Dec. 20, 1932. A. Z. BAKER 1,891,219

TOY FIREARM

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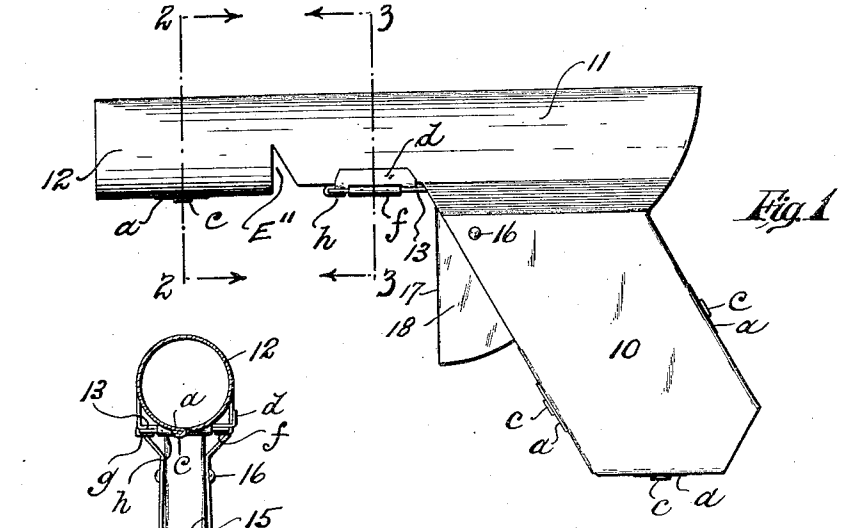


