

Feb. 23, 1960

J. P. A. BLANKENSHIP

2,925,685

SOUND MAKING DEVICE FOR TOY GUNS

Filed June 4, 1958

2 Sheets-Sheet 1

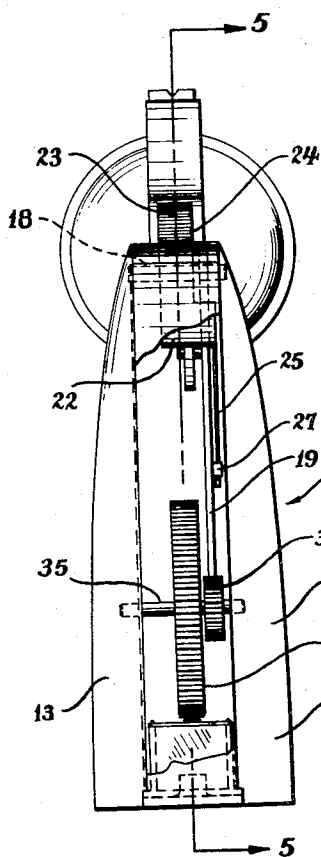


Fig. 2

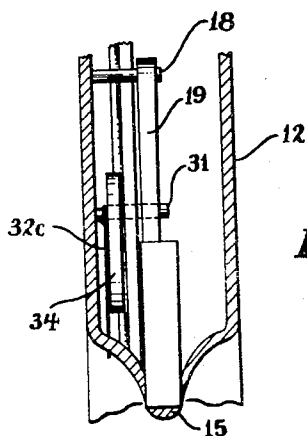


Fig. 3

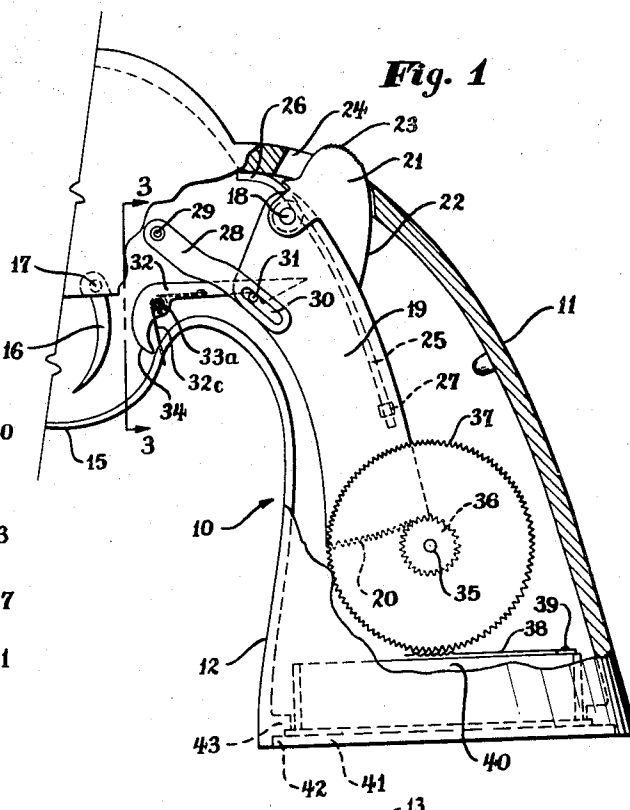


Fig. 1

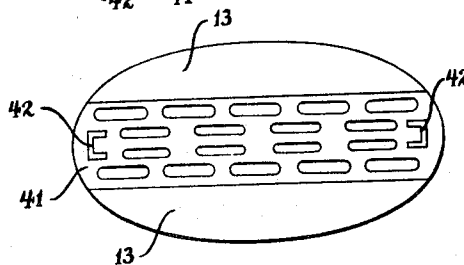


Fig. 4

INVENTOR

John P. A. Blankenship

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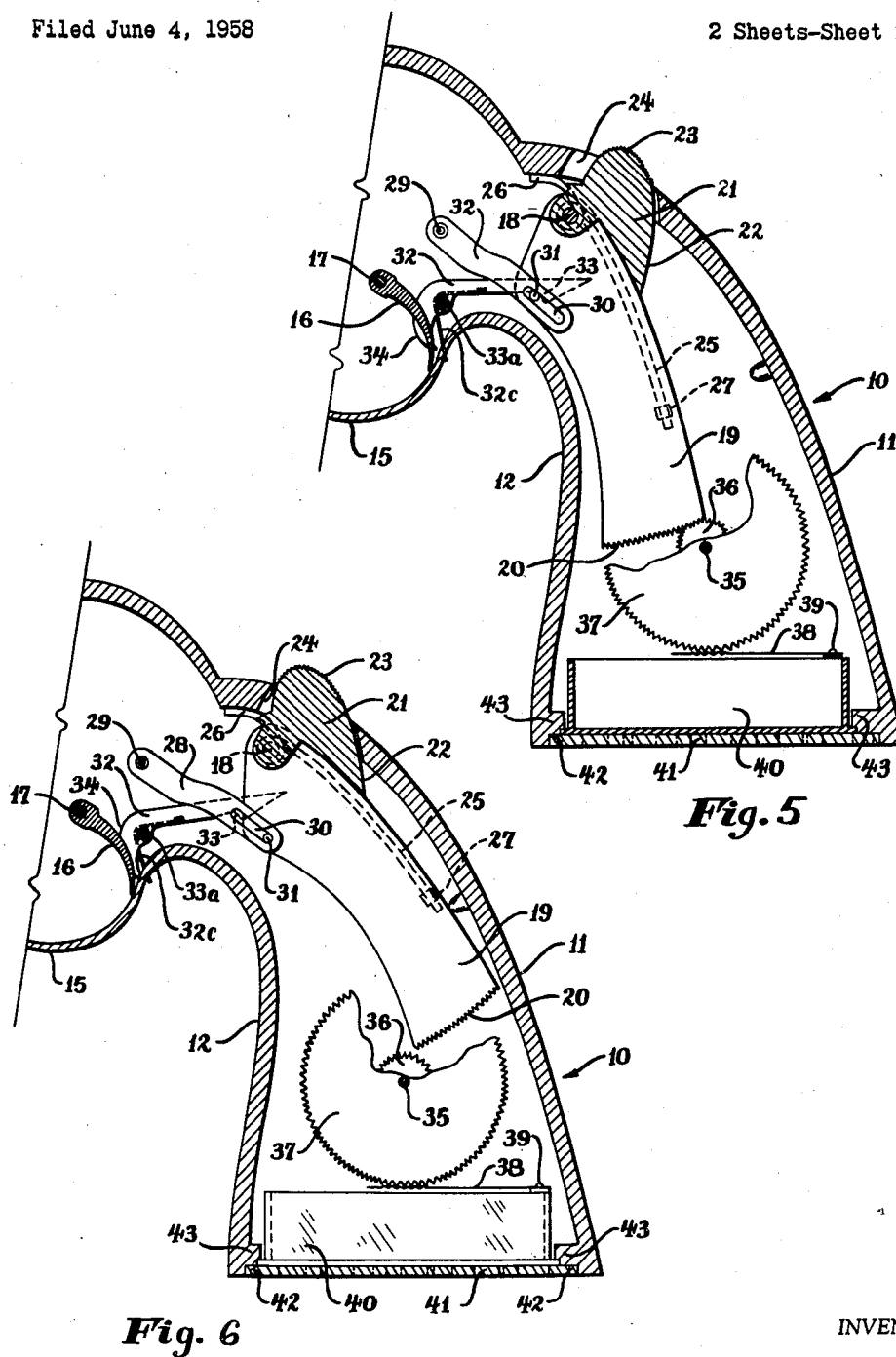
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INVENTOR

John P. A. Blankenship

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SOUND MAKING DEVICE FOR TOY GUNS

John P. A. Blankenship, Dallas, Tex.

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2 Claims. (Cl. 46—189)

This invention relates to a sound making device for toy guns, and has as its primary object the provision of a device in association with a toy pistol or the like which will simulate the whine of a bullet.

An additional object of the invention is the provision of such a device which is adapted to be actuated either by the trigger mechanism of a toy gun, or by a thumb cocking device independent of the trigger action.

Still another object of the invention is the provision of a device of this character which may be readily associated with a toy pistol, rifle, or automatic.

A further object of the invention is the provision of a device of this character which may be manufactured inexpensively, which is sturdy and durable in construction, reliable and efficient in operation, and which produces a sound which closely resembles the whine of a bullet as fired from an actual firearm.

Still other objects reside in the combinations of elements, features of construction, and arrangements of parts, all as will be more fully pointed out hereinafter, and disclosed in the accompanying drawings.

In the drawings:

Figure 1 is a side view, partially in elevation and partially in section, showing the sound producing device of the instant invention in association with a toy revolver.

Figure 2 is a rear view of the arrangement of Figure 1, parts being shown in elevation, and partially broken away.

Figure 3 is a sectional view taken substantially along the line 3—3 of Figure 1 as viewed in the direction indicated by the arrows.

Figure 4 is a bottom plan view of the butt of the pistol of Figure 1.

Figure 5 is a sectional view taken substantially along the line 5—5 of Figure 2 as viewed in the direction indicated by the arrows.

Figure 6 is a view similar to Figure 5 but showing the parts in a different position of adjustment.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Having reference now to the drawings in detail, there is generally indicated at 10 a simulated firearm, such as a toy pistol, which includes a butt 11 having a central frame piece 12, and side plates 13, the assembly being suitably secured in position as by means of transversely extending bolts 14.

