July 13, 1937. E. B. JONES 2,087,193

TOY PISTOL

Filed May 29, 1936

Fig.1.

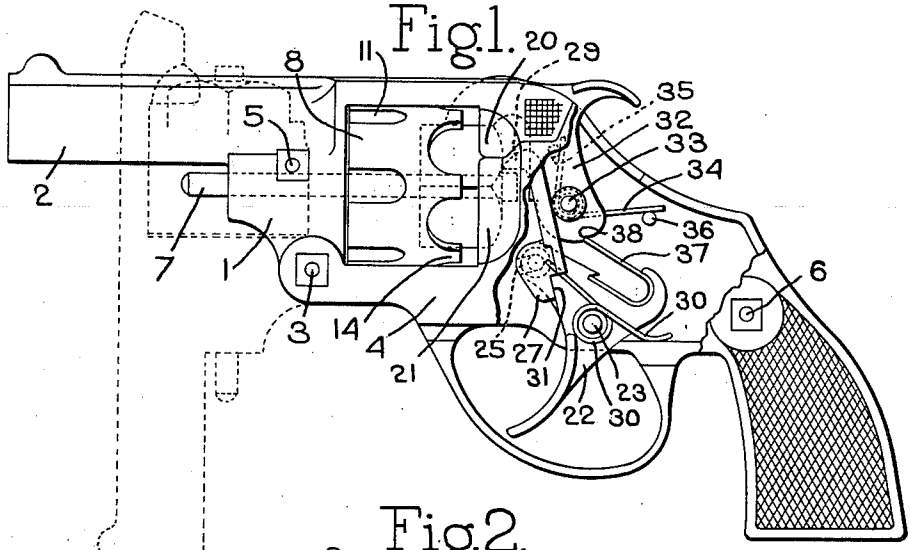


Fig.2.

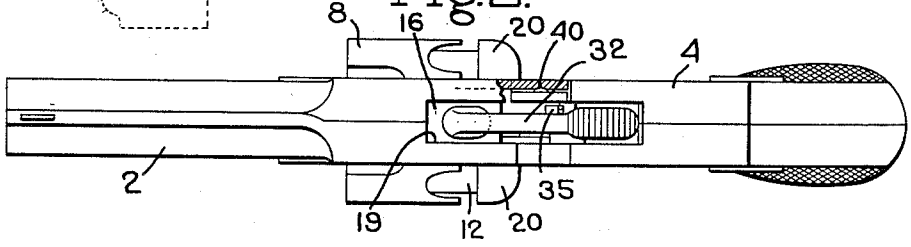


Fig.3.

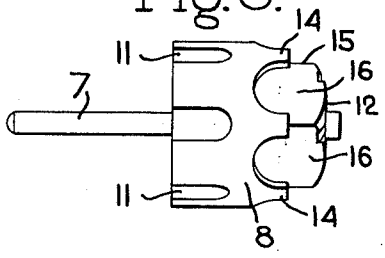


Fig.4.

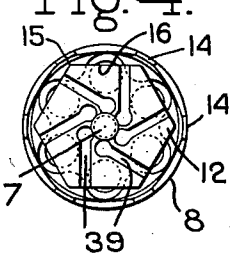


Fig.5.

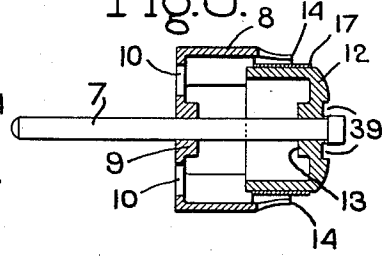


Fig.6.

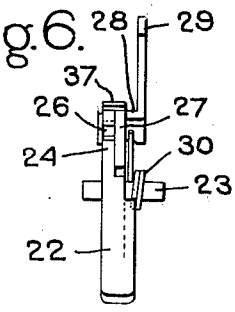
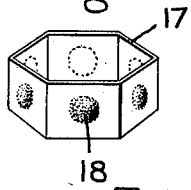


Fig.7.



