

Aug. 22, 1961

J. H. WEIMER  
TOY CAP GUN WITH VIBRatable MEMBER PRODUCING  
SOUND OF WHINING BULLET

2,996,823

Filed May 11, 1959

3 Sheets-Sheet 1

Fig. 1

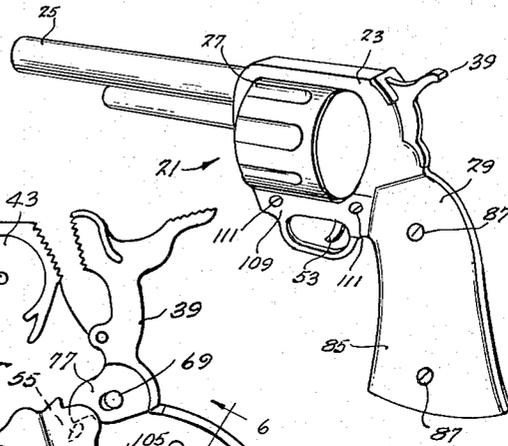


Fig. 3

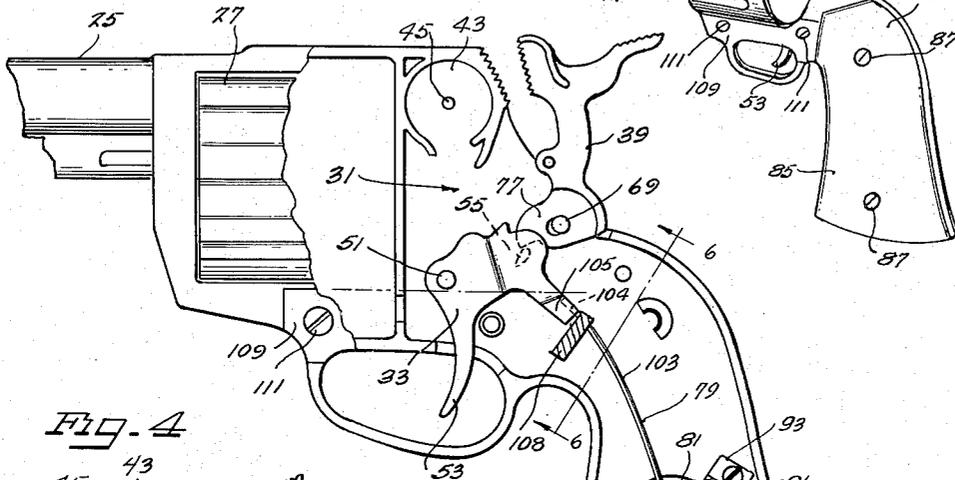


Fig. 4

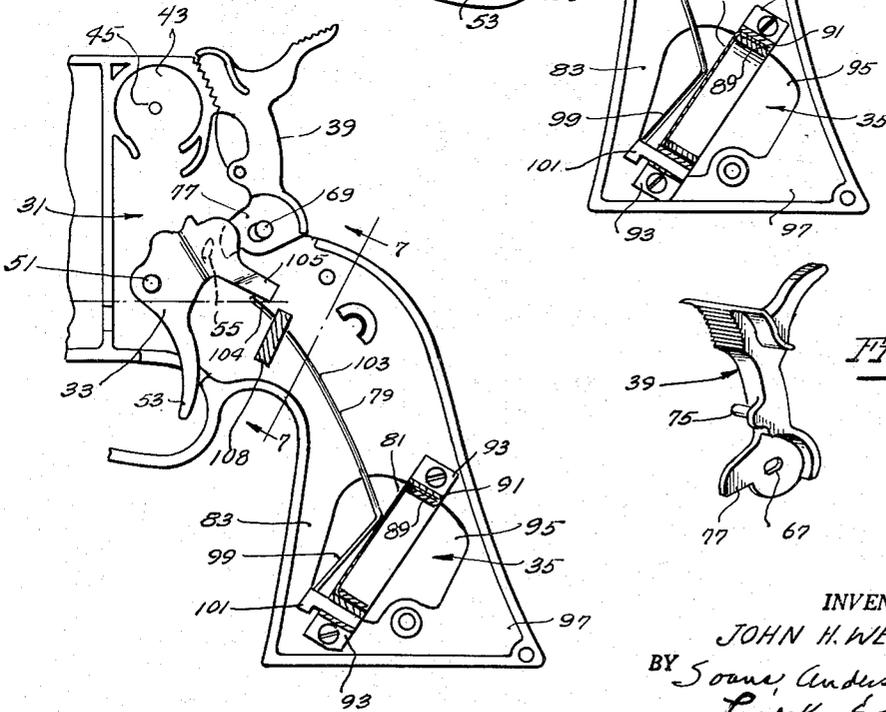
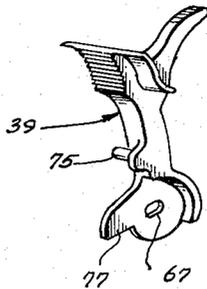


