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(54) **Electric toy gun**

Elektrische Spielzeugpistole
pistolet de jeu électrique

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Description

BACKGROUND OF THE INVENTION

(a) Field of the Invention

[0001] The present invention relates to an electric toy gun, and more particularly to an electric toy gun for shooting plastic bullets (particularly so-called BB bullets).

(b) Description of the Prior Art:

[0002] Conventional toy guns used for war games are air guns, gas guns, electric guns and so on for the players to shoot plastic bullets (BB bullets) or other material bullets. As disclosed in U.S. Patent No. US8585407, US7694448, and US20120138038, a conventional electric gun comprises a plurality of pivots and gears therein, so that the power of the motor can be transmitted to the firing mechanism through the pivots and the gears for shooting bullets. The electric gun shoots plastic bullets through compressed air. The weight of one plastic bullet is about 0.12g to 1g. The initial speed of shooting is about 100M/Sec. Therefore, the player cannot feel the recoiling effect when shooting the plastic bullets.

[0003] A toy gun to simulate the recoiling effect has been developed and is disclosed e.g. in US 2012/138038 A1. By means of a reciprocating movement of the piston or in other ways by generating vibrations, such a toy gun provides a vibration effect when shooting, but it is not like a real recoiling effect. Besides, the elastic members (springs) used to push the firing mechanism in the casing of the conventional toy gun will fatigue after a period of time. It is necessary to disassemble the toy gun for maintenance and replacement. However, the design of the conventional toy gun does not allow taking out the elastic members from the rear end of the casing. It is required to disassemble the whole casing of the toy gun, so the maintenance and replacement are difficult and inconvenient.

SUMMARY OF THE INVENTION

[0004] It is an object of the present invention to provide an enhanced electric toy gun enabling a vibration effect like a real gun when shooting bullets, which can be disassembled and maintained with ease.

[0005] This problem is solved by an electric toy gun according to claim 1. Further advantageous embodiments are the subject-matter of the dependent claims.

[0006] In order to achieve the aforesaid object, the electric toy gun (electric toy gun structure) of the present invention comprises a casing, a firing mechanism, a guide pipe, a hit rod, a first elastic member, a second elastic member and a claw. The casing has a room therein. The casing has a rear end with a through hole communicating with the room. The firing mechanism is disposed in the room. The firing mechanism has a piston

corresponding to the through hole. The guide pipe is coupled at the rear end of the casing and communicates with the through hole. The hit rod is movably disposed in the guide pipe. The hit rod has a first end and a second end.

5 The first end of the hit rod passes through the through hole and is located in the room. The second end of the hit rod is coupled with a weight. The first elastic member is disposed in the room. A first end of the first elastic member abuts against the piston, and a second end of the first elastic member abuts against the hit rod. A second elastic member is disposed in the guide pipe. A first end of the second elastic member abuts against the casing, and a second end of the second elastic member abuts against the weight.

10 **[0007]** The claw is disposed inside the piston and is configured for releasably catching the first end of the hit rod. When the claw catches the first end of the hit rod, the piston is pushed forwards through the elastic force of the first elastic member and the hit rod and weight are synchronously moved to compress the second elastic member. When the claw releases the first end of the hit rod, the hit rod and weight are pushed backwards through the elastic force of the first and second elastic member for the weight of the hit rod to hit an end plug coupled to the rear end of the guide pipe.

[0008] Thus the electric toy gun of the present invention enables a vibration effect like a real gun when shooting bullets and can be disassembled and maintained with ease.

30 **[0009]** Preferably, the electric toy gun further comprises a tubular stop sleeve. The stop sleeve is fitted on the first end of the hit rod. The second end of the first elastic member abuts against the stop sleeve.

35 **[0010]** Preferably, the stop sleeve has a first stop portion. The first elastic member is a spiral spring fitted in the stop sleeve. The second end of the first elastic member abuts against the first stop portion.

[0011] Preferably, the weight has a diameter greater than that of the hit rod. The weight is formed with a second stop portion. The second elastic member is a spiral spring fitted on the hit rod and abuts against the second stop portion.

40 **[0012]** Preferably, the electric toy gun structure further comprises a tubular shaft sleeve. The shaft sleeve is disposed in the through hole. The first end of the hit rod passes through the shaft sleeve to be located in the room.

[0013] Preferably, the rear end of the casing is provided with a connecting protrusion. The through hole passes through the connecting protrusion. A front end of the guide pipe is coupled to the connecting protrusion.

45 **[0014]** Preferably, the connecting protrusion has first threads thereon, and the front end of the guide pipe has second threads therein to engage with the first threads.

[0015] Preferably, a rear end of the guide pipe is coupled with an end plug.

50 **[0016]** Preferably, the rear end of the guide pipe has third threads therein, and the end plug has fourth threads thereon to engage with the third threads.

