal displacement control system includes at least one panel element defining a front panel projected area orthogonal to a body longitudinal axis, each panel element being controllably and reversibly deployable incrementally to each one of a plurality of successive deployed positions between a fully retracted position and a fully deployed position, to provide a respective reversible incrementally increasing aft force to the refueling device at least during the in-flight refueling operation.

[Continued on next page]

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