Fig. 12



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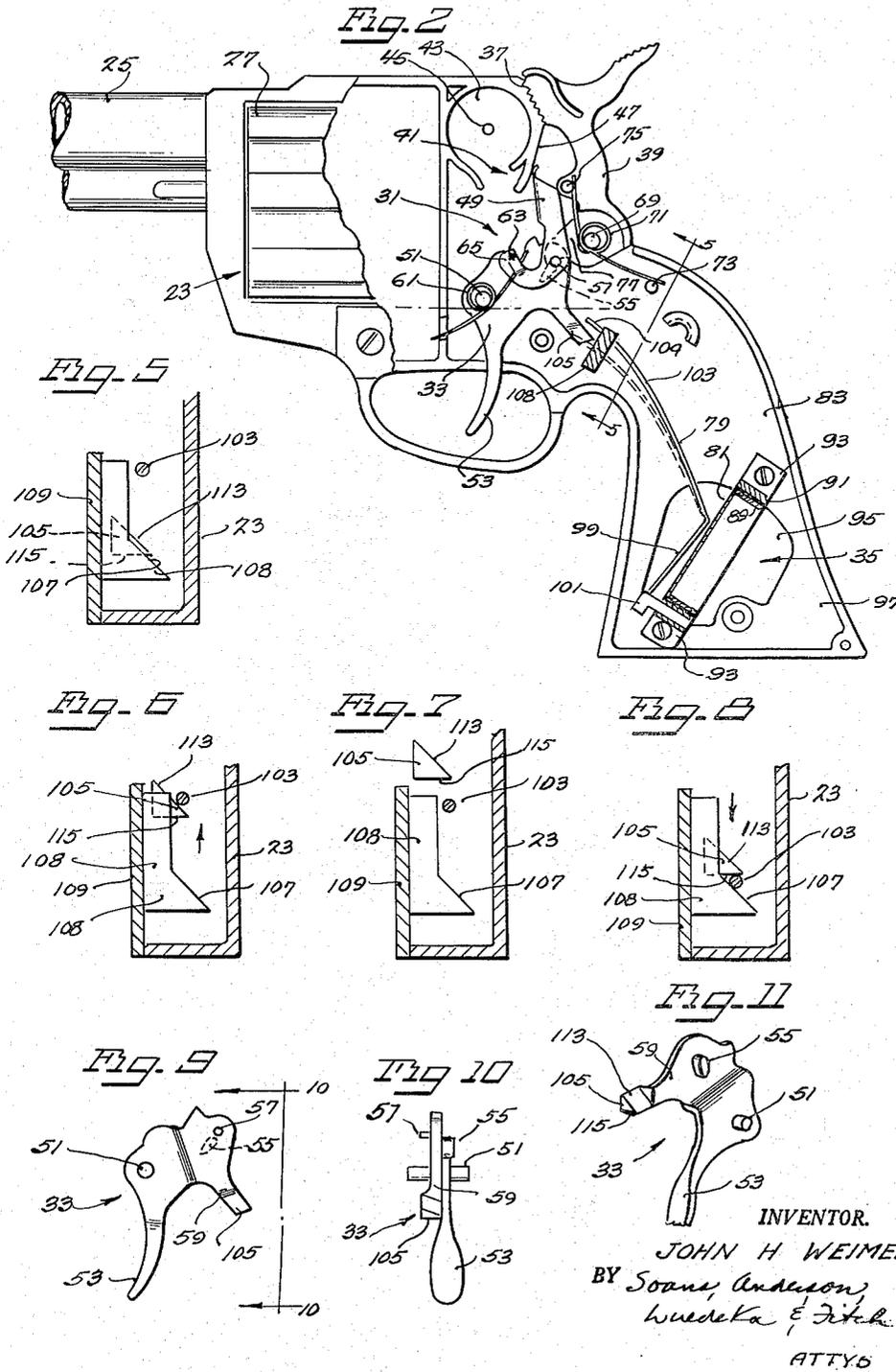
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