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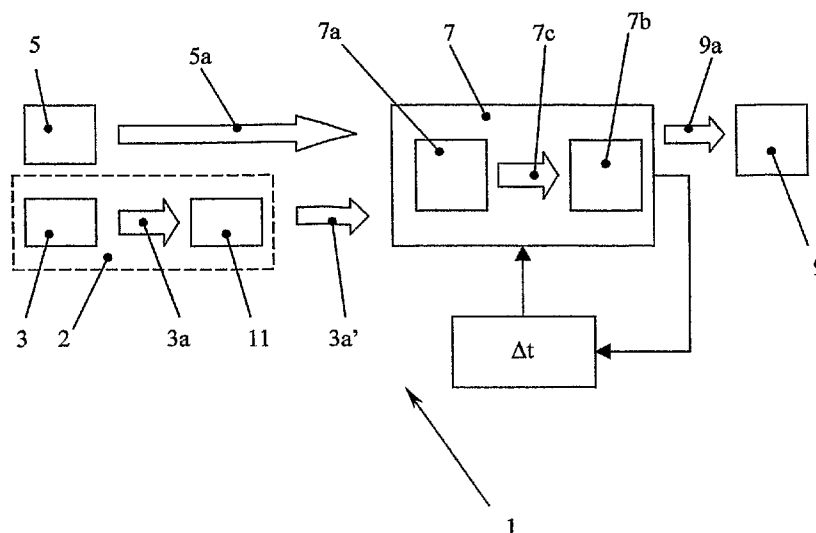
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(57) Abstract: A system (1) is described for automatically controlling the flight of at least one power wing airfoil (2), comprising first detecting means (3) on board of such power wing airfoil (2) adapted to detect first pieces of information (3a) dealing with at least one position and one orientation in space of the power wing airfoil (2) and accelerations to which the power wing airfoil (2) is subjected; second detecting means (5) on the ground adapted to detect tension on the driving cables (21) of the power wing airfoil (2) and a position of a driving unit (9) counterweight; processing and controlling means (7) adapted to transform the contents of such information (3a, 5a) into a mechanical drive operating on the winches of the driving unit (9) to drive the power wing airfoil (2) along a flight trajectory TV1, TV2, TV3, ..., TVn maximising a "lift" effect generated on the power wing airfoil (2). A process is further described for automatically controlling the flight of at least one power wing airfoil (2) through the system (1).

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