Fig. 1

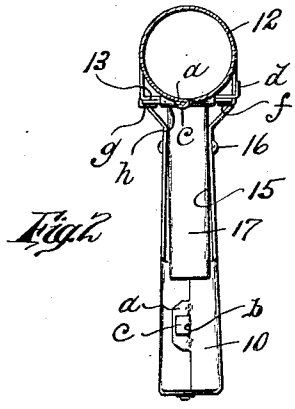


Fig. 2

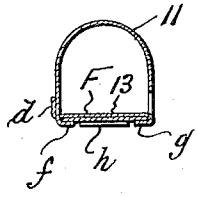


Fig. 3

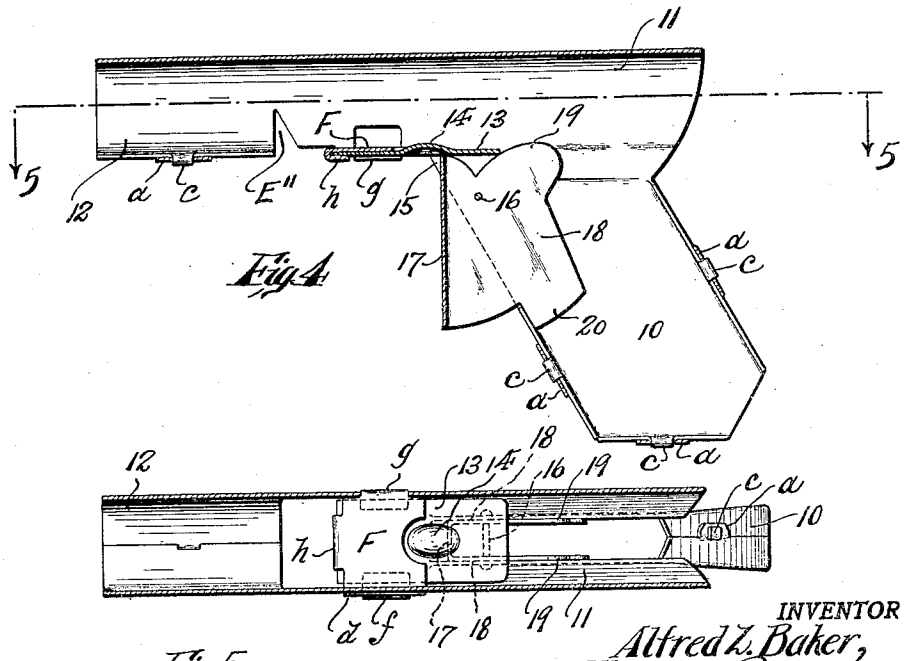


Fig. 4

Fig. 5

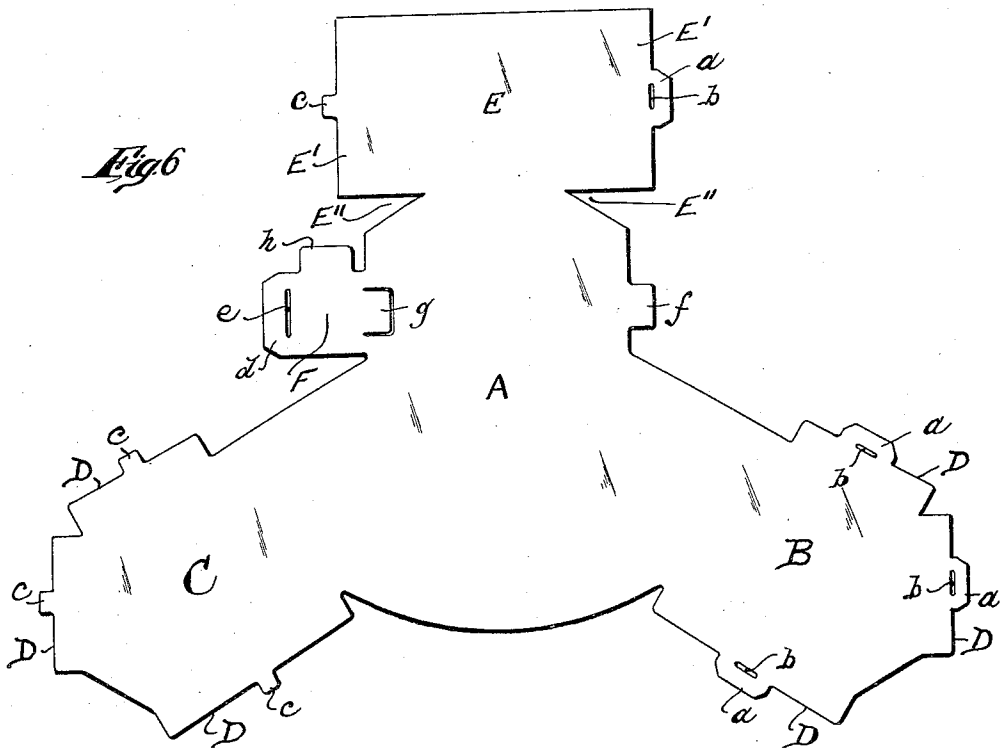
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Fig. 6



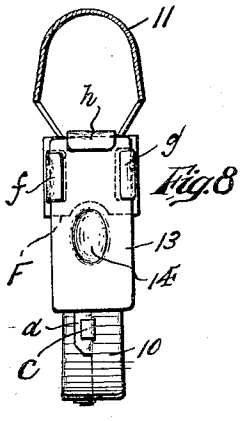


Fig. 8

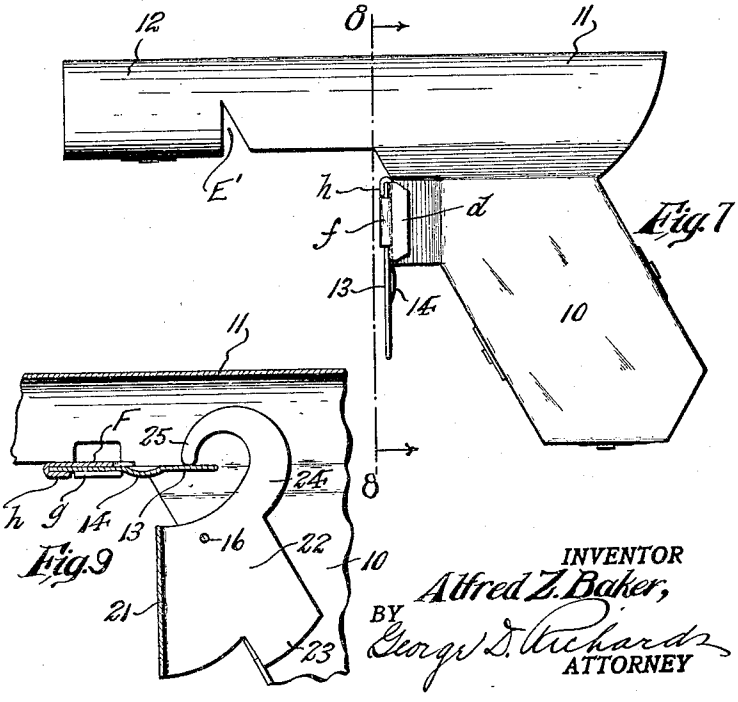


Fig. 7

Fig. 9

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UNITED STATES PATENT OFFICE

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TOY FIREARM

Application filed April 15, 1932. Serial No. 605,404.

