M. P. APPELL.

AUTOMATIC TOY PISTOL.

APPLICATION FILED JAN. 14, 1918.

1,272,353. Patented July 16, 1918.

FIG. 1.

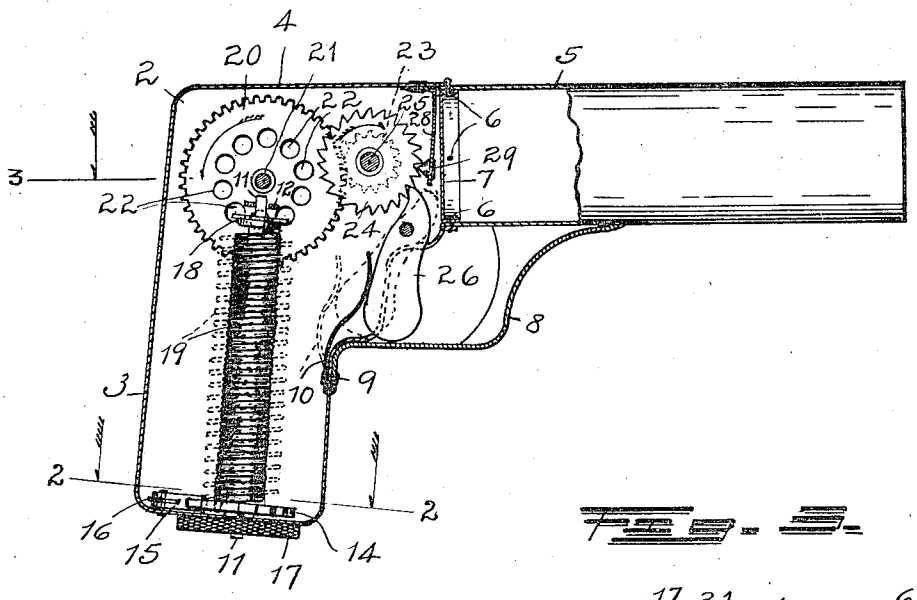
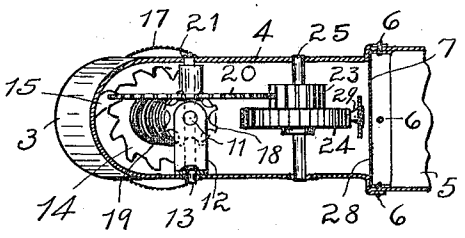


FIG. 3.



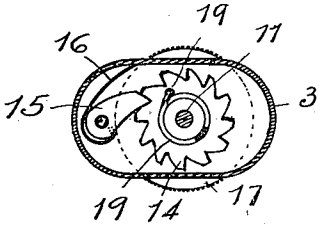


FIG. 2.

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UNITED STATES PATENT OFFICE.

MARTIN P. APPELL, OF NEAR GALVA, ILLINOIS.

AUTOMATIC TOY PISTOL.

1,272,353. Specification of Letters Patent. Patented July 16, 1918.

Application filed January 14, 1918. Serial No. 211,826.

To all whom it may concern:

Be it known that I, MARTIN P. APPELL, a citizen of the United States, residing near Galva, in the county of Henry and State of Illinois, have invented a new and useful Automatic Toy Pistol, of which the following is a specification.

My invention relates to a toy, made in the semblance of an automatic pistol and adapted to produce a sudden, loud clatter which may continue for a length of time and which may be stopped at the will of the operator.

The principal object of the invention is to produce a novel toy of this character which may be constructed at slight cost; which will produce a maximum of sound; which is durable and not liable to become disordered or inoperative; which closely resembles the conventional type of automatic pistol; which requires no detachable key for winding the operating spring; which is within the instant control of the user; which is harmless, which will operate for a relatively long time without rewinding; and which will appeal strongly to a boy's desires.

In the accompanying drawing, which illustrates one embodiment of the invention:

Figure 1 is a side elevation, partly broken away in order to show the operative elements;

Fig. 2, a transverse section, its plane being taken in the line 2—2 in Fig. 1; and

Fig. 3, a section taken substantially in the line 3—3 in Fig. 1.

Considering the drawings in detail, 2 indicates a hollow pistol-frame having a handle portion 3 and a forwardly directed portion 4. The part 3 preferably oblong in cross-section, as shown best in Fig. 2, for a purpose presently described. 5 denotes a barrel secured by rivets or screws 6 to the fore end of the part 4, the same rivets or screws also securing in place a sounding-plate or diaphragm 7. A trigger-guard 8 is secured to the handle 3 by a rivet or screw 9 which serves also to attach a trigger-return spring 10 to the handle.

The lower end of a spring-carrying shaft 11 is rotatably seated in a bearing in the butt-end of the handle, its upper end being similarly mounted in a bearing in an arm 12 secured by a rivet 13 to one side of the handle. 14 denotes a ratchet-wheel fixed on said shaft and 15 indicates a pawl adapted to engage it, the pawl being controlled by a spring 16. 17 indicates a knurled winding-wheel fixed on the outer terminal of the shaft. It is greater in diameter than the width of the oblong handle 3, in order that it may be readily operated, either by turning it with the thumb and fingers or by rolling it upon a table, floor or other flat surface. 18 denotes a tappet-wheel fixed upon the upper end portion of the shaft 11, and 19 indicates an operating-spring one end of which is secured to the wheel 14 and its other end to the wheel 18.

