Claims

1. A retaining device for holding a tank (100) in the fuselage of an aircraft, comprising, between the tank and a structure (12) secured to the fuselage of the aircraft, an articulated retaining means (4) and a fixing rod (20) on which said articulated retaining means is mounted characterized in that the articulated retaining means comprises a ball-joint (4) comprising a tubular housing to accommodate the fixing rod (20), said fixing rod is designed to be mounted on the structure (12) secured to the fuselage of the aircraft, wherein the tubular housing comprises a sliding connection means on the fixing rod (20) that forms a sliding joint (21) inside the ball-joint, said articulated retaining means is intended to restrain the tank in a direction X along the main fore-aft axis of the aircraft, and said retaining device having a degree of freedom to effect translational movement along an axis Z perpendicular to the axis X.

2. The retaining device as claimed in claim 1, for which the articulated retaining means is intended to be connected to a rear end (102) of the tank.

3. The device as claimed in claim 1 or 2, for which said fixing rod (20) comprises a pin provided with an external part (20b) in the form of a tube and an internal part (20a) in the form of a rod pushed into the tube.

4. An aircraft comprising a tank arranged in the fuselage of the aircraft and attached to the fuselage by a retaining device as claimed in any one of the preceding claims, for which the fixing rod is secured to the structure (12) of the aircraft, and the articulated retaining means is secured to a load-spreading skirt (23) fixed to a periphery of the tank.

5. The aircraft as claimed in claim 4, for which the articulated retaining means comprising said ball-joint which connects the tank to the structure through said fixing rod so that said ball joint has a degree of freedom in terms of translation on said rod, said ball joint provides to the tank three degrees of freedom in the three rotations about the rod and uncouples the tank from the fixing rod in terms of pitch, roll and yaw.

6. The aircraft as claimed in claim 5, for which the fixing rod (20) is pushed into a sliding joint (21) surrounded by a spherical ball (22) at the end of a skirt (23) secured to the tank (100), for which the structure provides for the transmission of force from the rod to the fuselage of the aircraft, and for which the sliding joint reacts force along the axes X and Y while at the same time being entirely free to rotate and free to effect a translational movement about the rod (20) along the vertical axis Z.

7. The aircraft as claimed in any one of Claims 4 to 6, for which the retaining device is arranged at the rear of the tank with respect to a longitudinal axis of the aircraft.

8. The aircraft as claimed in any one of Claims 4 to 7, for which the retaining device is designed to form an anchor point for anchoring the tank in the aircraft, complementary retaining means keeping the tank aligned with the fuselage of the aircraft.

9. The aircraft as claimed in claim 8, for which the complementary retaining means comprise link rods (30) fixed to the tank and to the fuselage by means of pins (51) which are free to rotate and arranged in such a way as to allow the tank to expand or contract freely.