[0017] Accordingly, when the electric toy gun structure of the present invention shoots bullets, the weight of the hit rod will hit the end plug to provide a vibration effect like a real gun to shoot bullets. The end plug can be detached from the guide pipe to take out the hit rod, the shaft sleeve, the stop sleeve, the first elastic member, and the second elastic member to replace the elastic members, so that the electric toy gun according to the present invention can be disassembled and maintained with ease.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018]

FIG. 1 is a sectional view of a preferred embodiment of an electric toy gun according to the present invention;

FIG. 2 is an exploded view of the preferred embodiment of the present invention;

FIG. 3 is a schematic view showing the first operation of the preferred embodiment of the present invention;

FIG. 4 is a schematic view showing the second operation of the preferred embodiment of the present invention; and

FIG. 5 is a schematic view showing the third operation of the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings.

[0020] As shown in FIG. 2, the electric toy gun (electric toy gun structure) for shooting plastic bullets (BB bullets) according to a preferred embodiment of the present invention comprises a casing 1, a firing mechanism 2, a guide pipe 4, a hit rod 5, a first elastic member 6, and a second elastic member 7.

[0021] The casing 1 is composed of two semi-casing bodies 11 and has a room or chamber 12 therein for installing other mechanisms. The casing 1 has a rear end 13, a front end 15, and a lower end 16. The rear end 13 of the casing 1 has a through hole 14 communicating with the room 12. The front end 15 is adapted for mounting a barrel. The lower end 16 is adapted for mounting a handle. The firing mechanism 2 comprises a cylinder 21 and a piston 22. The cylinder 21 is coupled in the room 12 and pushed by the piston 22 to send out air towards the front end 15 of the casing 1. The piston 22 is disposed in the cylinder 21 to compress air forwards and corresponds to the through hole 14 of the rear end 13 of the casing 1 backwards. In a preferred embodiment, the guide pipe 4 is a hollow pipe as a portion of the butt. The front end of the guide pipe 4 is coupled at the rear end

13 of the casing 1 and communicates with the through hole 14. The hit rod 5 is movably disposed in the guide pipe 4. The hit rod 5 has a first end 51 and a second end 52. The first end 51 of the hit rod 5 passes through the through hole 14 and is located in the room 12. The second end 52 is coupled with a weight 53 through a threaded lock structure 54. The weight 53 is able to reciprocate for simulating vibrations. The first elastic member 6 is disposed in the room 12. A first end of the first elastic member 6 abuts against the piston 22 of the firing mechanism 2 and a second end of the first elastic member 6 abuts against the hit rod 5 for pushing the piston 22 to push air forwards. The second elastic member 7 is disposed in the guide pipe 4. A first end of the second elastic member 7 abuts against the rear end 13 of the casing 1 and a second end of the second elastic member 7 abuts against the weight 53 of the hit rod 5 for moving the hit rod 5 and the weight 53 backwards to generate vibrations. Thus, the electric toy gun of the present invention is assembled.

[0022] As shown in FIG. 1 and FIG. 2, the present invention further comprises a tubular stop sleeve 8 and a tubular shaft sleeve 9. The stop sleeve 8 is fitted on the first end 51 of the hit rod 5, such that the second end of the first elastic member 6 is or abuts against the stop sleeve 8. Preferably, the stop sleeve 8 has a raised-ring first stop portion 81. The first elastic member 6 is a spiral spring fitted in the stop sleeve 8, and the second end of the first elastic member 6 is or abuts against the first stop portion 81. The shaft sleeve 9 is disposed in the through hole 14 at the rear end 13 of the casing 1 to seal the through hole 14. The first end 51 of the hit rod 5 passes through the shaft sleeve 9 to be located in the room 12. When it is necessary to disassemble and maintain the electric toy gun structure, the shaft sleeve 9 is taken out backwards so as to take out the stop sleeve 8, the first elastic member 6, the second elastic member 7 and so on.

[0023] As shown in FIG. 1 and FIG. 2, the weight 53 of the present invention has a diameter greater than that of the hit rod 5. The weight 53 is formed with a second stop portion 531. The second elastic member 7 is a spiral spring fitted on the hit rod 5. The first end of the second elastic member 7 abuts against the rear end 13 of the casing 1 and the second end of the second elastic member 7 abuts against the second stop portion 531 of the hit rod 5.

[0024] As shown in FIG. 1 and FIG. 2, the rear end 13 of the casing 1 is integrally formed or connected with a connecting protrusion 17. The through hole 14 passes through the connecting protrusion 17. The front end of the guide pipe 4 is coupled to the connecting protrusion 17. Preferably, the connecting protrusion 17 has first threads 171 thereon. The front end of the guide pipe 4 has second threads 41 therein to engage with the first threads 171. The rear end of the guide pipe 4 is coupled with an end plug 42. Preferably, the rear end of the guide pipe 4 has third threads 43 therein, and the end plug 42 has fourth threads 44 thereon to engage with the third

threads 43. The end plug 42 can be detached from the guide pipe 4 to take out the hit rod 5, the stop sleeve 8, the first elastic member 6, the second elastic member 7 and so on for maintenance and replacement.

