Nov. 13, 1928. 1,691,237

R. A. FRISBIE

TOY PISTOL CONSTRUCTION

Filed Dec. 19, 1927

Fig. 1

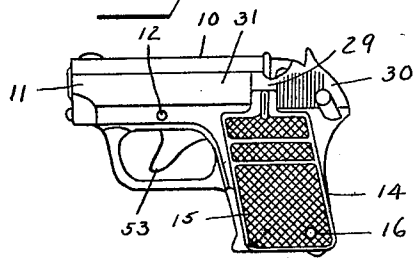


Fig. 2

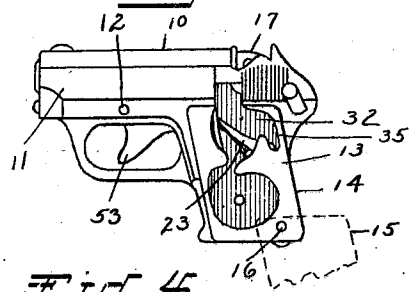


Fig. 3

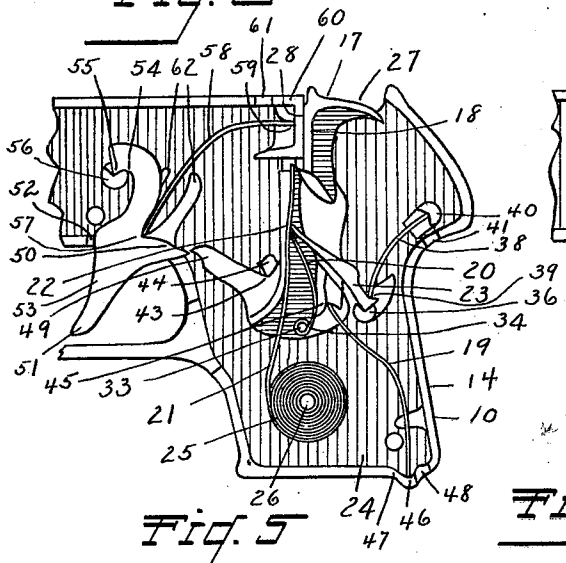


Fig. 4

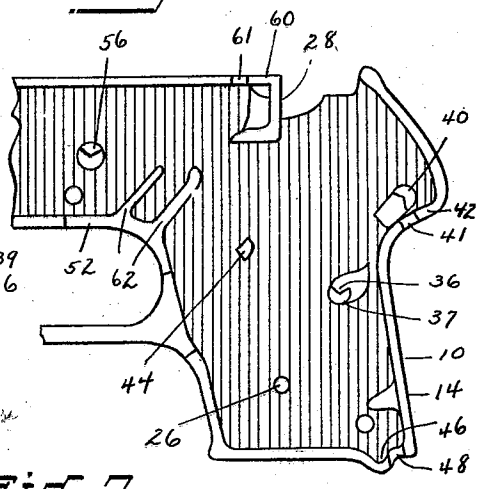


Fig. 5

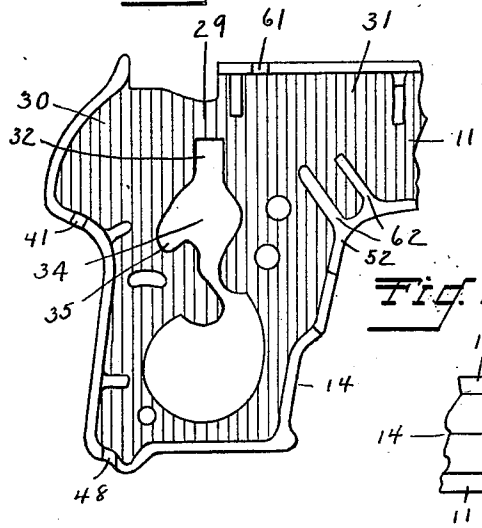


Fig. 7

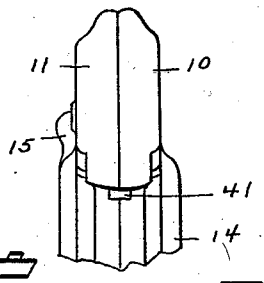


Fig. 6

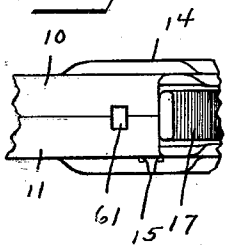
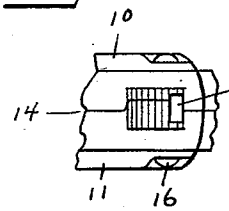


Fig. 8



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UNITED STATES PATENT OFFICE.