This invention relates to improvements in toy firearms of a character adapted by mechanical means to produce, when actuated, a report in simulation of the detonation of ammunition in practical firearms; and the invention has reference, more particularly, to a novel toy firearm which may be made in imitation of desired forms of practical firearms, such e. g. as pistols, rifles or ordnance.

This invention has for its principal object to provide a simple, and easily and cheaply constructed toy firearm, involving a minimum number of parts, and provided with a rim-bound metallic sounder and a trigger means for actuating the latter.

This invention has for a further object to provide a novel toy firearm, the body of which is formed from a single sheet metal blank having novel interlocking elements for retaining the same in the firearm simulating form into which it is wrought, and also having, integral therewith, novel means to fasten and anchor thereto the metallic sounder with which the completed body is provided.

This invention has for another object to provide in a toy firearm of the kind above mentioned, a novel sounder actuating trigger having stop means to determine the normal initial position thereof, and so related to the sounder as to utilize the stored tension of the latter, after actuation, for returning the trigger to normal initial position.

Other objects of this invention, not at this time more particularly enumerated, will become apparent in the following detailed description of the same.

Illustrative embodiments of this invention are shown in the accompanying drawings, in which:—

Fig. 1 is a side elevation of the novel toy firearm in the form of a pistol; Fig. 2 is a transverse vertical section of the same, taken on line 2—2 in Fig. 1; Fig. 3 is another transverse section, taken on line 3—3 in Fig. 1; Fig. 4 is a central vertical longitudinal section through the same; Fig. 5 is a horizontal sectional view, taken on line 5—5 in Fig. 4; and Fig. 6 is a plan view of the sheet metal blank out of which the main body of the toy pistol shown in Fig. 1 is formed.

Fig. 7 is a side elevation of a modified form of toy pistol, embodying the general principles of this invention; and Fig. 8 is a transverse section therethrough, taken on line 8—8 in said Fig. 7.

Fig. 9 is a fragmentary longitudinal vertical section, similar to that of Fig. 4, but showing a modified form and arrangement of sounder actuating trigger.

Similar characters of reference are employed in the above described views, to indicate corresponding parts.

Referring to Fig. 6 of the drawings, there is shown therein a preferred form of sheet metal blank from which may be produced the main body of the novel toy firearm in a form simulating that of a pistol. This blank comprises a medial portion A having oppositely angularly projecting side portions B and C bordered by marginal extensions D. From the marginal extensions D of the side portion B project tongues *a* having slots *b* substantially coincident to the line of juncture thereof with said extensions D. From the marginal extensions D of the side portion C project clinching lugs *c*. Extending forwardly from the medial portion A is a barrel section E, having its laterally extending wings E′ separated from the medial portion A by indented notches E″. From the longitudinal margin of one of said wings E′ projects a tongue *a* having a slot *b* substantially coincident to the line of juncture thereof with said wing. From the longitudinal margin of the other wing E′ projects a clinching lug *c*. From the longitudinal margin at one side of said medial portion A, between the side portion C and barrel section E, is a laterally projecting bridge piece F, the free end of which terminates in a tongue *d* having a slot *e*, and from the corresponding opposite margin of said medial portion A extends a combined clinching and anchoring lug *f*. Formed in the medial portion A, so as to be struck out therefrom, and to spring from the juncture of said bridge piece F therewith, is an anchor lug *g*, and extending from the forward end margin of said bridge piece F is another anchor lug *h*.