[0025] As shown in FIG. 3, when the electric toy gun according to the present invention is used, a motor (not shown) in the casing 1 drives a gear 10, and then the gear 10 drives a rack 221 at one side of the piston 22 to move the piston 22 backwards and to compress the first elastic member 6 until a claw 222 inside the piston 22 catches the first end 51 of the hit rod 5. As shown in FIG. 4, when the gear 10 is turned to a non-toothed portion 101, the force to move the piston 22 backwards will be released. Through the elastic force of the first elastic member 6, the piston 22 is pushed forwards to send out the air and the hit rod 5 and the weight 53 are synchronously moved forwards to compress the second elastic member 7. As shown in FIG. 5, until the claw 222 inside the piston 22 is detached from the first end 51 of the hit rod 5, the hit rod 5 and the weight 53 are pushed to the rear end of the guide pipe 4 through the first elastic member 6 and the second elastic member 7 for the weight 53 of the hit rod 5 to hit the end plug 42. Therefore, when the electric toy gun of the present invention shoots bullets, the weight 53 of the hit rod 5 is reciprocated to provide a vibration effect like a real gun to shoot bullets.

[0026] In particular, as shown in FIG. 1, the electric toy gun according to the present invention composed of the guide pipe 4, the hit rod 5, the first elastic member 6, the second elastic member 7, the stop sleeve 8 and the shaft sleeve 9 provides a vibration effect. Besides, when it is necessary to replace or maintain the first elastic member 6 and the second elastic member 7, the end plug 42 or the connecting protrusion 17 can be detached from the guide pipe 4 to take out the hit rod 5 and the shaft sleeve 9 backwards as well as the first elastic member 6, the second elastic member 7 and the stop sleeve 8 out of the through hole 14 of the casing 1. It is convenient for the user to maintain and replace the elastic members.

[0027] Although particular embodiments of the present invention have been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the scope of the present invention. Accordingly, the present invention is not to be limited except as by the appended claims.

Claims

1. An electric toy gun comprising

a casing (1) having a room (12) therein, the casing having a rear end with a through hole (14) communicating with the room (12);
a firing mechanism (2) disposed in the room (12), the firing mechanism (2) having a piston (22) corresponding to the through hole (14);
a guide pipe (4) coupled at the rear end (13) of

the casing (1) and communicating with the through hole (14);

a hit rod (5) movably disposed in the guide pipe (4), the hit rod (5) having a first end (51) and a second end (52), the first end (51) of the hit rod (5) passing through the through hole (14) and being located in the room (12), the second end (52) of the hit rod (5) being coupled with a weight (53);

a first elastic member (6) disposed in the room (12), a first end of the first elastic member (6) abutting against the piston (22) and a second end of the first elastic member (6) abutting against the hit rod (5); and

a second elastic member (7) disposed in the guide pipe (4), a first end of the second elastic member (7) abutting against the casing (1) and a second end of the second elastic member (7) abutting against the weight (53);

said electric toy gun structure further comprising a claw (222) disposed inside the piston (22) and being configured for releasably catching the first end (51) of the hit rod, wherein

, when the claw (222) catches the first end (51) of the hit rod, the piston (22) is pushed forwards through the elastic force of the first elastic member (6) and the hit rod (5) and weight (53) are synchronously moved to compress the second elastic member (7), and

, when the claw (22) releases the first end (51) of the hit rod, the hit rod (5) and weight (53) are pushed backwards through the elastic force of the first and second elastic member (6, 7), for the weight (53) of the hit rod (5) to hit an end plug (42) coupled to the rear end of the guide pipe (4).

2. The electric toy gun as claimed in claim 1, further comprising a tubular stop sleeve (8), the stop sleeve (8) being fitted on the first end (51) of the hit rod (5), the second end of the first elastic member (6) abutting against the stop sleeve (8).

3. The electric toy gun as claimed in claim 2, wherein the stop sleeve (8) has a first stop portion (81), the first elastic member (6) being a spiral spring fitted in the stop sleeve (8), the second end of the first elastic member (6) abutting against the first stop portion (81).

4. The electric toy gun as claimed in any of the preceding claims, wherein the weight (53) has a diameter greater than that of the hit rod (5), the weight (53) being formed with a second stop portion (531), the second elastic member (7) being a spiral spring fitted on the hit rod (5) and abutting against the second stop portion (531).

