blank shot, the hammer returns. Schematically, the electronic circuit and the recoil sensor are likewise represented.

[0013] Legend

(1) Magnet

(2) Weapon part or hammer

(3) Rod with the hammer spring

(4) Armature or coil

(5) Electronic circuit

(6) Acceleration sensor

(7) Trigger

(8) Striker

Summary of the invention

[0014] According to embodiments of the invention, the electronic circuit can be energized by battery or by energy recuperation. In order to avoid any confusion in the text, it shall be stipulated that, in the former case, reference is made to the circuit being awakened after an a priori movement and, in the latter case, reference is made to the circuit being energized after an a priori movement. Likewise, it shall be mentioned that the circuit is awakened or energized when the speed of displacement of the part of the weapon exceeds a critical speed. It is obvious that this critical reference value may be expressed in the form of an energy threshold, rather than in the form of a speed threshold.

[0015] The present disclosure is more particularly detailed for a detection system based on a magnet and coil pair. By coil is meant a simple winding or a more complex arrangement, such as one comprising several windings interconnected head to tail. Likewise, for the magnet, this may be a simple monobloc magnet or a more complex magnet structure. It is moreover conceivable that the system is devised so that the axis of the magnet is perpendicular to the direction of the movement being detected.

[0016] The present disclosure pertains to a device for counting live bullet shots, blank shots, and dry-firing actuation of the striker for every type of weapon, said device being able to discriminate among these three events and comprising:

- an electronic circuit,
- a first sensor designed to detect a movement of a part of the weapon preceding a potential live bullet shot or a blank shot,
- a second sensor designed to measure a recoil acceleration when the live bullet shot or blank shot has been fired.

[0017] According to particular embodiments of the invention, the device comprises at least one or a suitable combination of the following characteristics:

- the electronic circuit is configured to be awakened or energized on the basis of the detection of a movement by the first sensor;
- the awakening or the energizing of the electronic circuit only occurs if the part of the weapon has a speed of displacement greater than a reference speed;

- the first sensor is designed to detect the movement of a part of the weapon by the variation of a magnetic field in an armature;
- the armature serves as a detector of movement and also as a generator of energy for the energizing of the electronic circuit;
- the first sensor is designed to detect the movement of the hammer of the weapon or any element connected to the movement of the hammer;
- the first sensor is integrated in the hammer, the release, the trigger, the slide, the piston, the bolt or the feed lever;
- the first sensor is of electromagnetic type comprising a coil integrated in the body of the weapon and a magnet integrated in said part of the weapon and designed to be displaced within the coil;
- the device is configured to detect, discriminate, and count a shot, whether a live bullet shot or a blank shot, and a dry-firing actuation of the striker, on the basis of the following criteria:
    - when the first sensor detects a movement in a single direction of the part of the weapon, a dry-firing actuation of the striker is detected,
    - when the first sensor detects successive movements in opposite directions of the part of the weapon, a shot is detected;
- when a shot is detected, said device is configured to discriminate a live bullet shot from a blank shot on the basis of the following criteria:
    - when the second sensor measures an acceleration of the weapon in a single direction, a live bullet shot is detected,
    - when the second sensor measures an acceleration of the weapon in one direction followed by an acceleration in an opposite direction, a blank shot is detected.

[0018] The present disclosure likewise pertains to a weapon comprising the counting device as described above.

[0019] According to one variant, the weapon is provided with a first sensor coupled to the hammer, to a release or a trigger for a rifle and a pistol, or to the slide, the bolt, the release, the trigger or the feed lever of a machine gun. According to another variant, the weapon is provided with the first sensor coupled to the piston for a rifle and a machine gun.

[0020] The present disclosure likewise pertains to a method for counting live bullet shots, blank shots, and dry-firing actuation of the striker for a weapon, involving a step of detection and analysis of the movement of a part of the weapon prior to a potential live bullet shot or blank shot.

[0021] The method further involves an additional step of measurement of a recoil acceleration of the weapon or a part of the weapon if the live bullet shot or blank shot has taken place; wherein the discrimination between the live bullet shot, the blank shot, and the dry-firing actuation of the striker is done as follows:

- it is a dry-firing actuation of the striker when the part of the weapon is displaced in a single direction,

- when the second sensor (6) measures an acceleration of the weapon in one direction followed by an acceleration in an opposite direction, a blank shot is detected.

11. An automatic or semiautomatic weapon comprising a counting device as claimed in any one of the preceding claims.

12. A method for counting live bullet shots, blank shots, and dry-firing actuation of the striker for a weapon, involving:

- a step of detection and analysis of the movement of a part of the weapon (2) prior to a potential live bullet shot or blank shot,
- an additional step of measurement of a recoil acceleration of the weapon if the live bullet shot or blank shot has taken place,

wherein the discrimination between the live bullet shot, the blank shot, and the dry-firing actuation of the striker is done as follows:

- it is a dry-firing actuation of the striker when the part of the weapon (2) is displaced in a single direction,
- it is a live bullet shot or a blank shot when the part of the weapon (2) is displaced successively in two opposite directions;
- it is a blank shot when the recoil acceleration comprises two components of opposite directions,
- it is a live bullet shot when the recoil acceleration comprises one component in a single direction.

13. The method as claimed in claim 12, involving a step of awakening or energizing an electronic circuit (5) providing the functions of counting and memorization of the live bullet shots, blank shots, and dry-firing actuations of the striker when the part of the weapon (2) is displaced with a speed greater than a reference speed.