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TOY-PISTOL CONSTRUCTION.

Application filed December 19, 1927. Serial No. 241,017.

My invention relates to improvements in toy pistol construction of the general form that is shown and described in my application filed March 9, 1927, Serial No. 174,049, for improvements in toy tape pistols, and the object of my present improvement is to produce a structure in which the parts are constructed and arranged so as to facilitate the removal and replacement of the springs primarily and incidentally of some of the other parts of the operating mechanism, involving a suitable shaping of the details of the casing structure and in some cases of the provision of especially located openings for some of the springs.

In the accompanying drawing:—

Figure 1 is a side elevation of a toy tape pistol having mechanism like that in the application above referred to and embodying my invention in that the springs and the other parts of the mechanism except the hammer member are removable and replaceable without separating the casing parts.

Figure 2 is a similar view of the same with the cover removed and indicated in the open position by broken lines.

Figure 3 is a side elevation on an enlarged scale and with the left casing part removed.

Figure 4 is a similar view of the right casing part, showing the inside thereof.

Figure 5 is an inside view of the left casing part.

Figure 6 is a fragmentary plan view showing the opening in the casing for the trigger spring.

Figure 7 is a fragmentary rear elevation showing the opening for the pawl spring.

Figure 8 is a fragmentary bottom view showing the opening for the main spring.

My improved toy pistol construction in the present instance is exemplified as being applied to a structure such as shown and described in the application already referred to and which is in the form of a tape pistol.

Said structure comprises a casing that is composed of a right main part 10 and a left mating part 11 that serves generally as a closure for said main part and which is secured thereto by means of the rivet 12.

The portion 13 of the mating part 11 at the rear and that extends over the side of the handle 14 is of more or less open or skeleton form of structure such as to permit of access to some of the internal mechanism and said portion 13 is provided with a cover 15 that swings on the pin 16.

The parts that are exposed by swinging the cover 15 to one side comprise the hammer member 17 that has the hammer 18 at the upper end; the main spring or hammer spring 19; the check pawl 20 for the tape end 21 that by its upper end cooperates with travel face or way 22 provided on the hammer member 17 for preventing retrograde movement of the tape; the feeding pawl 23; the chamber 24 in the lower end of the handle 14 for the tape coil 25; and the pivotal pin 26 for said tape coil 25 and which is integral with the main casing part 10.

The hammer 18 is exposed through the opening 27 in the top of the casing as is also the anvil 28.

Below said top opening or hammer opening 27 is a bridge 29 that connects the rear portion 30 and the front portion 31 of the left casing part 11. Below said bridge 29 extends the open portion 32 of the skeleton wall structure 13 through which the parts named above are exposed and more or less accessible.

Parts of the skeleton wall structure 13 serve as guides for opposed portions of the operating mechanism and in cutting away to provide the opening or open portion 32 there must be retained sufficient wall structure to effect such guiding.

In the previously described structure access was provided for mounting a tape coil 25 on the pin 26 and for leading the tape end 21 along the travel face 22, in front of the check pawl 20 and the feeding pawl 23, and upwardly between the anvil 28 and the handle 18. Also, the open portion 32 adjacent the check pawl 20, as before, provides for removing and replacing the said pawl 20, which latter is mounted on a pin 33 that is integral with the hammer member 17 by means of the pivotal sleeve-coil 34 on the lower end, as in the previous construction.

In the present construction the feeding pawl 23 is removable and replaceable through the opening 32. Said opening or open portion 32 comprises a relatively large or wide portion 34, as before, through which

the major portion of the pawl 23 is exposed and by providing an extension 35 of said open portion provision is made for sidewise removal of said pawl 23. Such removal is made possible by reason of the detail of the pivotal connection of the pawl with the casing, which is in the form of a knife-edge connection, comprising, as shown, a V-point 36 at the lower end of the pawl and a cooperating seat therefor on the post 37 that is integral with the main casing part 10.

