(No Model.)

J. F. W. KOETTER.

REPEATING TOY PISTOL.

No. 490,568. Patented Jan. 24, 1893.

Fig. 1

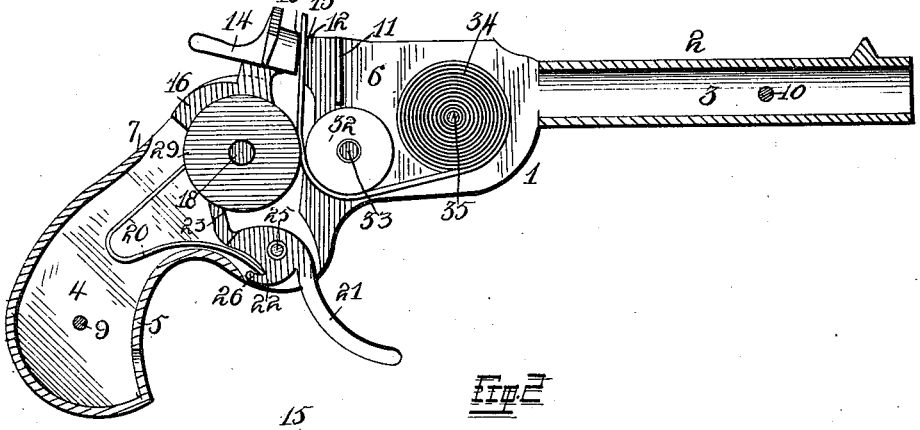


Fig. 2

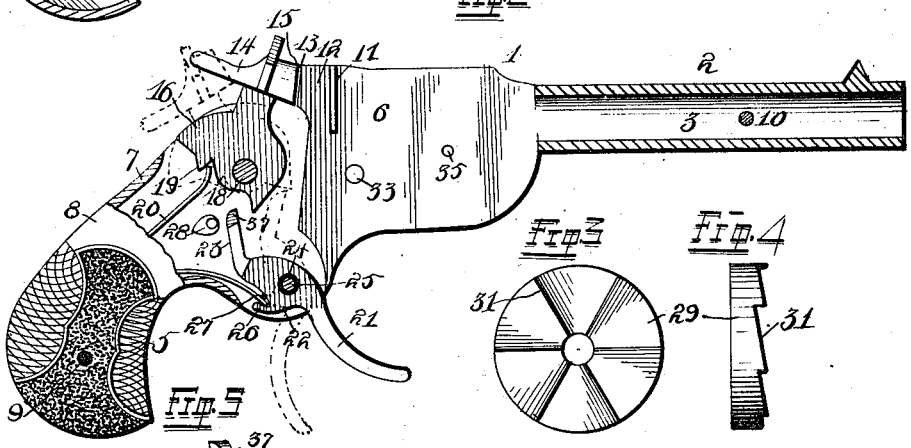


Fig. 3

Fig. 4

Fig. 5

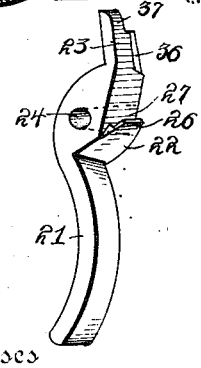


Fig. 6

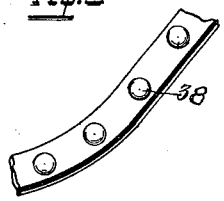
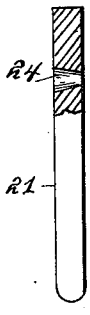


Fig. 7



Witnesses
Alfred A. Eicke
Herbert S. Robinson.

Inventor
J. F. W. Koetter
By his Attorneys
Higdon & Higdon & Longan

UNITED STATES PATENT OFFICE.

JOHN F. W. KOETTER, OF ST. LOUIS, MISSOURI.

REPEATING TOY PISTOL.

SPECIFICATION forming part of Letters Patent No. 490,568, dated January 24, 1893.

Application filed May 10, 1892. Serial No. 432,474. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. W. KOETTER, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Repeating Toy Pistols, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in "toy pistols," and consists in the novel arrangement and combination of parts as will be more fully hereinafter described and designated in the claims.

In the drawings: Figure 1 is a longitudinal sectional view of my complete invention showing in detail the parts thereof. Fig. 2 is also a longitudinal view showing the lock actuating mechanism. Fig. 3 indicates a disk or roller forming a part of the feeding device. Fig. 4 is a side elevation of the disk or roller shown in Fig. 2. Fig. 5 is a perspective view of the trigger. Fig. 6 indicates a strip of paper or tape provided with fulminating caps. Fig. 7 is a section view of the trigger showing the pivot hole through same and its construction.

Referring to the drawings: 1 is a pistol approximately of the design and construction used in ordinary toy pistols, and has a barrel 2, provided with a center bore 3, a hollow chamber 4 in the handle 5 adapted to contain the parts of the lock.

6 is a hollow magazine chamber located in the stock of the pistol. The two sides or casings 7 and 8 of this pistol are separable as shown in Fig. 2 and are secured together by means of rivets 9 and 10 located respectively in the handle 5 and the barrel 2. In this connection I will state that all of the pivots and fastenings for the parts hereinafter described are secured to one casing only, namely 7.

11 is a projection shown in section in Figs. 1 and 2 but said projection is on the inside of the casing 8 and when the parts are put together this projection forms a partition serving a purpose more fully hereinafter described.

12 is an anvil having a face 13, said face being a part of the casing 8.