To form the body of the toy firearm out of the above-described blank, the marginal extensions D of the respective side portions B and C are bent to project at right angles to the latter, whereupon the blank is doubled upon itself along the longitudinal axis of its medial portion A, to thereby bring the side portions B and C into parallel alignment, with their marginal extensions D in meeting or abutting relation, and with the tongues *a* of one set of said extensions overlapping the adjoining set thereof, so that corresponding clinching lugs *c* may be extended through the slots *b* of said tongues *a*, and then clinched over to interlock the parts together. In this manner, the butt 10 of the pistol body is formed, while the medial portion A is bent upon itself to form the rearward section 11 of the pistol barrel. The wings E′ of the forward barrel section E are bent around therewith into cylindrical form, with the slotted tongue *a* of the one wing overlapping the other wing, whereby the clinching lug *c* of the latter may be passed through the slot B of the tongue *a*, and clinched over to secure the parts in the relation forming the forward free extension 12 of the pistol barrel. The bridge piece F is bent to extend horizontally across the underside of the rearward section 11 of the pistol barrel forward of the butt 10, and the anchoring and clinching lug *f* is extended through the slot *e* of the tongue *d* to fix the bridge piece in operative position.

Upon forming the main body of the pistol in the manner above described, there is assembled therewith a metallic sounder 13, provided intermediate its ends with a stretched or dished concavo convex portion or rim bound buckle 14, which, when the sounder is flexed back and forth, will itself spring back and forth to produce loud "cracks" or reports in simulation of the detonation of ammunition. One end of the sounder 13 is assembled with and affixed to the main body of the toy firearm by overlaying the same upon the outer or under surface of bridge piece F, so that the free end portion containing the rim bound buckle 14 projects rearwardly within the rearward section 11 of the pistol barrel and above the hollow interior of the butt 10. When the sounder 13 is so positioned, the anchoring lugs *f*, *g* and *h* are turned over around the side and end marginal parts of sounder, and thereupon clinched down into gripping and anchoring engagement therewith, to thus hold the sounder in operative assembled relation to the firearm body.

The marginal extensions D of the side portions B and C at the forward side of the butt 10 are of less than the total length of the latter, thus leaving an opening 15 intermediate the rearward section 11 of the barrel and the lower end portion of said butt 10. Pivotally mounted between the side portions of the butt 10, by a transverse pivot pin 16, is a trigger member having its forward portion projected through said opening 15. This trigger member is preferably made from a sheet metal blank, doubled laterally upon itself to provide a front face section 17 and laterally spaced parallel side wings 18. The rearward parts of the upper end portions of said side wings 18 are shaped to provide sounder actuating cam sections 19, which underlie the free rearward extremity of said sounder 13. The rearward parts of the lower end portions of said side wings 18 are shaped to provide downwardly extending stop ends 20, which by engagement with the front wall of the butt 10, below the opening 15, serve to arrest the trigger member in normal outwardly projected relation to the butt 10, and in normal initial relation to the sounder 13.

To operate the novel toy firearm, the butt 10 is grasped in the hand and the fore-finger is engaged around the trigger, so that by contracting the finger the trigger is pulled, thereby causing an inward swinging movement of the latter about the pivot pin 16. Such movement of the trigger swings upwardly the sounder actuating cam sections 19, thereby producing an upwardly lifting pressure upon the free end of the sounder 13, which flexes the body thereof and causes the rim bound buckle 14 thereof to snap downwardly, so as to produce a loud "crack" or report. By relaxing the pressure of the finger upon the trigger member, the tension stored in the sounder 13 by the flexing thereof is exerted upon the cam sections 19, whereby the trigger is swung outwardly and back to normal initial position as determined by the engagement of the stop ears 20 with the front wall of the butt. In thus moving back to normal initial position, the flexed sounder will spring the rim bound buckle thereof upwardly again, thus producing another "crack" or report. It will be apparent that these operations may be repeated indefinitely to produce a continuous firing or rapid fire effect.

It will be obvious, that the above described construction of toy firearm is of great simplicity, involving, in the form described, but three parts or pieces (exclusive of the pivotal rivet 16), viz., the main body, the sounder and the trigger. The novel means for interlocking the sheet metal body in its formed condition is simple and effective, eliminating separate fastening elements; this is also true with respect to the means for anchoring the sounder 13 in operative relation to the body and its trigger.

In Fig. 9 I have shown a modified form of trigger member, which may be utilized in a three-piece construction, such as above referred to. In this modified form, the trigger may be made from a sheet metal blank, doubled upon itself laterally to provide a front

face section 21 and laterally spaced parallel wings 22 having stop ears 23 at the lower rearward end portions thereof. In place of the lifting cam sections above described, however, I provide, in this modified construction of trigger, at the rearward upper end portions of the side wings 22, upwardly projecting members 24 terminating at their ends in forwardly and downwardly curved actuating fingers 25, adapted to engage the upper side of the free end portion of the sounder, so that when the trigger is pulled, the sounder is flexed downwardly. When using this modified form of trigger, the sounder 13 is reversed, so that the rim bound buckle 14 is normally downwardly bowed.