5. The electric toy gun as claimed in any of the preceding claims, further comprising a tubular shaft sleeve (9), the shaft sleeve (9) being disposed in the through hole (14), the first end of the hit rod (5) passing through the shaft sleeve (9) to be located in the room (12). 5
6. The electric toy gun as claimed in claim 5, wherein the rear end of the casing (1) is provided with a connecting protrusion (17), the through hole (14) passing through the connecting protrusion (17), a front end of the guide pipe (4) being coupled to the connecting protrusion (17). 10
7. The electric toy gun as claimed in claim 6, wherein the connecting protrusion (17) has first threads (171) thereon, and the front end of the guide pipe (4) has second threads (41) therein to engage with the first threads (171). 15
8. The electric toy gun as claimed in claim 7, wherein the rear end of the guide pipe (4) has third threads (43) therein, and the end plug (42) has fourth threads (44) thereon to engage with the third threads (43). 20
9. The electric toy gun as claimed in claim 3, wherein the weight (53) has a diameter greater than that of the hit rod (5), the weight (53) being formed with a second stop portion (531), the second elastic member being a spiral spring fitted on the hit rod (5) and being against the second stop portion (531). 25

Patentansprüche

1. Elektrische Spielzeugpistole, umfassend:

ein Gehäuse (1), das einen darin ausgebildeten Raum (12) aufweist, wobei das Gehäuse ein hinteres Ende mit einem Durchloch (14) aufweist, das mit dem Raum (12) verbunden ist; 40
 einen Abzugsmechanismus (2), der in dem Raum (12) angeordnet ist, wobei der Abzugsmechanismus (2) einen Kolben (22) aufweist, der zu dem Durchloch (14) passt; 45
 einen Führungsrohr (4), das mit dem hinteren Ende (13) des Gehäuses verbunden ist und mit dem Durchloch (14) in Verbindung steht;
 einen Schlag-Stab (5), der beweglich in dem Führungsrohr (4) angeordnet ist, wobei der Schlag-Stab (5) ein erstes Ende (51) und ein zweites Ende (52) aufweist, wobei das erste Ende (51) des Schlag-Stabes (5) sich durch das Durchloch (14) erstreckt und in dem Raum (12) angeordnet ist, wobei das zweite Ende (52) des Schlag-Stabes (5) mit einem Gewicht (53) verbunden ist; 50
 ein erstes elastisches Element (6), das in dem

Raum (12) angeordnet ist, wobei ein erstes Ende des ersten elastischen Elements (6) gegen den Kolben (22) stößt und ein zweites Ende des ersten elastischen Elements (6) gegen den Schlag-Stab (5) drückt; und
 ein zweites elastisches Element (7), das in dem Führungsrohr (4) angeordnet ist, wobei ein erstes Ende des zweiten elastischen Elements (7) gegen das Gehäuse (1) drückt und wobei ein zweites Ende des zweiten elastischen Elements (7) gegen das Gewicht (53) drückt; und wobei die elektrische Spielzeugpistole des Weiteren einen Greifer (222) umfasst, der in dem Kolben (22) angeordnet ist und ausgelegt ist, um das erste Ende (51) des Schlag-Stabes lösbar greift; wobei
 wenn der Greifer (222) das erste Ende (51) des Schlag-Stabes greift, der Kolben (22) durch die elastische Kraft des ersten elastischen Elements (6) nach vorne gedrückt wird, und der Schlag-Stab und das Gewicht (53) asynchron bewegt werden, um das zweite elastische Element (7) zusammenzudrücken; und wobei
 wenn der Greifer (222) das erste Ende (51) des Schlag-Stabes freigibt, der Schlag-Stab (5) und das Gewicht (53) durch die elastische Kraft des ersten und des zweiten elastischen Elements (6,7) nach hinten gedrückt werden, so dass das Gewicht (53) den Schlag-Stab (5) an einen Endpfropfen (42) anschlägt, der mit dem hinteren Ende des Führungsrohrs (4) verbunden ist.

2. Elektrische Spielzeugpistole nach Anspruch 1, des Weiteren eine röhrenförmige Anhalte-Hülse (8) umfassend, wobei die Anhalte-Hülse (8) auf das erste Ende (51) des Schlag-Stabes (5) aufgesetzt ist, und wobei das zweite Ende des ersten elastischen Elements (6) gegen die Anhalte-Hülse (8) stößt. 35

3. Elektrische Spielzeugpistole nach Anspruch 1, wobei die Anhalte-Hülse (8) einen ersten Anschlag-Abschnitt (81) aufweist, wobei das erste elastische Element (6) eine Spiraldruckfeder ist, die in die Anhalte-Hülse (8) eingesetzt ist, und wobei das zweite Ende des ersten elastischen Elements (6) gegen den ersten Anschlag-Abschnitt (81) stößt. 40