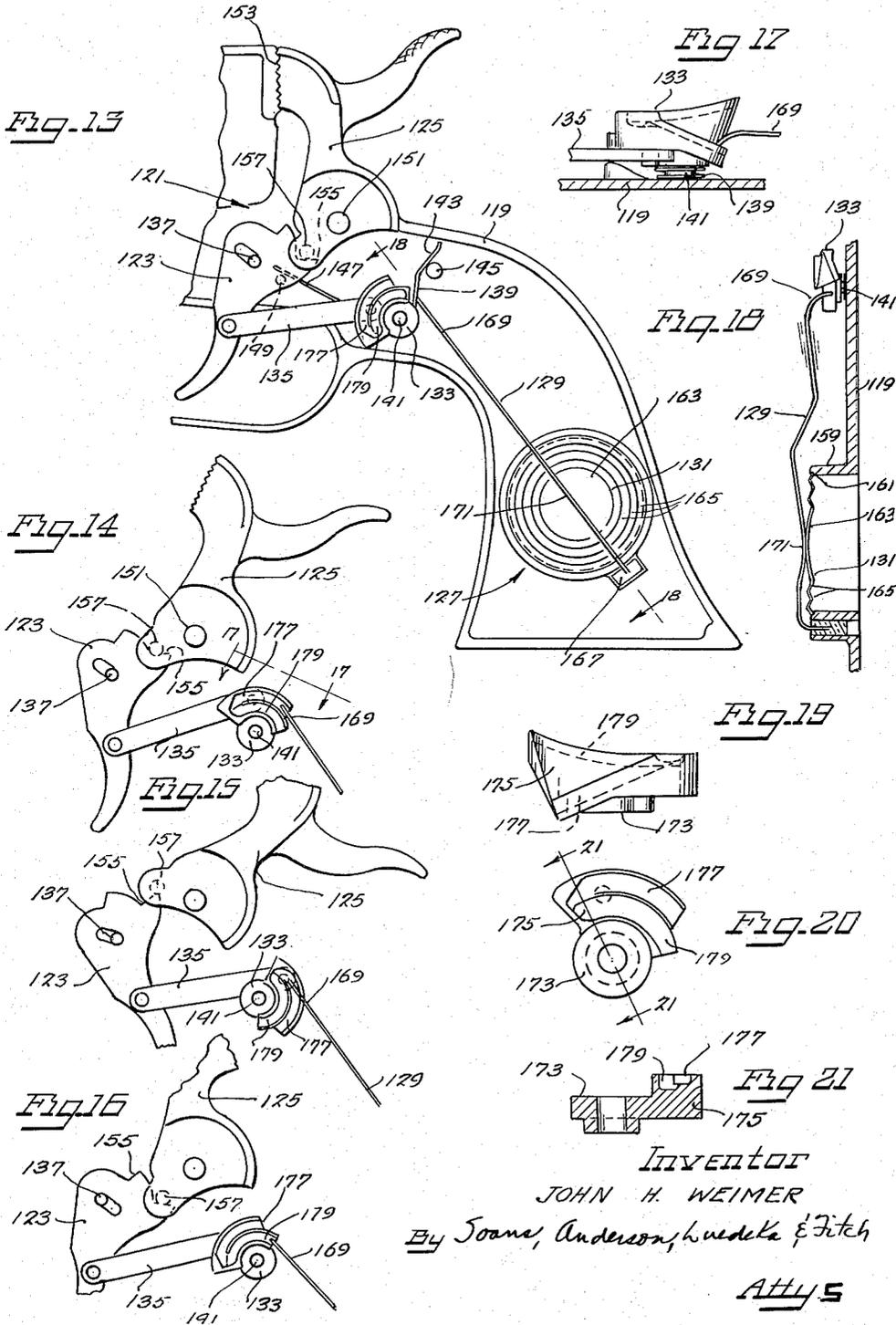
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2,996,823

