

D. R. SACKMAN.
PNEUMATIC PISTOL.

APPLICATION FILED AUG. 3, 1912.

Patented Oct. 6, 1914.

2 SHEETS—SHEET 1.

1,112,563.

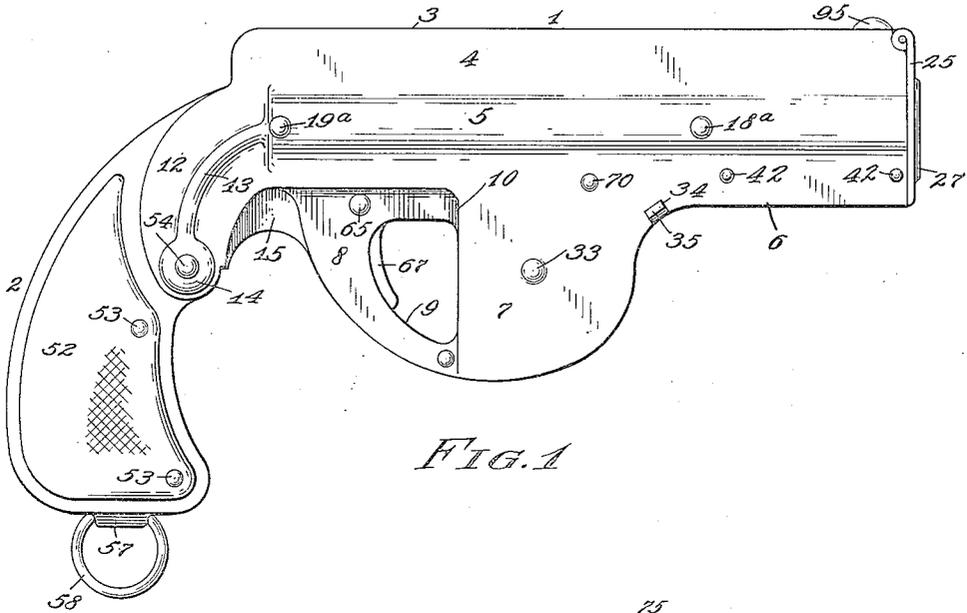