4. Elektrische Spielzeugpistole nach einem der vorherigen Ansprüche, wobei das Gewicht (53) einen Durchmesser hat, der größer als der des Schlag-Stabes (5) ist, und wobei das Gewicht (53) mit einem zweiten Anschlag-Abschnitt (531) ausgebildet ist, und wobei das zweite elastische Element (7) eine Spiraldruckfeder ist, die auf den Schlag-Stab (5) aufgesetzt ist und gegen den zweiten Anschlag-Abschnitt (531) stößt. 45

5. Elektrische Spielzeugpistole nach einem der vorherigen Ansprüche, wobei das Gewicht (53) einen Durchmesser hat, der größer als der des Schlag-Stabes (5) ist, und wobei das Gewicht (53) mit einem zweiten Anschlag-Abschnitt (531) ausgebildet ist, und wobei das zweite elastische Element (7) eine Spiraldruckfeder ist, die auf den Schlag-Stab (5) aufgesetzt ist und gegen den zweiten Anschlag-Abschnitt (531) stößt. 50

rigen Ansprüche, des Weiteren eine röhrenförmige Schaft-Hülse (9) umfassend, wobei die Schaft-Hülse (9) in dem Durchloch (14) angeordnet ist, und wobei das erste Ende des Schlag-Stabes (5) die Schaft-Hülse (9) durchgreift, um in dem Raum (12) angeordnet zu sein.

6. Elektrische Spielzeugpistole nach Anspruch 5, wobei das hintere Ende des Gehäuses (1) mit einem Verbindungs-Vorsprung (17) versehen ist, wobei das Durchloch (14) sich durch den Verbindungs-Vorsprung (17) erstreckt, und wobei ein vorderes Ende des Führungsrohrs (4) mit dem Verbindungs-Vorsprung (17) verbunden ist.
7. Elektrische Spielzeugpistole nach Anspruch 6, wobei der Verbindungs-Vorsprung (17) erste Gewinde (171) auf diesem aufweist, und wobei das vordere Ende des Führungsrohrs (4) zweite Gewinde (41) in diesem aufweist, um in die ersten Gewinde (171) einzugreifen.
8. Elektrische Spielzeugpistole nach Anspruch 7, wobei das hintere Ende des Führungsrohrs (4) dritte Gewinde (43) in diesem aufweist, und wobei der End-Pfropfen (42) vierte Gewinde (44) auf diesem aufweist, um in die dritten Gewinde (43) einzugreifen.
9. Elektrische Spielzeugpistole nach Anspruch 3, wobei das Gewicht (53) einen Durchmesser hat, der größer ist als der des Schlag-Stabes (5), wobei das Gewicht (53) mit einem zweiten Anschlag-Abschnitt (531) ausgebildet ist, und wobei das zweite elastische Element eine Spiralfeder ist, die auf den Schlag-Stab (5) aufgesetzt ist und gegen den zweiten Anschlag-Abschnitt (531) gedrückt wird.

Revendications

1. Un pistolet jouet électrique comprenant :

un boîtier (1) comportant une chambre (12) en son sein, le boîtier ayant une extrémité arrière avec un trou traversant (14) communiquant avec la chambre (12); un mécanisme de mise à feu (2) disposé au sein de la chambre (12), le mécanisme de mise à feu (2) comportant un piston (22) correspondant au trou traversant (14); un tube de guidage (4) couplé à l'extrémité arrière (13) du boîtier (1) et communiquant avec le trou traversant (14); une tige de percussion (5) disposée de manière mobile dans le tube de guidage (4), la tige de tube (5) ayant une première extrémité (51) et une seconde extrémité (52), la première extrémité (51) de la tige de percussion (5) passant

au travers du trou traversant (14) et étant située dans la chambre (12), la seconde extrémité (52) de la tige de tube (5) étant couplée à un poids (53);

un premier élément élastique (6) disposé au sein de la chambre (12), une première extrémité du premier élément élastique (6) venant en butée contre le piston (22) et une seconde extrémité du premier élément élastique (6) venant en butée contre la tige de percussion (5); et un second élément élastique (7) disposé dans le tube de guidage (4), une première extrémité du second élément élastique (7) venant en butée contre le boîtier (1) et une deuxième extrémité du deuxième élément élastique (7) venant en butée contre le poids (53);

ledit pistolet jouet électrique comprenant en outre une pince (222) disposée à l'intérieur du piston (22) et configurée pour prendre de manière provisoire la première extrémité (51) de la tige de percussion, dans lequel

lorsque la pince (222) prend la première extrémité (51) de la tige de percussion, le piston (22) est poussé vers l'avant par la force élastique du premier élément élastique (6) et la tige de percussion (5) et le poids (53) sont déplacées en synchronisme pour comprimer le second élément élastique (7), et

lorsque la pince (222) libère la première extrémité (51) de la tige de percussion, la tige de percussion (5) et le poids (53) sont poussées vers l'arrière par la force élastique du premier et du second élément élastique (6, 7), pour que le poids (53) de la tige de percussion (5) vienne percuter un raccord d'extrémité (42) couplé à l'extrémité arrière du tube de guidage (4).