The feeding pawl spring 38 extends upwardly and rearwardly from the seat 39 provided therefor on the structure of said pawl 23 and the upper read end thereof is seated in a post 40 and special provision for admitting the same to the operative position after the casing parts 10 and 11 have been riveted together by means of the opening 41 in the casing. Said opening 41 is located in the rear or edge wall of the portion 42 of the casing that is adjacent the upper rear end supporting post 40 for said spring 38.

The pivotal connection for the hammer member 17 comprises the V-notch 43 on the upper front portion that cooperates with the post 44 and these are maintained operatively seated the one against the other by means of the main spring 19. A notch 45 for the upper end of said spring 19 is provided and is located generally at the rear and lower portion of the hammer member 17. The lower end of the main spring 19 is seated in a V-shaped notch 46 that is in the form of a depression in the bottom border edge wall structure of the adjacent portion 47 of the casing parts 10 and 11. A main spring admission opening 48 is provided in said wall structure or casing parts 10 and 11 through which said main spring 19 can be admitted and assembled to the operative position. The upper end of the spring 19 would be first seated in the notch 45; the spring is then fully admitted or forced inwardly so that the lower end will be resiliently engaged with the border wall adjacent the notch or seat 46; and, finally, by means of a simple implement the lower end is pushed forwardly until it is sprung into the notch or seat 46.

The hammer member 17 has a forwardly directed arm 49 that cooperates in firing with a rearwardly directed arm 50 on the trigger member 51.

The trigger member 51 plays in the trigger slot 52; has the downwardly directed trigger 53; is pivotally hung from its upper end portion by means of a hook or horn 54 that has a downwardly directed V-bearing point 55 that is seated against a post 56; and at the rear, between the horn 54 and the arm 50, has a V-notch or seat 57 for the trigger spring 58.

The lower end of the trigger spring 58 is engaged with the seat 57, the spring extends generally upwardly and rearwardly from said seat 57, and the upper and rear end thereof is seated in a V-notch 59 that is provided on the main casing part 10 and located immediately in front of the anvil 28. In front of the trigger spring seat 59 the adjacent wall structure 60 is provided with an opening 61 through which the trigger spring 58 is admitted to the operative position. The lower end thereof is first seated against the V-notch or seat 57; the upper end is forced inwardly so as to bear against the wall structure 60 that borders the upper seat 59; and, finally, said upper end is pushed rearwardly so as to be in a position to spring into the upper seat provided by the V-notch 59.

The seating of the trigger spring is facilitated by the provision of guide or directing lugs 62 that are integral with the inner faces of the casing parts 10 and 11.

The structural details of other parts are shaped and constructed and arranged so as to facilitate the seating of the spring ends to the seats that are provided therefor.

An inspection will show that the trigger member 51 can be manipulated so that the same can be removed through the trigger slot 52, a condition that follows from the use of a knife-edge bearing for the pivotal connection, and the proper location and construction of the other adjacent parts.

As described, all of the springs, four in number, and the working parts that cooperate with the hammer member are removable and replaceable without separating the casing parts 10 and 11.

I claim as my invention:—

1. In toy pistol construction, a casing composed of mating parts held together by a rivet and having an opening on the side of the handle portion that is provided with a cover, a hammer member operatively supported in said casing and provided with a main spring, mechanism for cooperating with said hammer member for effecting the firing, said casing having a seat for one end of said spring, and said casing being provided with an opening adjacent said seat for admitting said spring.

2. In toy pistol construction as described in claim 1, said mechanism comprising a feeding pawl that has a pawl spring, and said pawl being positioned so as to be removable through said first mentioned opening.

3. In toy pistol construction as described in claim 1, said mechanism comprising a feeding pawl and a pawl spring therefor, a post on said casing for backing one end of said pawl spring, and said casing having an opening adjacent said one end for admitting said pawl spring.

4. In toy pistol construction as described in claim 1, said mechanism comprising a

trigger member that operates in a trigger slot, and said trigger member being disengageable from the other parts of said mechanism and removable through said slot.

5. In toy pistol construction as described in claim 1, said mechanism comprising a trigger member and a trigger spring therefor, said casing having a seat for said trigger spring, and said casing having an opening adjacent said last named seat for admitting said trigger spring to the operative position.

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