**TOY CAP GUN WITH VIBRATABLE MEMBER PRODUCING SOUND OF WHINING BULLET**

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11 Claims. (Cl. 42—57)

This invention relates generally to toy guns, and more particularly to an improved operating means in a toy gun for creating a noise effect which is in addition to the noise or other effect indicating discharge of an imaginary projectile and which adds to the realism of the gun firing activity. More specifically, this invention is directed to the incorporation in a cap gun of an improved operating arrangement for creating a noise effect simulating the noise or whine produced by the travel or ricochet of a projectile after discharge from the gun.

Accordingly, the principal object of this invention is a toy gun which incorporates a new and improved operating mechanism for producing a realistic sound effect associated with the travel of a discharged projectile. A further object of this invention is the provision of an operating mechanism in a toy gun of the type characterized above which includes a time delay feature enabling creation of the simulated sound of projectile travel at a selected point in time subsequent to the firing of the gun. A further object of this invention is the provision of a gun of the type indicated above which is inexpensive in construction and which will provide reliable performance over a long, extended period of time.

Other objects and advantages of this invention will be understood by reference to the following description and the accompanying drawings, wherein there are disclosed two embodiments of a toy gun constructed in accordance with the invention.

In the drawings:

FIGURE 1 is a perspective view showing a typical cap gun incorporating various features of the invention;

FIGURE 2 is a fragmentary, enlarged, and partially broken away side view of the cap gun shown in FIGURE 1 and is illustrative of an operating mechanism for producing the sound effect of a simulated projectile. The various operating components are shown in their normal disposition;

FIGURE 3 is a view similar to FIGURE 2, with certain parts removed for the sake of clarity, showing the disposition of the operating components when the trigger is partially squeezed;

FIGURE 4 is a view similar to FIGURE 3, showing the disposition of the operating components when the trigger is in its rearwardmost position after release of the hammer;

FIGURE 5 is an enlarged sectional view taken along line 5—5 of FIGURE 2;

FIGURE 6 is an enlarged sectional view taken along line 6—6 of FIGURE 3;

FIGURE 7 is an enlarged sectional view taken along line 7—7 of FIGURE 4;

FIGURE 8 is a view similar to FIGURES 5 through 7 and illustrates the method of releasing the sound producing vibrator;

FIGURE 9 is a side view of the trigger element incorporated in the gun shown in FIGURES 1 through 4;

FIGURE 10 is an end view taken along line 10—10 of FIGURE 9;

FIGURE 11 is a perspective view of the trigger element shown in FIGURE 9;

FIGURE 12 is a perspective view of the hammer incorporated in the gun shown in FIGURES 1 through 4;

FIGURE 13 is a fragmentary, enlarged and partially

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broken away side view of a toy gun which is similar to the gun shown in FIGURE 1, and which incorporates another operating mechanism in accordance with the invention for producing a whine or ricochet sound effect.

5 In FIGURE 13, various operating components are shown in their normal disposition;

FIGURE 14 is a view similar to FIGURE 13, but with certain parts removed, showing the disposition of the operating components during squeezing of the trigger;

10 FIGURE 15 is a view similar to FIGURE 14, showing the operating components just prior to release of the hammer;

FIGURE 16 is a view similar to FIGURES 14 and 15, showing the operating components after release of the hammer, and during release of the trigger, just prior to operation of the sound producing means;

FIGURE 17 is an enlarged sectional view taken along line 17—17 of FIGURE 14;

FIGURE 18 is a sectional view taken along line 18—18 of FIGURE 13;

FIGURE 19 is an enlarged perspective view of the trigger-operated actuating cam;

FIGURE 20 is a top view of the actuating cam shown in FIGURE 19; and

FIGURE 21 is a sectional view taken along line 21—21 of FIGURE 20.

Basically, the toy guns disclosed herein both include a gun firing mechanism which is operable to produce a sound effect such as a percussive report indicating firing of the gun and an auxiliary noise producing mechanism which is operable at a selectively determinable time after operation of the gun firing mechanism to provide a whine or ricochet sound effect realistically resembling the noise produced by the travel of a bullet or other projectile after discharge from a gun. Operation of the gun firing mechanism and auxiliary sound producing mechanism, and the establishment of any desired time interval therebetween, are controlled by movement of the trigger. More specifically, movement of the trigger to one position effects operation of the gun firing mechanism, and movement of the trigger to another position actuates operation of the auxiliary noise producing means. Thus, by controlling the movement of the trigger any desired period of time can be obtained between the gun firing action and the production of the bullet whine or ricochet sound effect.

A typical toy cap gun which embodies certain of the features of the invention is illustrated generally in FIGURE 1. As shown, the cap gun 21 is representative of but one of many different and widely varying toy firearms in which the features of the invention can be incorporated, and comprises a frame 23 having a forwardly extending barrel 25, a centrally located cylinder 27, and a rearwardly extending stock or butt 29. The operating components of the illustrated gun, as shown in FIGURE 2, comprise a cap firing mechanism 31 including a trigger element 33, and a sound producing means or mechanism 35 which creates a realistic sound effect simulating the whine or ricochet noise of a projectile after discharge from the gun, and which is operated incident to movement of the trigger element 33.

Apart from the formation of the trigger element 33 and its cooperation with the noise producing mechanism 35, the cap firing mechanism 31 is of conventional construction. In the illustrated structure it includes, in addition to the trigger element 33 (see FIGURE 2), an anvil 37 formed on the gun frame 23, a hammer 39 which is rockably operable by the trigger element 33 for action against the anvil 37, and a cap feeding mechanism 41 including a cap storage recess 43 which is formed in the gun frame 23 and which has a cap roll supporting post 45, a cap feed plate 47 which forms an extension

of the anvil 37, and a cap feeding pawl 49 which is carried on the trigger element 33.

The trigger element 33, as shown in FIGURES 9 through 11, is of irregular shape and is formed to include a centrally located rod 51 by which the trigger element is pivotally supported for reciprocal movement through a predetermined path between opposed limiting positions, a trigger 53 which extends exteriorly of the gun frame within a trigger guard, a shoulder 55 which is engageable with the hammer 39, a pin 57 upon which the cap feeding pawl 49 is carried, and a rearwardly extending arm 59 which engages the sound producing mechanism 35.

