CLAIMS

1. A guiding assembly adapted to be connected to a projectile, comprising:

a rear main unit adapted to be connected at its rear side to ~~the~~a front end of ~~the projectile~~ said projectile, said rear main unit having a central longitudinal axis;

a front main unit rotatably connected at its rear end to ~~the~~a front end of said rear main unit and adapted to rotate about said central longitudinal axis;

a relative speed control unit operable between said rear main unit and said front main unit and capable of providing spin braking force to slow the relative speed of rotation of said front main unit, wherein said braking force is controllable; ~~and~~

a single guiding fin radially extending from said front main unit, wherein said guiding fin is shaped as a flat aerodynamic element having a fin chord extending from the front end of the fin to the rear end of the fin and residing in a plane parallel to said central longitudinal axis, said chord of said fin forms a pitch angle with said central longitudinal axis in said plane parallel to said central longitudinal axis~~.~~; and

a return spring, operably connected to said fin, wherein said spring is configured to allow movement correspondingly to aerodynamic pressure on the fin, and wherein said pitch angle is controllable by said spring.

2. The guiding assembly of claim 1 wherein said pitch angle of said single fin is set at a fixed angle between zero and fifteen degrees.

3. The guiding assembly of claim 1, wherein said ~~the~~ pitch angle of said fin is adjustable to values that are not lower than zero degrees and not higher than fifteen degrees.

4. The guiding assembly of claim 1, wherein said relative speed control unit is an electrical alternator, and wherein the braking force of it is controllable by controlling the amount of electrical power consumed from the alternator.

5. The guiding assembly of claim 1, wherein the size and pitch angle of said guiding fin are big enough for causing said front main unit to spin in a rotational speed that is faster than the rotational speed of said projectile and is opposite to it in direction, when said projectile is in its trajectory.

6. The guiding assembly of claim 1, wherein said guiding fin is pivotally connected to said front main unit.

~~5.~~7. The guiding assembly of claim 1, wherein said guiding fin has a steering lever.

~~6.~~8. The guiding assembly of claim 1 wherein the pitch angle of said fin is controllable.

~~7.~~9. The guiding assembly of claim ~~6~~8, wherein ~~said fin is operably connected to a return spring so that~~ the pitch angle of said fin is growing larger as the aerodynamic pressure on the fin lowers and it is ~~growing~~getting smaller as the aerodynamic pressure on the fin gets bigger.

~~8.~~10. A method for guiding a projectile along its desired trajectory, the method comprising:

providing a guiding assembly to ~~the~~a front end of said projectile, said guiding assembly comprising:

a rear main unit adapted to be connected at its rear side to ~~the~~a front end of ~~the projectile~~ said projectile, said rear main unit having a central longitudinal axis;

a front main unit rotatably connected at its rear end to the front end of said rear main unit and adapted to rotate about said central longitudinal axis;

a relative speed control unit operable between said rear main unit and said front main unit and capable of providing spin braking force to slow the relative speed of rotation of said front main unit, wherein said braking force is controllable; ~~and~~

a single guiding fin radially extending from said front main unit, wherein said guiding fin is shaped as a flat aerodynamic element having a fin chord extending from the front end of the fin to the rear end of the fin and residing in a plane parallel to said central longitudinal axis, said chord of said fin form a pitch angle with said central longitudinal axis in said plane parallel to said central longitudinal axis; and

a return spring, operably connected to said fin, and the spring moving correspondingly to aerodynamic pressure on the fin;

launching said projectile; and

controlling the magnitude of the rotational speed of said front main unit to be substantially equal to and opposite in direction with respect to the rotational speed of said projectile when correction to said trajectory is required and allowing said front main unit to rotate with no braking forces at said relative speed control unit at other times., wherein said pitch angle is controllable by said spring.

9.11. The method of claim 810 wherein said relative speed control unit is an electrical alternator.

10.12. The method of claim 911, further comprising:

controlling the rotational speed of said front main unit by applying controllable electrical load to said alternator.

11.13. The method of claim 1012, wherein said guiding fin is operably connected to a return spring so that the pitch angle of said fin is growing larger as the aerodynamic pressure on the fin lowers and it is growinggetting smaller as the aerodynamic pressure on the fin gets bigger.