2. Le pistolet jouet électrique tel que revendiqué dans la revendication 1, comprenant en outre un manchon de butée tubulaire (8), le manchon de butée (8) étant monté sur la première extrémité (51) de la tige de percussion (5), la seconde extrémité du premier élément élastique (6) venant buter contre manchon de butée (8).

3. Le pistolet jouet électrique tel que revendiqué dans la revendication 2, dans lequel le manchon de butée (8) comporte une première partie de butée (81), le premier élément élastique (6) étant un ressort hélicoïdal monté dans le manchon de butée (8), la deuxième extrémité du premier élément élastique (6) venant en butée contre la première partie de butée (81).

4. Le pistolet jouet électrique tel que revendiqué dans l'une quelconque des revendications précédentes, dans lequel le poids (53) a un diamètre supérieur à

celui de la tige de percussion (5), le poids (53) étant formé avec une seconde partie de butée (531), le second élément élastique (7) étant un ressort hélicoïdal monté sur la tige de percussion (5) et venant en butée contre la seconde partie de butée (531). 5

5. Le pistolet jouet électrique selon l'une quelconque des revendications précédentes, comprenant en outre un manchon d'arbre tubulaire (9), le manchon d'arbre (9) étant disposé dans le trou traversant (14), la première extrémité de la tige de percussion (5) passant au travers le manchon d'arbre (9) destiné à être situé dans la chambre (12). 10
6. Le pistolet jouet électrique tel que revendiqué dans la revendication 5, dans lequel l'extrémité arrière du boîtier (1) est pourvue d'une saillie de liaison (17), le trou traversant (14) traversant la saillie de liaison (17), une extrémité avant du tube de guidage (4) étant couplé à la saillie de liaison (17). 15 20
7. Le pistolet jouet électrique tel que revendiqué dans la revendication 6, dans lequel la saillie de liaison (17) comporte un premier filetage (171) y disposé, et l'extrémité avant du tube de guidage (4) comporte un second filetage (41) en son sein pour être en prise avec le premier filetage (171). 25
8. Le pistolet jouet électrique tel que revendiqué dans la revendication 7, dans lequel l'extrémité arrière du tube de guidage (4) présente un troisième filetage (43) en son sein, et le raccord d'extrémité (42) comporte un quatrième filetage (44) en prise avec le troisième filetage (43). 30 35
9. Le pistolet jouet électrique tel que revendiqué dans la revendication 3, dans lequel le poids (53) a un diamètre plus important que celui de la tige de percussion (5), le poids (53) étant formé avec une seconde partie de butée (531), le second élément élastique étant un ressort hélicoïdal correspondant à la tige de percussion (5) et venant en butée sur la seconde partie de butée (531). 40 45

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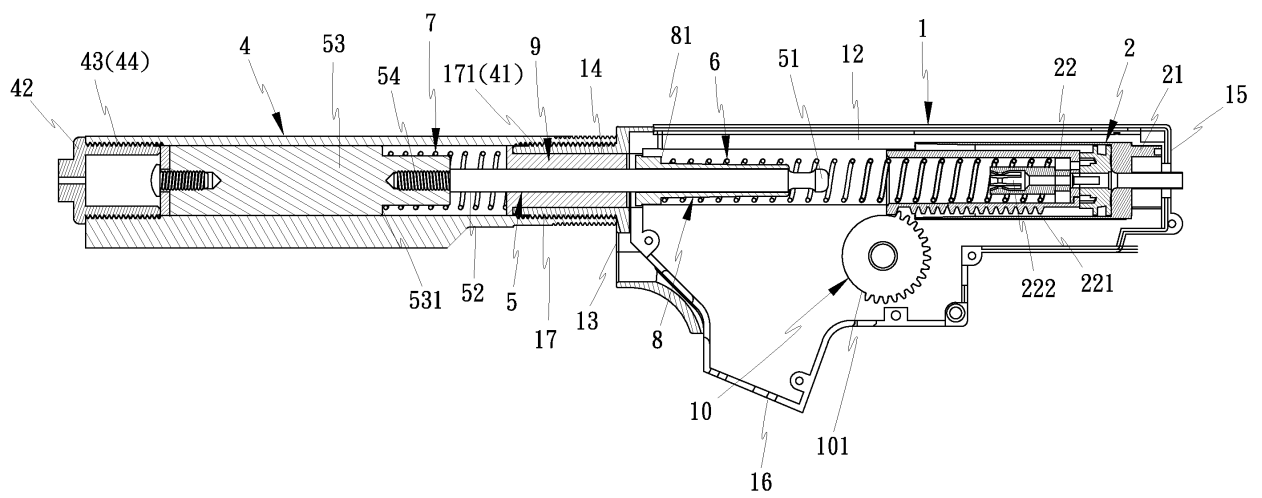