As shown in FIGURE 2, the trigger element 33 is biased with the trigger 53 in a forwardly disposed position, while at the same time, the cap feeding pawl 49 is biased against the cap feed plate 47, by a coiled hairpin spring 61 which is carried on the pivot rod 51 and which has one end engaged by the gun frame 23 and has its other end engaged in a lug 63 formed on a leg 65 of the cap feeding pawl 49.

The hammer 39 as seen particularly in FIGURE 12, is also of irregular formation and includes a centrally located elongated slot 67 through which extends a supporting post 69 (see FIGURE 2) projecting from the gun frame 23. The hammer is biased with its upper portion against the anvil 37 by a coiled hairpin spring 71 having one leg in engagement with a rod 73 projecting from the gun frame 23, and with the other leg in engagement with a pin 75 fixed on the hammer. Cocking of the hammer against the action of the spring 71 is accomplished through rocking engagement of the trigger element shoulder 55 with the under surface of a forwardly extending hammer tang 77.

In operation, when the trigger 53 is squeezed against the action of the trigger-biasing spring 61, the cap feeding pawl 49 slides upwardly along the cap feed plate 47 to advance a cap strip previously positioned therebetween, and the trigger element shoulder 55 simultaneously engages the hammer tang 77 to cock the hammer against the action of the hammer-biasing spring 71. As completion of the rearward trigger movement approaches, the trigger element shoulder 55 slides off the under surface of the hammer tang 77 and the hammer is released for striking against the anvil 37 to explode the cap positioned thereon by the movement of the cap feeding pawl 49. When the pressure is released on the trigger 53, the trigger element rotates clockwise, as seen in FIGURE 2, to thereby lower the cap feeding pawl 49 for subsequent advancement of the next cap, and the trigger element shoulder 55 moves along the upper surface of the hammer tang 77, forcing the hammer outwardly relative to the supporting post 69 until the shoulder 55 slides under the forwardly extending lower surface of the hammer tang 77.

If desired, increased gun firing realism can be achieved by rotatably mounting the cylinder 27 on the gun frame 23, and by providing suitable means associated with the trigger element for indexing the cylinder incident to rearward movement of the trigger. In addition, various other firing arrangements and modifications of the described firing mechanism can be employed without substantially affecting the principles of the invention.

The sound producing mechanism 35 may take any suitable form. In the gun illustrated in FIGURES 1 to 4 it comprises a vibrator 79 and a membrane 81 which is located in a chamber 83 formed in the butt 29 of the gun and covered by a pair of plastic hand grips 85 (see FIGURE 1) which are secured to the gun frame 23 by screws 87.

The membrane 81 in the illustrated structure comprises a sheet of grass shim stock which is about .002 inch in thickness and which extends across a rigid metallic inner ring 89 and is held in position by a rigid metallic outer ring 91 which is forced over the inner ring 89 and marginal portions of the shim stock. The outer ring 91 is formed with a pair of oppositely disposed ears 93 by

which it is fastened to the gun frame 23 to locate the membrane 81 across an opening 95 in the central web 97 of the gun frame 23.

The illustrated vibrator 79 is formed of spring wire having one leg 99 which is fixed at one end in an anchor 101 joined to the outer ring 91 and which extends across the top of, and in close adjacent relation to the membrane 81, to a point of engagement therewith slightly more than one-half of the distance thereacross. The spring wire which constitutes the vibrator is also formed with a second leg 103 which curves upwardly from the membrane engaging end of the leg 99 and through the hollow butt 29, and which terminates in a free end portion 104 disposed for engagement by the rearwardly extending trigger element arm 59. The sound making assembly is more fully described and is claimed in the Ayala Patent No. 2,941,325, issued June 21, 1960.

Actuation of the vibrator to create the desired noise effect is accomplished incident to movement of the trigger element 33, and through cooperation between vibrator engaging and displacing means formed on the trigger element arm 59 and means carried by the gun frame for disengaging the vibrator from the trigger element after displacement of the vibrator to a position under tension. In this embodiment, the vibrator engaging and displacing means constitutes an ear 105 formed at the rearward end of the trigger element arm 59 and the vibrator disengaging means is provided by a camming edge 107 formed on a lug 108 on the inside of a side plate 109 which forms a portion of the gun frame and which is suitably secured, as by screws 111 (see FIGURE 1), to position the camming edge 107 in transverse disposition across the neck of the hollow butt 29 and in inclined relation to the path of trigger arm movement to effect disengagement of the displaced vibrator leg 103 from the vibrator engaging ear 105 incident to release of the trigger.

More specifically, as can be seen especially in FIGURE 11, the ear 105 at the rearward extremity of the trigger arm 59 is formed with an upper vibrator engaging surface 113 which is inclined in relation to the path of trigger arm movement (downwardly and to the right as seen in FIGURES 5 through 8) so that when the trigger is squeezed and the arm 59 is caused to move upwardly in a counterclockwise direction, the free end of the vibrator leg 103, as seen in FIGURES 6 and 7, will first be engaged by the inclined surface 113 but will then slide down the incline and resume its normal position.