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TOY PISTOL

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12 Claims. (Cl. 42—58)

This invention relates to a toy pistol and has for its object to provide a simple and efficient device of this character which shall simulate in appearance a cartridge pistol of the revolver type.

The object of the invention is further to provide a device which shall be of simple and durable construction and safe to place in the hands of children and young people.

The object of the invention is further to provide such a device in which the ammunition is in the form of a polygonal band and in which the pistol is loaded with this polygonal band in a similar manner to the loading of an ordinary revolver.

The object of the invention is further to provide a novel form of rotatable anvil having a polygonal periphery for supporting and positioning the polygonal band of ammunition.

The object of the invention is further to provide a simple form of hammer and trigger mechanism acting automatically to rotate the anvil and effect the explosion of the fulminate upon each pressure of the trigger.

The object of the invention is further to provide a novel form of ammunition.

The object of the invention is further to provide a toy pistol having an anvil with a periphery upon which is positioned an endless band of ammunition and in which the body and handle portions are provided with a hinged connection acting, when the body is swung to open or loading position, to expose the rear of the anvil unobstructed and in position to enable the endless band of ammunition to be slipped over the rear of the anvil and seated on the anvil periphery.

These and other objects of the invention will appear more fully from the accompanying description and drawing and will be particularly pointed out in the claims.

The drawing illustrates a preferred form of the invention in which:

Fig. 1 is a side elevation of the pistol partially broken away and with the body shown in dotted lines in loading position.

Fig. 2 is a top plan view of the construction shown in Fig. 1.

Fig. 3 is a detail in plan view of the cylinder and anvil.

Fig. 4 is an end view of the construction shown in Fig. 3.

Fig. 5 is a view in vertical cross section of the construction shown in Figs. 3 and 4 with the ammunition band in place.

Fig. 6 is a view in front elevation of the trigger and anvil-operating hook,

Fig. 7 is a perspective view of the polygonal ammunition band.

The general shape of the pistol, its size and proportions, may be varied as desired but is here shown as of the shape, size and proportions of a familiar type of revolver for the firing of cartridges. The main portions of the pistol are conveniently made of cast iron with the parts secured together by a few bolts.

In the construction illustrated, the body portion 1 of the pistol which is provided with the usual barrel 2 and which supports the cylinder and ammunition-carrying element is hingedly mounted by a bolt 3 to the handle portion 4 in which is mounted the hammer and trigger mechanism.

The body of the pistol is shown as formed of two generally similar castings clamped together by means of the bolt 5 and similarly the handle portion is shown as made of two generally similar castings clamped together by means of the bolt 6.

A shaft 7 extends parallel with the barrel and is clamped in place between the two portions of the body by the bolt 5. This shaft projects rearward into a cut-away portion of the body and upon the rear portion of this shaft is mounted the cylinder 8 which simulates the cartridge cylinder of an ordinary revolver. As illustrated, this cylinder is a shell-like structure having a hub 9 journalled on the shaft 7 and provided at its front face with openings 10 and on its periphery with grooves 11 similar to those in a cartridge cylinder. While the cylinder 8 is thus shown as rotatable on the shaft 7, it is not essential to the broadest scope of the invention that this cylinder shall be so mounted as to rotate, although it is preferred that it shall be rotatable because it causes the pistol further to resemble an ordinary revolver.

An essential feature of the invention in its preferred form is the polygonal anvil 12 shown as rotatably mounted at the rear end of the shaft 7. In the preferred form illustrated, the anvil and cylinder rotate together and the anvil, which is shown as a shell-like structure having a hub 13 journalled on the shaft 7, telescopes within the rear end of the cylinder but slightly spaced therefrom. This construction is effected by providing on the cylinder a plurality of equispaced, similar, rearward projections 14 at the periphery of the cylinder with these projections overlying the angular edges 15 of the anvil and presenting between the projections spaces opposite the respective anvil faces 16.