FIG. 1

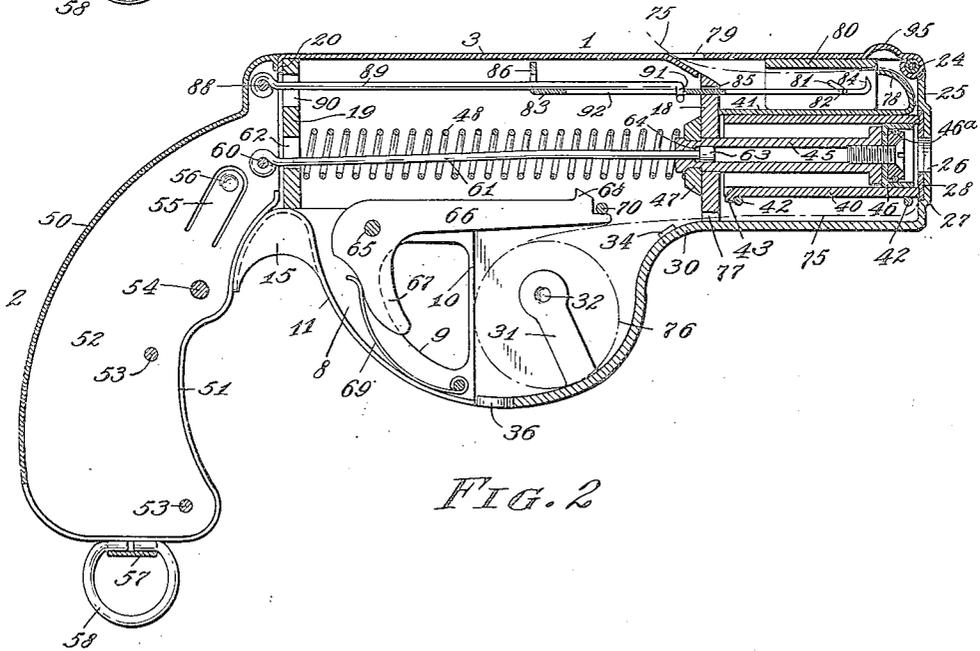


FIG. 2



FIG. 11

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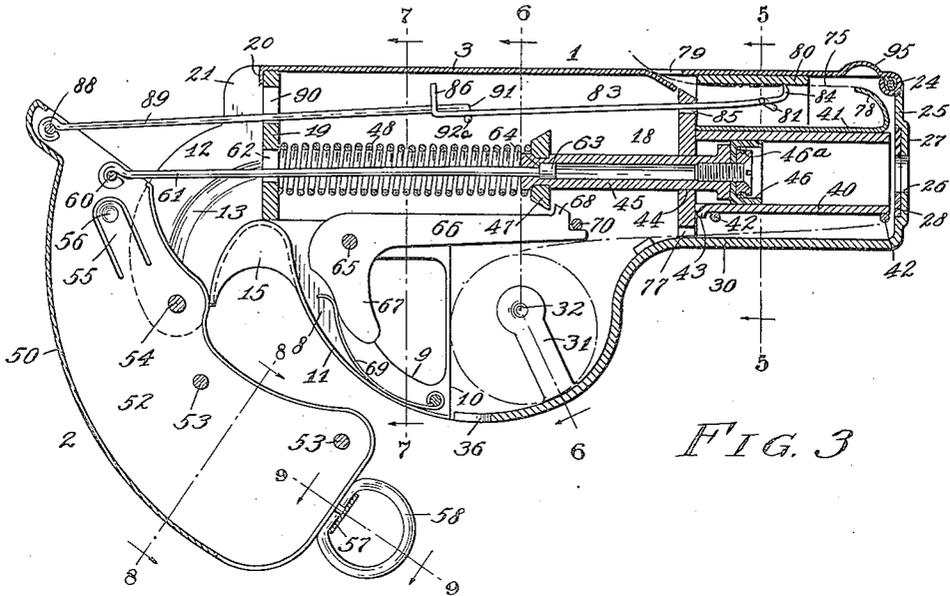