The lower surface 115 of the ear 105 is disposed in generally normal relation to the path of movement of the trigger arm, and thus, when the trigger is released, the trigger arm 59 rotates clockwise, and the lower ear surface 115 engages the vibrator leg 103 and displaces the vibrator downwardly under tension (see FIGURE 8). As the displacement of the vibrator is increased incident to continued clockwise movement of the trigger element, the free leg 103 of the vibrator is urged against the inclined edge 107 of the side plate 109 and is cammed clear of the lower ear surface 115, to thereby release the vibrator from its displaced position under tension, for vibratory action against the membrane resulting in the production of the realistic sound effect simulating the whine or ricochet of an imaginary, discharged projectile.

Thus, the vibrator is both displaced and then released incident to the release of the trigger and resultant clockwise movement of the trigger element.

The operation of the sound producing means in the disclosed manner provides a simple and reliable operating arrangement, and, in addition, provides a time delay feature, the duration of which delay may be controlled by the individual firing the gun. As explained, firing operation of the firing mechanism is completed incident to the rearward movement of the trigger, and operation of the sound producing means occurs incident to forward

movement of the trigger. Hence, by maintaining the trigger in its squeezed rearward position, any desired time interval may be secured between the firing effect created incident to rearward movement of the trigger and the whine or ricochet effect created incident to forward movement of the trigger.

Illustrated in FIGURES 13 through 21 is another embodiment of an operating arrangement by which the features of this invention can be obtained. As seen particularly in FIGURE 13, this arrangement comprises a gun frame 119, a generally conventional gun firing mechanism 121 which is carried on the gun frame and which includes a trigger 123 and a hammer 125, a sound producing mechanism 127 which is carried on the gun frame and which includes a vibrator 129 and a membrane 131, and a vibrator-operating linkage including a rotatably mounted, vibrator-engaging cam 133 and a connecting rod 135 linking the cam 133 and the trigger 123.

More specifically, the trigger 123 is rockably mounted about a post 137 and is biased in a forward position by a trigger spring 139 which is carried about a fixed shaft 141 extending from the gun frame and which has one leg 143 engaged with a lug 145 on the gun frame, and a second leg 147 in engagement with a pin 149 formed on the trigger 123. The hammer 125 is rockably carried on another post 151 and is biased in a counter-clockwise direction by a hammer spring (not shown) for engagement with an anvil 153 formed on the gun frame.

Cocking of the hammer 125 incident to rearward squeezing pressure on the trigger 123 is accomplished by the engagement, as shown in FIGURES 13 and 14, of a projecting tang 155 on the trigger with a projecting lug 157 carried on the hammer 125. When the rearward movement of the trigger approaches completion, as shown particularly in FIGURE 15, the lug 157 is disengaged from the tang 155 to permit rapid forward movement of the hammer and resultant impact against the anvil to provide a gun firing effect. Incident to release of the squeezing pressure, the trigger, as shown in FIGURE 16, shifts its position relative to the supporting post 137 and cams along the under-surface of the lug 157 until the tang 155 is again positioned for cocking engagement with the hammer.

The whine or ricochet sound producing means 127 incorporated in this embodiment is generally similar in operation to that previously described, but is constructed somewhat differently with the membrane 131 having an increased measure of flexibility in the direction of vibrator engagement. In this connection, the membrane 131, which is of metallic foil, extends across the open end of a cylindrically formed section 159 of the gun frame and is soldered on a seat formed by an inner annular shoulder 161. The membrane 131 is formed with a central segment 163 providing a slightly dome-shaped surface for engagement by the vibrator 129, and with a series of annular ring segments 165 which are formed to provide, in cross section, a slightly serrated effect. Thus, the junctures of the various ring segments act in the nature of hinges to permit variations in the angular relationship between ring segments to thereby impart increased diaphragm flexibility under the action of vibrator engagement.

The vibrator 129 is fixed at one end in an anchor 167 held in the gun frame adjacent the cylindrical section 159 and extends across the membrane 131 and upwardly of the butt of the gun, terminating in a free end portion 169 which is curved inwardly, as seen in FIGURE 18, to a point adjacent the actuating cam 133. While the vibrator 129 extends in a linear direction, as seen in FIGURE 13, its formation, as seen at a right angle to the view in FIGURE 13, (see FIGURE 18) is irregular, having a membrane-engaging portion 171 which is formed for limited touching engagement with the membrane central segment 163 when the vibrator is in an untensioned con-

dition. When the vibrator is set in motion, the vibratory action is transmitted to the membrane by the vibrator-engaging portion 171 and the resultant realistic whine or ricochet sound effect results.