14 is a hammer having a face 15 adapted to bear against and come in contact with the face 13 of the anvil 12. That part of the hammer located within the casing forms a tumbler 16 eccentrically pivoted by a pivot 18, said tumbler having a serrated edge 19 adapted to engage one end of a spring 20.

21 indicates a trigger provided with a tumbler 22 and a sear 23. This trigger has through a portion of its tumbler a conical perforation 24 into which fits a pivot 25 secured in the casing 7 as herebefore stated. Said tumbler has on its under edge a projection 26 forming a depression 27 between said projection and a tumbler. Said depression 27 being so constructed to engage the other end of the spring 20.

28 indicates a projection of suitable design formed with the casing 7 and serving as a gage or stop for the backward movement of the pawl 23. The spring 20 is approximately V shaped and preferably made from light spring steel.

The lock mechanism is provided with a revolving disk or roller 29 mounted on the pivot 18 and said roller 29 having projecting shoulders 31 on its under flat surface. Said roller acting as a ratchet in a manner more fully hereinafter described.

32 is a roller suitably mounted upon a pivot 33, said roller being made of rubber or some equally yielding material and adapted to come in contact with and revolve with the ratchet 29.

34 is a roll of tape or paper having regularly arranged on one side a series of exploding caps made from some fulminating compound. Said tape is adapted to pass between the roller 32 and the ratchet 29 and to be fed onto the anvil by the revolutions of same.

35 is a supply pivot or roller for the engaging of the roll of fulminating tape.

One corner of the pawl 23 is provided with a chamfer 36 adapted to allow the free backward movement of the trigger without interfering with the operation of the device.

The free end of the pawl is provided with a notch 37 in its side adapted to engage the serrated edge 19 of the tumbler 16 in a manner more fully hereinafter described.

Having described the parts of my invention in detail I will now state more clearly the combination and operation of same.

I will first describe the operation when the hammer is down as shown in Fig. 1. The

parts are all in position as shown therein and the fulminating tape is passed between the ratchet 29 and roller 32 and a cap is on the anvil in direct contact for the face 15 of the hammer 14. The projection upon the end of the sear engages the serrated edge 19 of the tumbler 16 and the notch 37 in the end of said pawl 23 engages the projecting shoulder 31 of the ratchet 29 as shown in Fig. 2. In cocking the pistol the sear presses against said serrated edge 19 of the tumbler 16 and pushes same upward and as the tumbler is eccentrically pivoted, the spring, one end of which also engages in the serrated edge, is compressed and when the backward movement of the trigger reaches a certain point the tumbler releases the pawl, allowing the outward tension of the spring to force the tumbler up, thus forcing the hammer down upon the cap resting upon the anvil and exploding said cap. In the backward movement of the trigger the notched portion 37 of the sear 23 engages in one of the projecting shoulders or cams 31 (of which there are generally six) and revolves the same a distance equal to the movement of said sear before it is released by the tumbler 16. The spring 20 engaged by the depression 27 and by the serrated edge 19 of the tumbler 16 serves to hold the trigger forward from the handle 5 and the hammer upon the anvil.

The tape of fulminating caps is as before stated inserted between the roller 32 and the ratchet 29 and with each backward movement of the trigger the ratchet is revolved toward the anvil and said ratchet being in contact with the roller 34, also revolves it the same distance thus with every revolution forcing the tape upward onto the anvil so that the caps 38 are located directly upon the face of the anvil As there are generally six cams on the ratchet it will be seen that there are six caps fed upon the anvil with every complete revolution of said ratchet.

When the hammer is in full cock the parts of my invention are in position as shown by dotted lines in Fig. 2. By comparing this with the position of the hammer as shown in Fig. 1 it will readily be seen how the pistol is operated.

The yielding roller 32 guarantees the accurate and regular feeding of the caps upon the anvil.

The partition 11 serves as a protection to keep the fire from the anvil when the cap is exploded from igniting any of the caps upon the roll 34. The perforation 24 in the tumbler of the trigger 21 is conical shaped as before stated, the small end of which is next to the casing 7. The function of this perforation is to admit a free motion to the trigger so that in manipulating same the pawl is kept constantly engaged in the serrated edge of the tumbler 16 and the shoulders or cams 31 of the ratchet wheel 29.

The formation of the perforation 24 admits of slight lateral movement to the trigger. Thus as the latter is being returned to its normal position by the spring, the chamfer or bevel 36 of the trigger engages the serrated edge of the tumbler and throws the sear to one side sufficiently to pass the tumbler.

Having fully described my invention, what I claim is:

1. In a self-cocking toy pistol, the combination, with the pistol proper, and a spring-held hammer provided with a projecting shoulder, of a pivoted spring-held trigger provided with a sear adapted to engage said shoulder, and with a conical bearing eye; substantially as and for the purpose set forth.

2. In a self-cocking toy pistol, the combination, with the pistol proper, a hammer, and a trigger provided with a sear for operating said hammer, of a bearing for carrying a fulminating tape, a feed-roller, and a ratchet feed disk arranged adjacent to said roller and adapted to be rotated by the sear; substantially as and for the purpose set forth.

3. In a self-cocking toy pistol, the combination, with the pistol proper, of a spring-held hammer provided with a projecting shoulder, a pivoted spring-held trigger provided with a sear adapted to engage said shoulder, and with a conical bearing eye, for the purpose described, a feed-roller, a ratchet feed-disk actuated by the sear, and means for carrying a fulminating tape, said tape being automatically fed between said roller and disk; substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. W. KOETTER.

Witnesses:

ED. E. LONGAN,

HERBERT S. ROBINSON.