FIG. 3

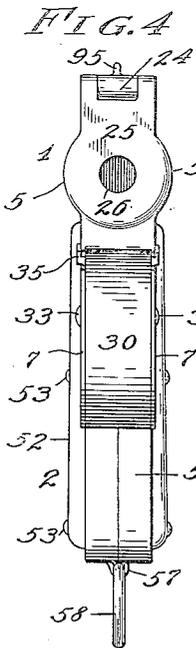


FIG. 4

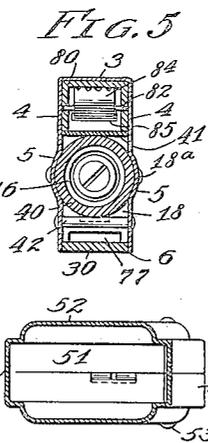


FIG. 5

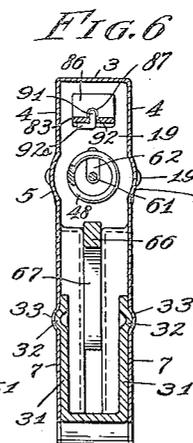


FIG. 6

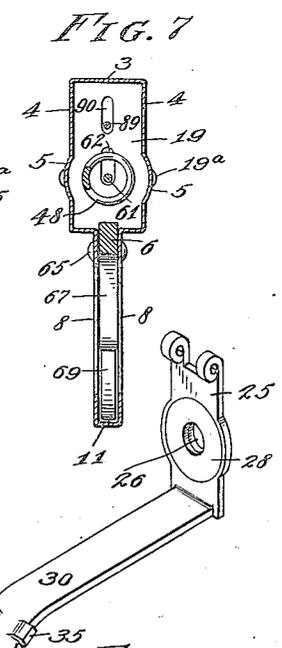


FIG. 7

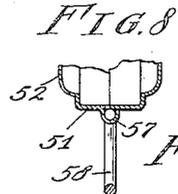


FIG. 8

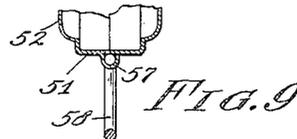


FIG. 9

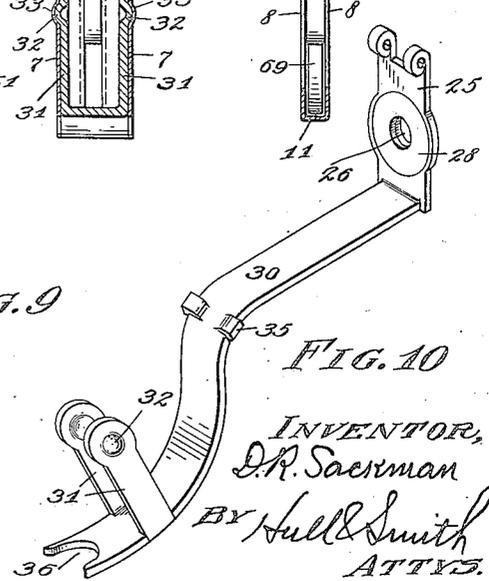


FIG. 10

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UNITED STATES PATENT OFFICE.

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PNEUMATIC PISTOL.

1,112,563.

Specification of Letters Patent.

Patented Oct. 6, 1914.

Application filed August 3, 1912. Serial No. 713,031.

To all whom it may concern:

Be it known that I, DANIEL R. SACKMAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Pneumatic Pistols, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to the subject of toys and especially to that form of toy which may be used in the harmless production of noise.

The objects of the invention are the provision of a device of this character having the general form and appearance of a pistol and by means of which a frangible diaphragm can be ruptured by gas pressure with a very satisfactory detonation; the provision of a device of this character which shall propel the ruptured portion of the diaphragm for a considerable distance with a fair degree of accuracy; the provision of a device of this nature which can be reset by a movement of the parts thereof similar to that required in reloading a firearm; the provision of means whereby the resetting movement will advance into position a new frangible diaphragm; the provision of means whereby the said diaphragm may be clamped securely in position so as to prevent the leakage of compression therepast which would diminish the violence of the detonation; while further objects and advantages of the invention will become apparent as the description proceeds.

In the preferred embodiment, the frame of the device consists of two sheet metal members, one of which is formed after the similitude of the butt or handle of a pistol, and the other of which is made to resemble as closely as possible the body and barrel of a pistol. The latter member contains an air compressing device, a trigger for holding said air compressing device against operation until it is desired to discharge the pistol, and a frangible diaphragm adapted to be ruptured by the operation of said device. The two members are hinged together in such wise that when the two are forcibly "broken" the air compressing device will be reset, and means is also provided whereby the resetting of the air compressing device will advance a paper ribbon so as to present an unbroken portion to the pressure of the air. The pressure cylinder is then

clamped against the paper so as to prevent the loss of compression, after which the pressure of the air will forcibly eject a portion of the paper with considerable velocity and a large amount of noise.

Generally speaking my invention may be defined as consisting of the combinations of parts recited in the claims hereto annexed and illustrated in the drawings accompanying and forming a part of this application, wherein;

Figure 1 is a side elevation of a complete pistol made in accordance with my invention, Fig. 2 is a longitudinal cross-sectional view of the same showing the parts in "unloaded" position; Fig. 3 is a longitudinal cross sectional view showing the frame members in broken relation and the air compressing parts at the point of greatest retraction; Fig. 4 is a muzzle view of the pistol; Figs. 5 to 9 inclusive are detail cross-sectional views taken upon the similarly numbered lines in Fig. 3 and looking in the direction of the arrows; Fig. 10 is a perspective view of the cover of the ammunition chamber detached from the pistol; and Fig. 11 is a perspective view of a portion of the paper strip employed as ammunition after the ejection of the same.