FIG. 1

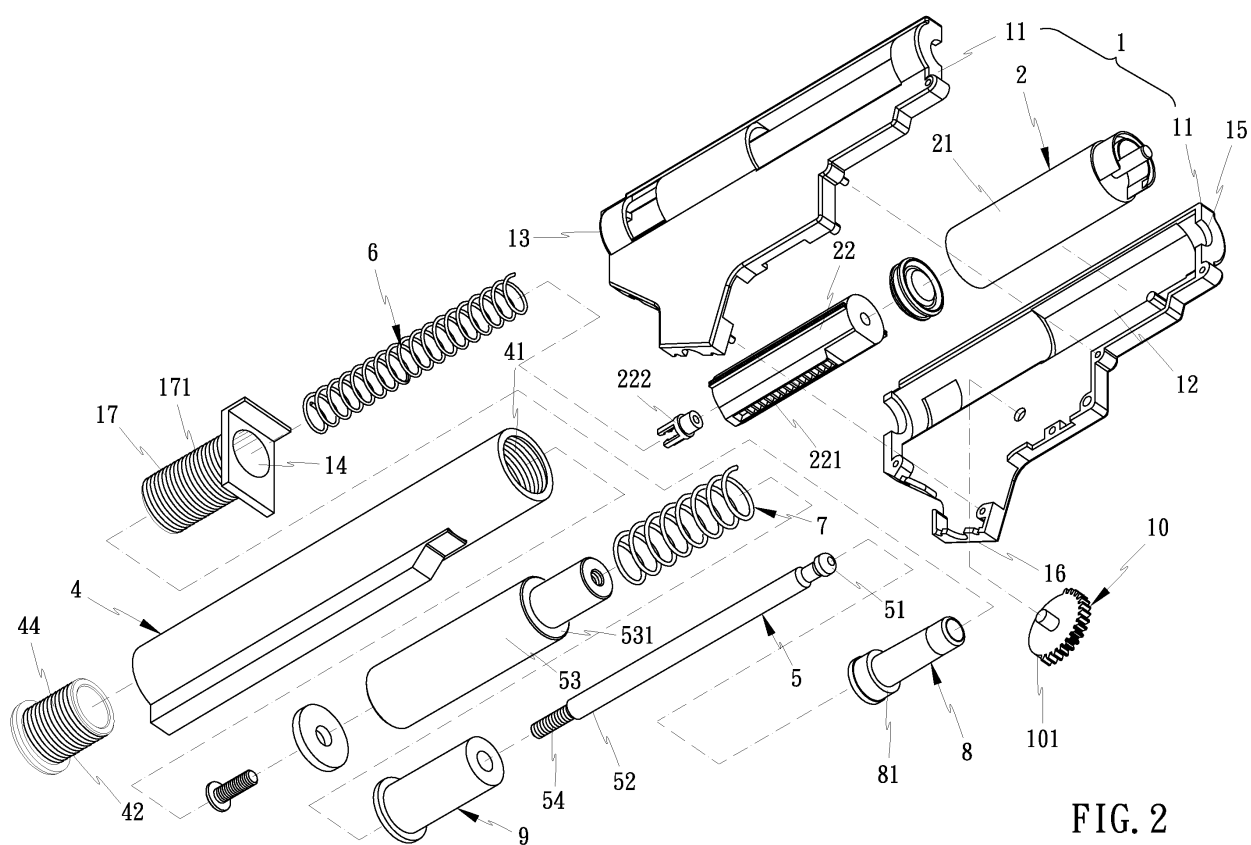


FIG. 2

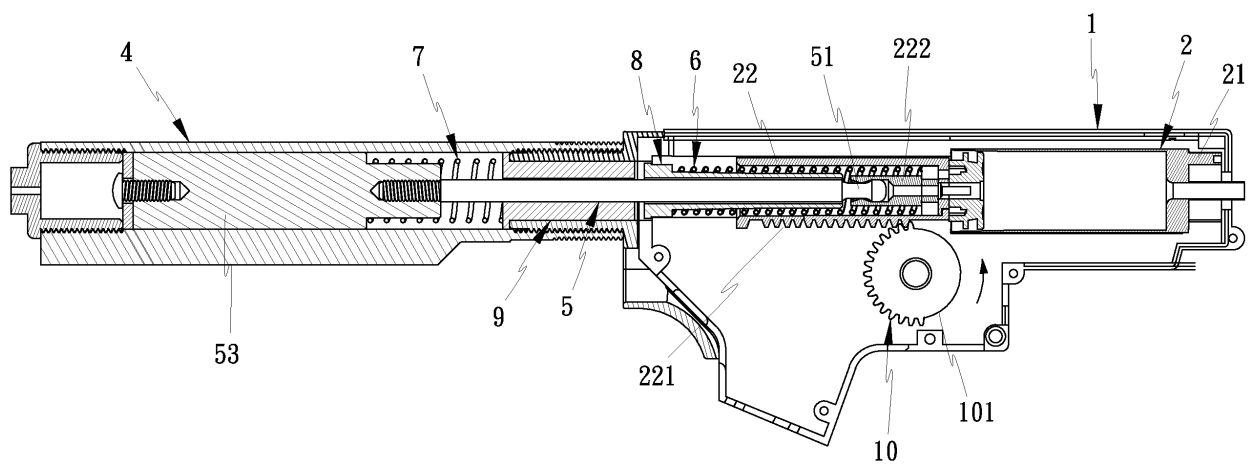


FIG. 3

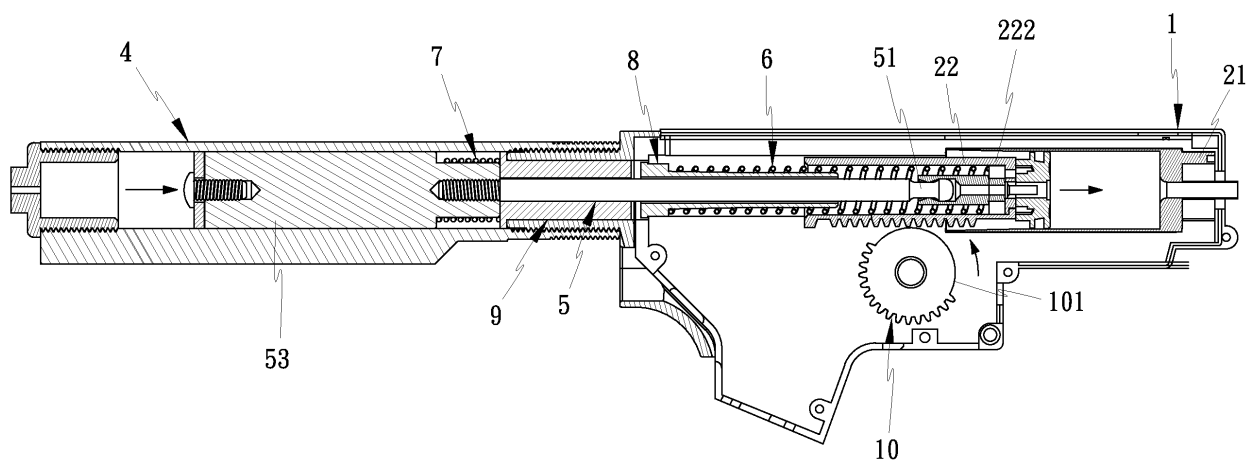