While I have shown the trigger members above described, as made of sheet metal, it will be obvious that the same may, if desired, be made of solid material, such e. g. as wood, shaped to provide the sounder actuating elements and the stops.

Referring to Figs. 7 and 8, I have shown therein a further modified toy firearm, within the principles of this invention, but simplified to provide a two-piece construction eliminating the pivoted trigger means. In this arrangement, the bridge-piece and sounder anchoring means are formed to spring from the sides of the butt 10, at the forward upper portion of the latter, thus disposing the sounder 13 in a downwardy projecting position, spaced forwardly of the butt 10. As thus arranged and disposed, the sounder may be directly engaged by the forefinger of the hand of the user by which the firearm is held, so as to be subject to direct flexing by the pressure of the finger thus applied thereto.

I am aware that various changes, other than those above indicated, could be made in the herein described constructions, and many widely different embodiments of this invention could be made without departing from the scope thereof; it is intended, therefore, that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:—

1. In a toy firearm, a sheet metal blank folded upon itself to form a main body comprising a barrel and butt, certain meeting edge portions of said folded blank having slotted tongues and opposed meeting edge portions having clinching lugs extended through and clinched over said slotted tongues to secure said folded blank in body forming condition, a bridge piece springing from one side and extending between the sides of said folded body, the free end of said bridge piece having a slotted tongue, a resiliently flexible sounder having a rim bound buckle adapted to "crack" when the sounder is flexed, one end of said sounder being supported on said bridge piece, and said folded body including anchor lugs to embrace and clinch over the supported end of said sounder, one of said anchor lugs also extending through the slotted tongue of said bridge piece to interlock the latter with the opposite side of said folded body.

2. In a toy firearm, a main body, a resiliently flexible sounder affixed to said body, said sounder having a free end portion subject to flexure and provided with a rim bound buckle adapted to "crack" when the sounder is flexed, a trigger pivotally connected with said body, said trigger having sounder actuating means in constant engagement therewith and adapted to flex said sounder when the trigger is pulled and said trigger having stop ears at its lower rearward end portion engageable with said main body to determine its normal initial position, the tension of the flexed sounder operating to return said trigger after actuation to normal stopped relation to said body.

3. In a toy firearm, a sheet metal blank folded upon itself to form a main body comprising a barrel and butt, means to secure meeting parts of the folded blank in body forming condition, a resiliently flexible sounder having a rim bound buckle adapted to "crack" when the sounder is flexed, said body having means to fixedly secure one end portion of the sounder thereto so as to leave a free end portion thereof subject to flexure and disposed for rearward extension into the hollow interior of the body above the butt, a trigger pivotally connected with the butt of said body, said trigger having sounder actuating cam means engageable with the free end portion of the sounder, and said trigger having stop ears at its lower rearward end to engage a wall of the butt of said body to determine normal initial position of the trigger, the tension of the flexed sounder operating to return said trigger to normal stopped position after actuation.

4. In a toy firearm, a sheet metal blank folded upon itself to form a main body comprising a barrel and butt, certain meeting edge portions of said folded blank having slotted tongues and opposed meeting edge portions having clinching lugs extended through and clenched over said slotted tongues to secure said folded blank in body forming condition, a bridge piece springing from one side and extending between the sides of said folded body forwardly of the butt thereof, the free end of said bridge piece having a slotted tongue, a resiliently flexible sounder having a rim bound buckle adapted to "crack" when the sounder is flexed, one end of said sounder being supported on said bridge piece so as to leave a free end portion thereof subject to flexure and disposed for rearward extension into the hollow body above the butt, said folded body including

anchor lugs to embrace and clinch over the supported end of said sounder, one of said anchor lugs also extending through the slotted tongue of said bridge piece to interlock the latter with the opposite side of said folded body, a trigger pivotally connected with the butt of said body, said trigger having sounder actuating cam means engageable with the free end portion of the sounder, and said trigger having stop ears at its lower end to engage a wall of the butt of said body to determine normal initial position of the trigger, the tension of the flexed sounder operating to return said trigger to normal stopped position after actuation.

In testimony that I claim the invention set forth above I have hereunto set my hand this 12th day of April, 1932.

ALFRED Z. BAKER.