The ammunition employed and which is novel in itself is shown separately in Fig. 7. It consists of a polygonal band 17 of paper or suitable material such as employed in the ordinary paper caps having at each section a small mass of fulminate 18 such as is employed in paper caps. This annular flat band of ammunition comprises a plurality of flat sections corresponding in number and size with the anvil faces with these sections joined at sharp bends in the paper and each section carrying the fulminate. These bends act to preform the flat band into polygonal shape for loading. The pistol is loaded by swinging the body about the hinged pivot 3 to a position such as shown in dotted lines in Fig. 1 and then slipping the polygonal band of ammunition over the rear end of the anvil beneath the projections 14 and with the fulminate sections seated respectively on the anvil faces. Thus the ammunition is slipped into place at the rear of the cylinder in much the same fashion that cartridges are slipped in place in the cylinder of a revolver.

The construction of body and handle portions of the pistol with the hinged connection therebetween which acts, when the body is swung to open or loading position, to expose the rear of the anvil unobstructed and enables the endless band of ammunition to be slipped over the rear of the anvil and thus placed or seated in the required position on the anvil periphery is independent of the polygonal shape of the anvil periphery in the broader aspect of this feature.

The body of the pistol at the rear portion above the anvil is slotted at 19 to allow for the operation of the hammer and the engagement thereof with the anvil. Small laterally extending guard projections 20 are also provided to prevent any backward discharge upon the explosion of the fulminate.

The handle portion of the pistol carries the hammer and trigger mechanism and is provided at each side with the curved flanges 21 beneath the projections 20 which further act to prevent any backward discharge upon the explosion of the fulminate.

The action of the hammer and trigger mechanism is such that, when the trigger is pressed, it automatically rotates the anvil, and preferably with it the cylinder, to bring an anvil face into uppermost position and simultaneously cocks and releases the hammer to effect the explosion of the fulminate on the anvil face and thus the firing of the pistol.

The trigger 22 is journalled on a stud 23 in the handle and is provided with an upwardly and forwardly extending portion 24 slotted at 25. In this slot is journalled a stud 26 secured to a shank 27. This shank is offset at 28 and extends upward therefrom and forms a hook 29. Thus this hook member is journalled in the slot 25 held in place between the head of the stud 26 and the shank portion 27. A spring 30 surrounding the stud 23 bears at its rear end against a ledge in the handle and at its forward end beneath the offset portion of the hook member thus yieldingly holding the hook member with the depending flange 27 abutting at its rear edge a shoulder 31 on the trigger. The hammer 32 is pivotally mounted at 33 in the handle and is forced forward against the anvil by a spring 34 mounted on the pivot 33 and engaging at its upper end a lug 35 on the hammer and at its opposite end a lug 36 on the handle. A spring 37 held in a recess in the trigger engages at its free end a shoulder 38 on the lower end of the hammer.

It will thus be seen that as the trigger 22 is pressed so that the finger piece is moved rearward, the hook 29 has a bodily movement with the trigger and also, if restrained, a swinging movement with respect to the trigger at the stud 26. The rear face of the anvil 12 is provided with a series of similar grooves 39 equispaced and corresponding in number to the number of anvil faces and each extending from the center of the anvil outward and these grooves cooperate with the hook so that upon the movement of the hook the anvil is given a rotation of one step to bring the proper anvil face into firing position.

It will be seen that each of the grooves 39 which extend from the center of the anvil outward is inclined with respect to the radius extending from the axis of the anvil to the outer termination of the groove, that the hook 29 has both a swinging movement toward and from the anvil and a bodily vertical movement in a path at one side of the axis of the anvil. The result is that when the trigger is pressed, the hook first swings into engagement with one of the grooves at its inner end and then slides vertically downward at one side of the axis of the anvil so that at the conclusion of the vertical downward movement of the hook the engaged groove extends in the vertical path of the hook. Consequently the required rotation of the anvil one step to position the fulminate in firing position, independently of the particular shape of the periphery of the anvil, takes place accurately and surely.