Describing the parts by reference characters 1 represents generally the barrel member of the pistol and 2 the handle. Each of these members is preferably made from a single piece of sheet metal whereby cheapness, lightness, and uniformity may be most easily secured. The top of the barrel member, indicated at 3, consists of a longitudinal portion of such a sheet defined by bending downwardly the lateral portion thereof as shown at 4-4 to form sides. A longitudinal portion of each of these sides is then swelled outwardly as shown at 5-5, partly for the purpose of simulating a pistol barrel, and partly for the purpose of receiving the operating parts of the device. For a distance in the rear of the muzzle end of this member, the lower edges of the sides 4 are terminated substantially parallel to the top 3, as indicated at 6, in the rear of which the sides are prolonged downwardly so as to form substantially semi-circular, depending cheeks 7-7. The forward half of each of these cheeks preferably lies in the same plane as its corresponding side 4, but the rearward half thereof is offset or depressed inwardly as at 8

and apertured as at 9 so as to form a trigger guard. It will thus be seen that an abrupt offset is formed at 10 between the forward and rearward halves of the semicircular portion, the distance between the cheeks 7—7 being sufficient to form an ammunition chamber, and the distance between the sides 8—8 being just sufficient to receive the trigger. The lower edges of the sides 8—8 are preferably bent toward each other to form flanges 11—11, which meet at the medial line of the device as shown in Fig. 7.

At its rearward end each of the sides 4—4 is formed with a rearwardly-projecting, downwardly-curving extension 12 the same being provided with an embossed rib 13, merging at its upper end with the swelled portion 5 and at its lower end with the pivot seat 14. This rib serves to give stiffness to the extension 12 as well as to provide means for locking the butt or handle in firing position. The lower and inner edges of these extensions are connected to the sides 8 by means of webs 15 which are preferably shaped to abut each other upon the medial line of the device.

The barrel member is held in shape and the interior mechanism of the pistol supported in place by means of a pair of transverse plates 18 and 19, the plate 18 being disposed at a distance in the rear of the muzzle end of the barrel member, and the plate 19 at the very rear or butt end of the barrel member. Each of these plates is shaped to conform to the shape of the barrel member at the point of its attachment thereto and is provided with studs 18^a and 19^a respectively whereby it is secured in place. At the butt end of the barrel member the portion 3 is preferably folded downwardly over the surface of the plate 19 as shown at 20, the sides 4—4 being extended rearwardly a short distance beyond the plate 19 as shown at 21, to receive the forward end of the butt or handle member. The portion 3 is also extended forwardly at the muzzle end of the barrel member, and rolled downwardly to form a hinge 24 to which is pivoted a plate 25 which forms the muzzle of the pistol and is formed with an aperture 26 in alinement with the swelled portion 5. This plate is also preferably embossed outwardly circularly around this aperture as at 27, which both improves the appearance of the device and forms a seat for the reception of a gasket 28, the purpose of which will be described later. The portion of the plate 25 opposite to its hinge is prolonged into an extension 30 which is formed to follow the contour of the sides 4 in Fig. 2 and to fall within the same. Near its rearward end this extension is formed with a pair of inwardly projecting parallel arms 31—31 the ends of which are provided with rounded projections 32—32, the sides of the cheeks 7—7 be-

ing also divided with complementary sockets 33—33 adapted to yieldingly retain the same. In the angle between the edge 6 and the cheeks 7 I have illustrated the metal sides as formed with notches 34 adapted for the reception of ears 35 carried by the extension 30 whereby the plate 25 may be securely held against forward movement, although obviously this feature could be omitted without invention if deemed unnecessary. The rear end of the extension 30 is formed with a notch 36 for the reception of a tool by means of which it may be pried open to load the chamber.

Mounted within the casing between the plates 18 and 25, and extending at its sides into the outwardly swelled portions 5—5, is a cylinder 40. The length of this cylinder is slightly less than the distance between these plates and it is preferably supported with sufficient looseness to permit a certain amount of endwise movement. In this embodiment it is further supported and guided on its upper side by a flat plate 41 traversing the casing and on its lower side by a pair of spaced rods 42—42 secured in the sides 4—4. The complete withdrawal of the cylinder can be prevented by forming it with a tongue 43 adapted to engage one of these rods.