As previously indicated, the vibrator 129 is actuated by the cam 133 which rotates back and forth incident to squeezing and releasing movement of the trigger 123. Rotating movement of the vibrator-actuating cam is imparted through the connecting rod 135 which is pivotally connected at one end to the trigger 123 and pivotally connected at its other end to the cam 133.

As seen particularly in FIGURES 17 and 19 through 21, the cam 133 is rotatably carried by the shaft 141 and is formed with a central hub 173 and a vibrator-engaging portion 175 which projects outwardly along a part of the periphery of the central hub and which functions, incident to rotation of the cam, to engage the vibrator, to displace the vibrator to a tensioned position, and then to release the vibrator for vibratory action against the membrane 131. More specifically, the membrane-engaging portion 175 is formed with a pair of inclined tracks 177 and 179 which are curved around the central hub 173 in adjacent relation to one another. In this regard, the outer track 177 extends in the counter-clockwise direction from a lower level to a raised elevation where it joins the inner track 179 which, in turn, extends upwardly in the reverse direction from a point just below the upper end of the outer track to a still further elevated position spaced beyond the lower end of the outer track.

The formation of the lower end of the inner track 179 at a level just below the upper end of the outer track 177 acts to provide positive movement of the vibrator from the outer to inner tracks, and therefore prevents faulty operation of the vibrator-actuating cam.

In operation, when the trigger 123 is squeezed, the cam 133 rotates clockwise to move the outer track 177 under the vibrator free end portion 169, and to subsequently engage and elevate the free end of the vibrator, thereby placing the vibrator in a tensioned condition. When the trigger is fully squeezed, the gun firing mechanism is actuated, and the cam is rotated to a point where the free end of the vibrator is introduced into the lower end of the inner track 179. Incident to release of trigger, the cam 133 rotates counter-clockwise, and the vibrator is guided along the inner track to effect greater displacement of the free end of the vibrator from its normal untensioned position. Near the end of trigger release, the cam swings out from under the vibrator to thereby release the tensioned vibrator for vibratory action to produce, in cooperation with the membrane, the desired whine or ricochet sound effect.

Of course, the vibrator-actuating cam 133 could be constructed to provide for the occurrence of the engagement, displacement and release of the vibrator entirely within the period of trigger releasing movement.

As disclosed in both embodiments, the vibrator is released from a tensioned position incident to the movement of the trigger past the gun firing position to another position to thereby actuate the projectile travel sounding mechanism. Control of the movement of the trigger past the gun firing position is effective to introduce any desired delay between the gun-firing and projectile-travel effects. The disclosed constructions and the utilization of the return movement of the trigger to operate the auxiliary noise producing mechanism are extremely effective in creating a highly realistic whine or ricochet sound effect, and are of simple and inexpensive construction, as well as being highly reliable in operation over an extended period of time.

While the principles of this invention have been disclosed in conjunction with particular toy guns, it should be kept in mind that features of the invention are equally applicable for inclusion in any of a wide variety of toy firearms, including rifles, shotguns, and the like.

Numerous changes and modifications may be made in the disclosed construction to achieve certain of the fea-

tures mentioned herein, without departing from the principles of the invention. Various features of the invention believed to be new are set forth in the appended claims.

I claim:

1. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a movable trigger, and means carried by said frame for producing a sound simulating the whine of a bullet, said firing mechanism being actuated incident to one portion of the movement of said trigger, and said sound producing means being actuated incident to another portion of the movement of said trigger, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger.

2. A cap gun comprising a frame, a cap firing mechanism carried by said frame, said firing mechanism including a movable trigger, and means carried by said frame for producing a sound simulating the whine of a bullet, said firing mechanism being actuated incident to one portion of the movement of said trigger to fire a cap, said sound producing means being mechanically interconnected with said trigger, and being actuated incident to another portion of the movement of said trigger, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger.

3. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a trigger movable reciprocally to and from a gun firing position, and means carried by said frame for producing a sound simulating the whine of a bullet, said firing mechanism being actuated by movement of said trigger in one direction toward said firing position, and said sound producing means being actuated by movement of said trigger in the other direction from said gun firing position, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger.

4. A cap gun comprising a frame, a cap firing mechanism carried by said frame, said firing mechanism including a movable trigger, and means carried by said frame for producing a sound simulating the whine of a bullet, said sound producing means including a vibratable member, said firing mechanism being actuated incident to one portion of the movement of said trigger to fire a cap, means for mechanically interconnecting said trigger with said vibratable member to tension said vibratable member and to release said vibratable member to produce the sound of a bullet whine incident to another portion of the movement of said trigger, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said cap firing mechanism by controlling the movement of said trigger.