The operation of the pistol will now be apparent. With the parts shown in normal position as in Fig. 1, when the finger piece of the trigger is pressed, the trigger swings clockwise on its pivot 23 and the hook 29 moves bodily with it bringing the point of the hook into engagement with the inner end of one of the grooves 39 and as the pressure on the trigger continues, the hook slides down the groove at the same time swinging on its pivot 26, thus causing the anvil to rotate one step. Simultaneously with the swinging of the trigger, the hammer is cocked by the spring 37 pushing against the shoulder 38 on the hammer. As the hammer reaches its retracted position, the end of the spring 37 rides off this shoulder 38 and the powerful spring 34 causes the hammer to strike and explode the fulminate on the anvil face which has been presented in firing position. Thus the firing mechanism is entirely automatic, a single rearward movement of the finger on the trigger effecting the required movement of the anvil, the cocking and striking of the hammer. And by successive movements of the trigger the action may be repeated until the ammunition is exhausted.

The body of the pistol is frictionally held in closed position with respect to the hammer by any suitable means. As illustrated, the rearward ends of the side walls forming the slot 19 press against small lugs 40 on the handle portion for this purpose.

There is thus presented a simple, efficient and safe toy pistol simulating in its appearance and action a standard type of cartridge revolver.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is:

1. A toy pistol comprising a body having a barrel, a handle, an anvil having a polygonal periphery rotatable on an axis parallel to the barrel for supporting a correspond-

ing polygonal band of ammunition having fulminate on each section with the fulminate sections seated respectively on the anvil faces, the anvil being provided on its rear face with a series of similar grooves equispaced corresponding in number to the number of anvil faces and extending from the center of the anvil outward, a hinged connection between the body and handle acting, when the body is swung to open or loading position, to expose the rear of the anvil unobstructed for loading of the ammunition band on to the anvil from the rear thereof, and a firing mechanism mounted on the handle comprising a hammer, a trigger and a swinging and bodily movable hook, the said mechanism acting, when the trigger is pressed, to cause the hook to engage one of the grooves at its inner end and slide vertically downward and thus to rotate the anvil one step, and then to cause the hammer to strike and explode the fulminate on the anvil face presented thereto.

2. A toy pistol comprising a body having a barrel, a handle, a cylinder simulating a cartridge cylinder and having a plurality of equispaced similar rearward projections at its periphery and mounted on the body to rotate on an axis parallel with the barrel, an anvil having a polygonal periphery at the rear of the cylinder extending beneath the projections with its peripheral faces exposed at the spaces between the projections, the anvil being rotatable with the cylinder and forming a support for a corresponding endless band of ammunition having equispaced fulminates with the band extending beneath the projections and with the fulminate sections seated respectively on the anvil faces with the fulminate exposed at the spaces, a hinged connection between the body and handle acting when the body is swung to open or loading position to expose the rear of the anvil unobstructed and in position to enable loading the ammunition band on to the anvil from the rear thereof, and a hammer and trigger mechanism mounted on the handle acting when the trigger is pressed to rotate the anvil one step and cause the hammer to strike and explode the fulminate on the anvil face presented thereto.

3. A toy pistol having a barrel and comprising an anvil having a polygonal periphery presenting similar flat faces rotatably mounted on an axis parallel with the barrel and provided on its rear face with a series of similar grooves equispaced corresponding in number to the number of anvil faces and extending from the center of the anvil outward, a firing mechanism comprising a trigger and a hook mounted to swing toward and from the rear face of the anvil and to move bodily vertically with respect thereto, the said mechanism acting when the trigger is pressed to cause the hook to engage one of the grooves at its inner end and slide vertically downward thus to rotate the anvil one step.