The plate 18 is formed with an aperture 44 coaxial with the cylinder 40 and slidably receiving a hollow piston rod 45, the forward end of which is provided with a piston 46 of the usual or any convenient type closely fitting the cylinder. In its preferred form this piston comprises a cup shaped flexible member closely fitting in the cylinder and having its sides stiffened and pressed outwardly against the cylinder wall by means of an expanding spring 46^a whereby its friction is increased. The rear end of this piston is provided with a collar 47 which provides a seat for the spiral spring 48 whereby the piston is advanced and also a point of engagement for the trigger hereinafter described, as well as limiting the forward movement of the piston as shown in Fig. 2. The opposite end of the spring 48 is seated against the face of the plate 19.

The butt or handle member of the pistol is also preferably formed from a single piece of sheet metal bent to proper form, the upper side thereof being unbroken as indicated at 50, and the inner side and end thereof being formed by the inturned flanges 51, the edges of which abut each other upon the medial line of the device. The sides 52 of the handle are preferably embossed to simulate the usual revolver handle and are secured together by rivets 53. The upper and forward end of this handle is made to fit within and conform to the shape of the rear end of the sides 4 and projections 12 and is pivoted to such projections about a rivet 54

secured in the pivot seats 14. Spring tongues 55 are also preferably formed in the sides 52 and provided with rounded bosses 56 adapted to engage yieldingly in the grooves 13 so as to maintain the handle in firing position. One of the flanges 51 may also, if desired, be formed with a tongue 57 for the attachment of a ring 58.

Pivoted upon a rivet 60 carried by the upper and forward end of the handle member is a resetting or cocking link 61, which projects through a slot 62 formed in the plate 19 within the circle defined by the spring 48, and has its forward end received in the hollow piston rod 45. The forward end of this link is provided with a head 63 adapted to slide within this rod, and the rear end of the rod is formed with an internal shoulder 64 whereby the relative movement of the rod and link is limited. The length of the link is such that when the parts are in the position illustrated in Fig. 2 the head 63 is spaced slightly from the shoulder 64, so that as soon as the pistol is broken the piston rod will be retracted as shown in Fig. 3. Pivoted upon a rivet 65 secured in the sides 8—8 is a bell-crank lever having a horizontal arm 66 and a vertical arm 67, the former being provided with an upwardly projecting hook 68 adapted to engage the collar 47 when the piston is retracted, and the latter projecting into the aperture 9 to form a trigger whereby the piston may be released. A leaf spring 69 presses against the rear side of the arm 67 so as to force the hook 68 into engaging position, the upward movement of this hook being limited by a rivet 70 secured in the sides 4—4. The amount of lost motion between the piston and the resetting link is slightly greater than the amount of travel of the piston so that when the handle member is returned to firing position the head 63 will travel forwardly along the piston rod to a point short of the piston head, thus leaving the piston and piston rod free to advance under the influence of the spring 48 when released by the pressing of the trigger.

The ammunition consists of a ribbon 75 of paper or like material coiled in a roll 76 received in the space defined by the arms 31—31. The end of this ribbon is brought forwardly through a slot 77 formed in the plate 18, around the end of the cylinder 40, across the face of the gasket 28, around the curved lip 78 of the plate 41, and through an aperture 79 formed in the top 3 at the rear of the plate 18. The means for feeding this ribbon forwardly so as to reload the pistol will now be described.

By referring to Figs. 2, 3 and 5 it will be seen that the portion 3 and the sides 4—4 of the casing together with the plate 41 define a parallel walled prismatic chamber,

and in this chamber I mount a slidable, U-shaped feeder 80 with the edges of its walls resting upon the plate 41. Formed in the side walls of this feeder are inclined slots 81 receiving a pin 82 carried by an elongated feeding plate 83, the forward end of which is upturned as at 84 and sharpened and serrated (see Figs. 2 and 5) to form paper engaging teeth. The paper ribbon is passed between the base of the feeder and the teeth 84 as shown in Figs. 2 and 3. The plate 83 passes through a slot 85 in the plate 18 and has its rearmost end upturned as at 86, this upturned end being formed with an aperture 87 (see Fig. 6).