5. A toy cap gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a trigger reciprocally movable to and from a gun firing position, and means for producing a sound simulating the whine of a bullet, said sound producing means being carried by said frame and including a spring wire vibratable member, and means mechanically interconnecting said vibratable member and said trigger, said firing mechanism being actuated to fire a cap by movement of said trigger in one direction toward said firing position, said vibratable member being tensioned by movement of said trigger and being released from tension to produce the sound of bullet whining incident to movement of said trigger from said gun firing position in the other direction, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said

firing mechanism by controlling the movement of said trigger.

6. A toy gun comprising a frame, a reciprocally movable trigger carried by said frame, means carried by said frame for producing a sound simulating the whine of a bullet, said sound producing means including a vibratable member, said trigger engaging and then disengaging said vibratable member incident to trigger movement in one direction and engageably displacing said vibratable member under tension incident to movement in the other direction, and means carried on said frame for releasing said tensioned vibratable member from said trigger to thereby produce the sound of bullet whining.

7. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, a mechanism carried by said frame for producing a sound simulating the whine of a bullet, said sound producing mechanism including a vibratable member, said firing mechanism including a trigger movable reciprocally through a predetermined path and having means engageable with said vibratable member, said firing mechanism being operable incident to movement in one direction of said trigger and said sound producing mechanism being operable incident to movement of said trigger in the other direction, said vibratable-member-engaging-means having a first engaging surface inclined with respect to the path of trigger movement so as to engage and then disengage said vibratable member without substantial displacement thereof incident to trigger movement in said one direction and having a second engaging surface disposed generally normal to the path of trigger movement so as to engage and then disengage said vibratable member under tension incident to trigger movement in said other direction, and means carried by said frame for releasing said tensioned vibratable member incident to continued trigger movement in said other direction, said vibratable-member-releasing-means including a camming edge disposed in the path of the displacing movement of said vibratable member for engagement therewith to disengage said vibratable member from said second surface so as to produce the sound of bullet whining.

8. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a movable trigger and being actuated incident to one portion of the movement of said trigger, means carried by said gun frame for producing a sound simulating the whine of a bullet, said sound producing means including a vibratable member, and means mechanically connected with said trigger for engaging and displacing said vibratable member in tensioned condition and for releasing said vibratable member from said tensioned condition incident to another portion of the movement of said trigger, whereby vibration of said vibratable member can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger.

9. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a trigger movable to and from a gun firing position, said firing mechanism being actuated by trigger movement to said gun firing position, means carried on said frame for producing a sound simulating the whine of a bullet, said sound producing means including a vibratable member, and means for actuating said sound producing means incident to movement of said trigger from said gun firing position, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger, said actuating means including a vibratable-member-engaging cam rotatably carried on said frame, and a rod connecting said trigger and said cam, whereby said cam is caused to rotate incident to movement of said trigger and to thereby engage said

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vibratable member, displace said vibratable member under tension, and to release said tensioned vibratable member so as to operate said sound producing means.

10. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a trigger movable to and from a gun firing position, said firing mechanism being actuated by trigger movement to said gun firing position, means carried on said frame for producing a sound simulating the whine of a bullet, said sound producing means including a vibratable member, and means for actuating said sound producing means incident to movement of said trigger from said gun firing position, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger, said actuating means including a vibratable-member-engaging cam rotatably carried on said frame, and a rod connecting said cam and said trigger, whereby said cam is caused to rotate incident to movement of said trigger, said cam having an inclined track which, incident to rotation of said cam, engages said vibratable member, displaces said vibratable member under tension, and releases said tensioned vibratable member so as to operate said sound producing means.

11. A toy gun comprising a frame, a firing mechanism carried by said frame for firing said gun and producing a percussive report, said firing mechanism including a trigger movable to and from a gun firing position, said firing mechanism being actuated by trig-

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ger movement to said gun firing position, means carried on said gun frame for producing a sound simulating the whine of a bullet, said sound producing means including a vibratable member, and means for actuating said sound producing means incident to movement of said trigger from said gun firing position, whereby actuation of said sound producing means can be selectively delayed relative to actuation of said firing mechanism by controlling the movement of said trigger, said actuating means including a vibratable-member-engaging cam rotatably carried on said frame, and a rod connecting said cam and said trigger, whereby said cam is caused to rotate incident to movement of said trigger, said cam including a pair of inclined vibratable-member-engaging tracks connected at a common end, whereby incident to trigger movement to said gun firing position and resultant rotation of said cam, said vibratable member is engaged by and guided along one of said tracks to said common track end whereat said vibratable member is displaced to a tensioned position, and whereby incident to trigger movement from said gun firing position and resultant rotation of said cam, said vibratable member is guided along the other of said tracks to a position of increased tension and then released so as to operate said sound producing means, said common track end being formed to prevent movement of said vibratable member along said one track incident to rotation of said cam resulting from trigger movement away from said gun firing position.

No references cited.