FIG. 4

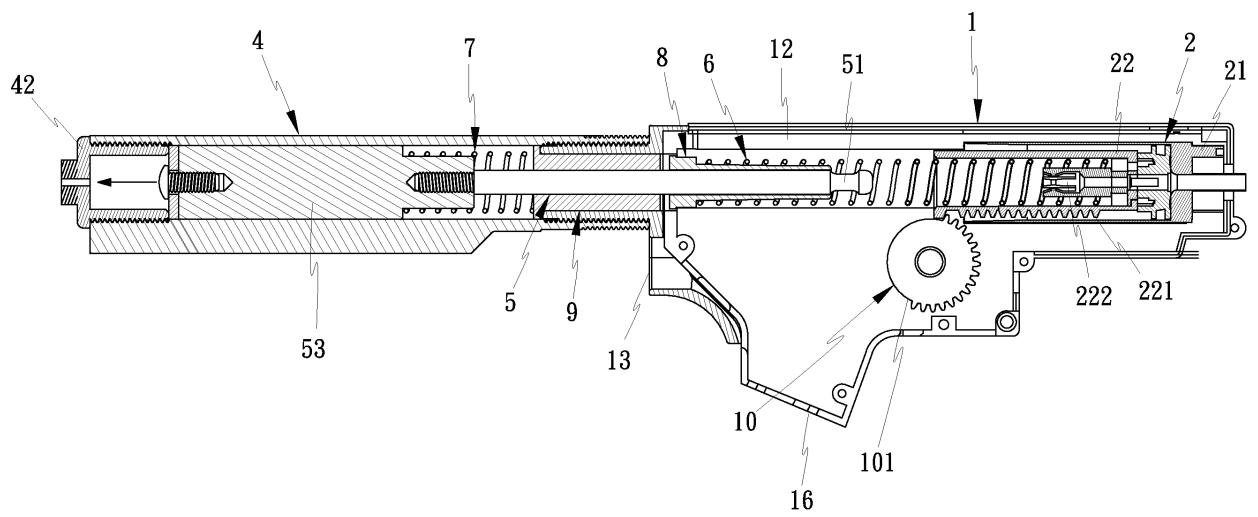


FIG. 5

REFERENCES CITED IN THE DESCRIPTION

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