Pivoted upon a rivet 88 carried by the handle member is a second link 89 which projects through a slot 90 in the plate 19 and through the aperture 87, the forward end of this link being bent downwardly at 91 through an elongated slot 92 formed in the plate 83. The extremity of the portion 91 is preferably deflected laterally as indicated at 92^a so as to interlock with the plate 83. This construction provides a lost-motion connection between the link 89 and the feeding plate 83, necessitated by the fact that the travel of the feeder 80 is much smaller than that of the link 89.

The operation of the device is as follows: The plate 25 and its extension are swung forwardly and the end of a roll of paper ribbon inserted over the lip 78, between the feeding teeth 84 and the feeder 80 and through the aperture 79. This ribbon is then unrolled so as to traverse the end of the cylinder 40 and lie in the slot 77, the roll 76 being positioned between the arms 31, after which the plate and its extension are returned to their position, whereupon parts will occupy the positions illustrated in Fig. 2. The members of the pistol are then broken about the pivot 54 so as to assume the position shown in Fig. 3, the piston being retracted against the tension of the spring 48 past the hook 68 as already described. During the first part of this retractive movement the friction between the piston 46 and the cylinder 40 slides the cylinder rearwardly against the plate 18 so as to free the paper strip. At the same time the link 89 moves freely along the slot 92 leaving the feeder plate 83 unmoved. Prior to the termination of the breaking movement, however, the link 89 reaches the end of this slot and draws the plate 83 rearwardly, whereupon the inclination of the slots 81 causes the feeding tooth 84 to be pressed upwardly against the paper ribbon which is thus caught against the base of the feeder. The continuation of the cocking movement causes the ribbon to be advanced, thus reeling off more paper from the roll and protruding the end of the strip through the aperture 79. The handle is now returned to firing position,

whereupon the piston and piston rod move forward a short distance until stopped by the hook 68, after which the head 63 moves forwardly along the piston rod as above described. The feeder 80 also moves forwardly until stopped by the lip 78, the teeth 84 being now disengaged from the paper strip, and after the feeder has reached the limit of its movement the link 89 slides along the slot 92 until the handle is locked to the barrel by the fingers 55. The short forward movement of the piston, prior to its engagement by the hook 68, also frictionally advances the cylinder 40 so as to press the mouth thereof against the inner face of the paper strip and wedge the same against the gasket 28. If the trigger 67 be now pressed so as to release the piston, the air in the cylinder will be compressed until the paper ribbon will no longer support the strain, when the portion thereof defined by the aperture 26 will be ruptured with a loud report and thrown for a considerable distance. The portion 3 of the barrel is preferably embossed as at 95 to form a sight. The strip of paper is torn off as it is protruded through the aperture 79 so that the view of this sight is not impeded.

It will be understood that the use of the particular kind of ammunition described is not essential to my invention, as I may in some cases employ a ribbon having portions of different thickness and weight so that the inertia of the projectile may be increased. Likewise I do not confine myself to the employment of a plate 25 of small thickness, but esteem my claims to cover a condition in which a closure member of considerable length of bore is employed. In general, therefore, while I have necessarily described my invention in detail I do not propose to limit myself to such details except as the same may be specifically recited in the claims hereto annexed or may be rendered necessary by the prior state of the art.

Having thus described my invention, what I claim is:

1. In a device of the character described, the combination, with a support and a fixed clamping member carried thereby, of a cylinder slidably mounted in said support, the forward end of said cylinder forming a movable clamping member, a piston in said cylinder and fitting frictionally against the walls thereof, a spring for advancing said piston, a trigger for holding said piston against the tension of said spring, and means for retracting said piston so as to compress said spring and simultaneously to withdraw said movable clamping member from said fixed clamping member to permit the introduction of a frangible diaphragm therebetween.