20 denotes a spur-wheel mounted on a shaft 21 having bearings in opposite sides of the handle 2 and provided with annular series of openings 22 adapted to be engaged by the teeth of the tappet-wheel 18, whereby to drive it. Its teeth mesh with and drive those of the toothed hub 23 of a ratchet-wheel 24 mounted on a shaft 25 seated in bearings in opposite sides of the handle. The wheel 24 is normally held from rotation by means of a trigger 26 which is held in engagement therewith by the spring 10. 28 indicates a bent-spring clatter-plate fixed at one end to the fore end 4, its free end carrying an anvil 29.

Assume the parts to be in the operative positions shown best by full lines in Fig. 1. The operator will grasp the handle 3 and with his forefinger operate the trigger 26 in the usual fashion of such devices to thereby free its point from the teeth of the wheel 24, whereby to permit it to rotate. This action releases also the hub 23, spur 20 and tappet-wheel 18. The operating-spring 19 is therefore released and it will exert its stored energy to rotate the wheel 18, spur 20, hub 23, and thereby the ratchet-wheel 24, and as the latter is thus rapidly rotated its teeth will strike the anvil 29 and impart correspondingly rapid vibrations to the clatter-plate 28, these being increased in number by reason of the multiplying gear 20, 23 and 24. The blows of the wheel 24 upon the anvil and the consequent vibrations of the plate 28 will alone create a loud alarming noise, but this is greatly intensified by reason of the blows of the anvil and clatter-plate upon the diaphragm 7. When it is desired to discontinue the sounds the user has but to release his finger from the trigger, whereupon the spring 10 will yieldingly throw its point into engagement

with a tooth of the wheel 24. This locks said wheel and thereby the hub 23, spur 20, wheel 18 and spring 19.

When the spring 19 has been fully expanded, as shown by the dotted lines in Fig. 1 it may be rewound by rotating the wheel 17 counterclockwise, the pawl 15 ratcheting over the teeth of the ratchet-wheel 14, and, when the winding operation is discontinued, being thrown by the spring 16 into locking engagement therewith.

The nature of the invention is such that it will be readily understood by reference to the foregoing description in connection with the accompanying drawings, but it must be understood that the drawings show and the description sets forth only that particular embodiment which I at present prefer, and that the details are subject to much modification without departing from the principles and novel features of the invention defined in the claims.

I claim as new the following, to-wit:

1. In a toy such as described, a pistol-shaped hollow frame, a noise-producing vibratory element therein, means for vibrating the latter, a spring from which the last recited element derives motion, and a trigger adapted to normally hold the last recited two elements from action.

2. In a toy such as described, a pistol-shaped hollow frame, a clatter-plate therein, means for actuating it, means for holding the actuating means inoperative, and means for releasing such actuating means.

3. In a toy such as described, a pistol-shaped hollow frame, a clatter-plate therein, a ratchet-wheel adapted to strike the clatter-plate, a spring from which the ratchet-wheel derives motion, and a trigger adapted to engage the ratchet wheel to stop rotations thereof and to be freed therefrom to permit it to rotate.

4. In a toy such as described, a pistol-shaped hollow frame, a vibratory element therein, a ratchet-wheel for vibrating it, a spur-wheel for driving the ratchet-wheel, a spring-actuated wheel for driving the spur-wheel, and a trigger for normally holding the ratchet-wheel and thereby said spur-wheel, spring-actuated wheel and spring from movement.

5. In a toy such as described, a pistol shaped hollow frame, a vibratory noise-creating element therein, a spring from which said vibratory element derives motion, a shaft embraced by said spring, and a spring-winding wheel secured on said shaft.

6. In a toy such as described, a pistol-shaped hollow frame, a vibratory noise-creating element therein, a spring from which said vibratory element derives motion, a shaft embraced by said spring and one of its ends extending through the butt of the handle-portion of said frame, and a spring-winding wheel on said extended end, said wheel projecting beyond the sides of the handle-portion.

7. In a toy pistol such as described, a pistol-shaped hollow frame, a vibratory element therein, a ratchet-wheel for vibrating it, a spur-wheel driving the ratchet wheel, a tappet-wheel for driving the spur, a spring for rotating the tappet-wheel, and a trigger normally holding the ratchet-wheel from rotation.

8. In a toy pistol such as described, a pistol-shaped hollow frame, a diaphragm at one end thereof, a vibratory clatter-plate adapted to strike the diaphragm, a ratchet-wheel for vibrating the clatter-plate, means for imparting rotary movement to the ratchet-wheel, and a trigger for normally restraining the ratchet-wheel from rotation.

In testimony whereof I hereto sign my name this fifth day of January, 1918.

MARTIN P. APPELL.