The frame piece 12 includes a integral trigger guard 15, which surrounds a trigger 16, pivotally mounted as at 17. Suitable mechanism, forming no part of the instant invention, may be connected to the trigger for the purpose of producing the sound of an explosion, as for example, a cap, and relevant mechanism for firing the same.

Pivotally mounted interiorly of the frame 11 as on a pivot 18 is a plate 19, which is provided at its lower end with an arcuate toothed surface 20. Mounted on the

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pivot 18 is a thumb cocking device 21, which includes an extending portion 22 which lies along the rear arcuate surface of the plate 19, and which has a serrated thumb engaging portion 23, which extends through an opening 24 in the top of the frame piece 11. A leaf spring 25 has one end 26 coiled about the pivot pin 18 and abutting the top of frame 12 and the other end secured as by means of a lug 27 or the like to the plate 19, the arrangement being such that the spring normally biases the plate in a direction toward the front or trigger guard of the frame.

A pivoted link 28 is secured as by means of a pivot 29 to an intermediate portion of the frame, and has an elongated slot 30 in an end thereof which engages over a pin 31 secured to the plate 19. A second lever 32 is provided with a notched detent 33 which is adapted to engage over the pin 31, and which is mounted on a pivot or axle 33a. The forward arcuate end 34 of the lever 32 extends forwardly adjacent the trigger guard 15, in such manner that it may be pressed by the finger of a user in pulling the trigger 16, to release the detent 33 from its engagement with the pin 31, for a purpose to be more fully described hereinafter. A spring 32c wound about axle 33a serves normally to bias detent 33 to pin releasing position.

A shaft or axle 35 extending transversely between the side plates 13 of the frame carries a gear 36, and also a larger gear 37. The gear 36 is adapted to mesh with the toothed portion 20 of the plate 19, to be moved thereby in order to impart rotation to the gear 37. The gear 37 is adapted to engage a serrated or corrugated needle or arm 38, which is fixedly secured as by means of a mounting pin 39 to the frame 11.

A sound box 40 is also provided in the lower portion of the butt, and is adapted to be held in position by means of a base plate 41, which includes end flanges 42 positioned interiorly thereof for engagement over corresponding flanges 43 of the sound box for securing the parts in related assembly.

From the foregoing the operation of the device should now be readily understandable. When the thumb cocking device is moved rearwardly to the position of Figure 5, the toothed portion 20 of the plate 19 causes rotation of the gear 36, which in turn rotates the gear 37, causing the same to ratchet over the arm or needle 38, producing a whining sound simulating the noise of a bullet in flight. The release of the thumb cocking device permits the spring 25 to urge the plate in the reverse direction towards the rear of the frame, to repeat the operation in the opposite direction. The sound box 40 amplifies the sound thus produced, and causes reverberations, which in turn produce a whining sound.

A similar effect may be achieved by moving the cocking device to place the parts in the position shown in Figure 5, whereupon the detent 33 by its engagement with the pin 31 will hold the plate 19 against rotation by the spring 25 until the trigger 16 is pulled, to release the detent, at which time the spring 25 will cause the plate to move rearwardly in the frame to produce the whining noise above referred to. The pull of the trigger causes the finger of the user to engage the curved surface of the lever 34 to release the detent and pin engagement.

From the foregoing it will now be seen that there is herein provided an improved noise producing device for a toy pistol or the like, which accomplishes all of the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the

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embodiment herein before shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

What is claimed is:

1. A device for producing a sound in simulation of the whine of a bullet, in conjunction with a toy gun, including a gun frame and a trigger, a vibrating sounding needle having a corrugated portion, mounted within said frame, a shaft within said frame disposed above said needle, a substantially large gear mounted on said shaft, said substantially large gear having teeth on its periphery movable over said corrugated portion of said needle, vibrating said needle producing a sound, a substantially small gear secured to said shaft for rotating said shaft and said substantially large gear, a pivoted actuating plate mounted within said frame, having a toothed arcuate shaped end meshing with said substantially small gear, rotating said gear as said actuating plate is operated, locking mechanism for normally holding said actuating plate inactive in a cocked position, and trigger control means for releasing said plate rotating said gears, producing a whining noise.

2. A device for producing a sound in simulation of the whine of a bullet, in conjunction with a toy gun, in-

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cluding a gun frame and a trigger, a vibrating sounding needle mounted within the frame having a corrugated end portion, a substantially large gear mounted within the frame having peripheral teeth engaging said corrugated portion of the sounding needle producing a sound, a small gear operating said substantially large gear, a pivoted hinge plate within the frame having teeth engaging said small gear and rotating said small gear as the teeth of the hinge plate move thereover, means for moving said hinge plate rearwardly within the frame, a spring member connected with said hinge plate tensioned by the movement of said hinge plate in one direction, means for locking said hinge plate in an inactive position against the action of said spring, and means for releasing said locking mechanism and plate whereby said spring moves said plate operating said gears and sounding needle producing a sound.

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