2. In a pneumatic pistol, the combination, with a barrel member and a handle

member pivotally connected thereto, of an air compressing cylinder slidably mounted in said barrel and having its axis substantially parallel therewith, a piston slidable in said cylinder and making close frictional contact therewith, a spring tending to advance said piston, tension means connecting said piston with said handle member whereby said piston may be retracted when the pistol is broken, a trigger for retaining said piston in retracted position, means for limiting the rearward movement of said cylinder during the retractive movement of said piston, and a plate carried by said barrel member adjacent to the forward end of said cylinder and having an aperture registering with said cylinder, whereby the friction of said piston against the wall of said cylinder will advance said cylinder toward said plate prior to any material forward movement of said piston relative to said cylinder so as to clamp a frangible diaphragm against said plate.

3. In a pneumatic pistol, the combination, with a barrel member of an air compressing cylinder slidably mounted in said barrel, an air compressing piston frictionally mounted in said cylinder, a spring tending to advance said piston, means for retracting said piston against the tension of said spring, a trigger for retaining said piston in retracted position, and an apertured plate carried by said barrel member adjacent to the end of said cylinder.

4. In a pneumatic pistol, in combination, a sheet-metal barrel member having substantially flat, depending, parallel sides, each of said sides being swelled outwardly to form a longitudinal corrugation simulating the barrel of a firearm, an air compressing cylinder within said barrel member and having its sides projecting into said swelled portions, a piston for said cylinder, a spring for said piston, means for retracting said piston against the tension of said spring, a trigger for retaining said piston in retracted position, and an apertured plate carried by said barrel member and closing the end of said cylinder and adapted to receive a frangible diaphragm, the spaces between said sides above and below said cylinder forming receptacles for the ends of such diaphragm.

5. In a pneumatic pistol, in combination, a barrel member having spaced sides defining a chamber, longitudinally spaced plates bridging said chamber, and formed with aligned apertures, an air compressing cylinder within said barrel member between the two forward plates, the length of said cylinder being slightly less than the distance between said plates, a piston in said cylinder and making close frictional contact with the walls thereof, a spring for said piston, means for retracting said piston against the

tension of said spring, and a trigger for retaining said piston in retracted position; said cylinder being longitudinally slidable within the limits defined by said plates, whereby it will be withdrawn from the forward plate upon the retraction of the piston to permit the insertion of a frangible diaphragm and will be advanced toward said plate upon the forward movement of the piston so as to clamp said diaphragm about the aperture in said plate.

6. In a pneumatic pistol, in combination, a sheet-metal barrel member having substantially flat, depending, parallel sides, each of said sides being swelled outwardly to form a longitudinal corrugation simulating the barrel of a firearm, an air compressing cylinder within said barrel member and having its sides projecting into said swelled portions, a piston for said cylinder, a spring for said piston, means for retracting said piston against the tension of said spring, a trigger for retaining said piston in retracted position, an apertured plate carried by said barrel member and closing the end of said cylinder, said barrel member being formed to receive an elongated paper ribbon and means for advancing said paper ribbon across the aperture in said plate simultaneously with the retraction of said piston.

7. In a pneumatic pistol, in combination, a barrel member having spaced sides defining a chamber, longitudinally spaced plates bridging said chamber, and formed with alined apertures, an air compressing cylinder within said barrel member between the two forward plates, the length of said cylinder being slightly less than the distance between said plates, a piston in said cylinder and making close frictional contact with the walls thereof, a spring for said piston, means for retracting said piston against the tension of said spring, and a trigger for retaining said piston in retracted position, said cylinder being longitudinally slidable within the limits defined by said plates, whereby it will be withdrawn from the forward plate upon the retraction of the piston to permit the insertion of a frangible diaphragm and will be advanced toward said plate upon the forward movement of the piston so as to clamp said diaphragm about the aperture in said plate, and means actuated simultaneously with the retraction of said piston for advancing said ribbon across said plate.