4. A toy pistol comprising a body having a barrel, a handle, an anvil having a polygonal periphery presenting similar flat faces mounted on the body to rotate on an axis parallel with the barrel, a polygonal band of ammunition having fulminate on each section fitting over the anvil with the fulminate sections seated respectively on the anvil faces, and a hammer and trigger mechanism mounted on the handle and acting when the trigger is pressed to rotate the anvil one step and cause the hammer to strike and explode the fulminate on the anvil face presented thereto.

5. A preformed polygonal ammunition unit for a toy pistol having a polygonal anvil consisting of an annular flat band having equispaced transverse bends defining similar flat fulminate-carrying sections angularly united at said bends to present when in place on the anvil a polygonal band fitting over the anvil.

6. A toy pistol comprising a body having a barrel, a handle, an anvil mounted on the body to rotate on an axis parallel with the barrel and presenting a periphery to receive and support an endless band of ammunition having a series of equispaced fulminates and a hinged connection between the body and handle acting, when the body is swung to open or loading position, to expose the rear of the anvil unobstructed and in position to enable the endless band of ammunition to be slipped over the rear of the anvil and seated on the anvil periphery.

7. A toy pistol comprising the construction defined in claim 6, together with a hammer and trigger mechanism mounted on the handle and acting, when the trigger is pressed, to rotate the anvil one step and cause the hammer to strike and explode the fulminate presented thereto

8. A toy pistol comprising a body having a barrel, a handle, a cylinder simulating a cartridge cylinder mounted on the body to rotate on an axis parallel with the barrel, an anvil at the rear of the cylinder separate therefrom but rotatable therewith on the said axis and presenting a periphery to receive and support an endless band of ammunition having a series of equispaced fulminates, a hinged connection between the body and handle acting, when the body is swung to open or loading position, to expose the rear of the anvil unobstructed and in position to enable the endless band of ammunition to be slipped over the rear of the anvil and seated on the anvil periphery, and a hammer and trigger mechanism mounted on the handle and acting, when the trigger is pressed, to rotate the anvil one step and cause the hammer to strike and explode the fulminate presented thereto.

9. A toy pistol comprising the construction defined in claim 8, in which the cylinder part presents a series of guard projections extending rearward over the anvil and overlying the ammunition band at each side of each fulminate when the ammunition band is in place on the anvil.

10. A toy pistol comprising a body having a barrel, a handle, an anvil having a polygonal periphery and mounted on the body to rotate on an axis parallel with the barrel, a hinged connection between the body and handle acting, when the body is swung to open or loading position, to expose the rear of the anvil unobstructed and in position to enable an endless band of ammunition having a series of equispaced fulminates to be slipped over the rear of the anvil and seated on the anvil periphery.

11. A toy pistol having the construction defined in claim 6, in which the hook is mounted to cause its vertical sliding movement to take place at one side of the axis of rotation of the anvil and in which each of the said grooves is so inclined with respect to the radius extending to its outer termination that the groove extends in the vertical path of the hook at the conclusion of the downward movement of the hook.

12. A toy pistol comprising a body having a barrel, a handle, an anvil mounted on the body to rotate on an axis parallel with the barrel and presenting a periphery to receive and support an

endless band of ammunition having a series of equispaced fulminates, the said anvil provided on its rear face with a series of similar equispaced grooves corresponding in number to the number of said fulminates and each extending from the center of the anvil outward and inclined with respect to the radius extending to its outer termination, a firing mechanism comprising a trigger and a hook mounted to swing and move bodily vertically at one side of the axis of rotation of the anvil, the said mechanism acting when the trigger is pressed to cause the hook to swing into engagement with one of the grooves at its inner end and slide vertically downward with the engaged groove extending in the vertical path of the hook at the conclusion of the downward movement of the hook thus to rotate the anvil one step and position the fulminate in firing position.

ERNEST B. JONES.