8. In a pneumatic pistol, in combination, a sheet-metal barrel member, an air compressing cylinder within said barrel member, a piston fitting snugly within said cylinder, a spring for said piston, a handle member pivoted to said barrel member, tension means connected to said handle member and to said piston whereby said

piston will be retracted when the pistol is broken, a trigger for retaining said piston in retracted position, and a stationary apertured plate carried by said barrel member and adapted to receive a frangible diaphragm, said cylinder being slidable inside said barrel member within narrow limits so as to be drawn away from said plate upon the retraction of said piston.

9. In a pneumatic pistol, the combination, with a barrel member and a handle member secured thereto, of an air compressing cylinder, a piston movable in said cylinder, a spring for advancing said piston, means for retracting said piston against the tension of said spring, a plate carried by the end of said barrel member and closing the end of said cylinder, said plate being substantially transverse to the axis of said barrel member and having an aperture therethrough whose axis is substantially parallel to the axis of the barrel member, a trigger for retaining said piston retracted, and means for automatically advancing a paper ribbon across said aperture simultaneously with the retraction of said piston.

10. In a pneumatic pistol, the combination, with a barrel member and a handle member secured thereto, of an air compressing cylinder, a piston movable in said cylinder, a spring for advancing said piston, means for retracting said piston against the tension of said spring, a trigger for holding said piston retracted, an apertured plate carried by the forward end of said barrel member and having an aperture therethrough, the inner face of said plate being adjacent to the end of said cylinder, means for withdrawing said cylinder from said plate upon the retraction of said piston to permit the introduction of a frangible diaphragm, and means operative not later than the beginning of the advancing movement of said piston for advancing said cylinder against said diaphragm.

11. In a pneumatic pistol, the combination, with a barrel member and a handle member secured thereto, of an air compressing cylinder, a piston movable in said cylinder, a spring for advancing said piston, means for retracting said piston against the tension of said spring, an apertured plate carried by said barrel member and traversing the end of said cylinder, said plate having a seating portion opposite to the end of said cylinder, an elongated paper strip interposed between the end of said cylinder and said seating portion and closing the aperture in said plate, means for advancing said cylinder to clamp said paper strip against said seat in advance of the material forward movement of said piston, means for withdrawing said cylinder from said plate upon the retractive movement of said piston, and means for advancing said paper strip

during the period of the disengagement of the cylinder therefrom.

12. In a pneumatic pistol, the combination, with a barrel member having therein a chamber adapted to receive a roll of paper ribbon, of an aperture plate carried by said barrel member, means for supporting a portion of said ribbon immediately inside said plate so as to close the aperture, a tubular member slidable along said barrel member and adapted to clamp said ribbon against said plate about said aperture, means for generating air pressure within said tubular member whereby said ribbon may be ruptured, and means for advancing said ribbon past said aperture to present unbroken surfaces thereof thereto.

13. In a pneumatic pistol, the combination, with a barrel member having at its forward end an apertured plate, a tubular member within said barrel member and having one of its ends adjacent to said plate and surrounding said aperture, means for separating said plate and member to permit the insertion of a frangible diaphragm, and means for generating air pressure within said tubular member whereby said diaphragm may be ruptured.

14. In a pneumatic pistol, the combination, with a barrel member having a pair of spaced depending sides, of an apertured plate closing the forward end of the chamber defined by said sides, a tubular member mounted in said chamber and having its forward end adjacent to the inner surface of said plate, means adapted to clamp a frangible diaphragm against said plate and over said aperture, and means for generating air pressure within said tubular member whereby said ribbon may be ruptured, said plate being hinged so as to permit loading and inspection.

15. In a pneumatic pistol, the combination, with a barrel member having a pair of spaced depending sides, of an apertured plate hinged to the forward end of the barrel member and having an extension adapted to cooperate with said sides in defining a closed chamber, an air compressing cylinder mounted in the upper part of said chamber and having its forward end adjacent to the end of said barrel member, the lower part of said chamber being formed to receive a roll of paper ribbon the end of which may traverse the end of said cylinder, means for clamping said ribbon against the face of said plate, means for securing said extension to said sides whereby said plate is held in position across the end of said cylinder, and means for generating air pressure within said cylinder whereby said ribbon may be ruptured.

16. In a pop gun, the combination, with a barrel member, a handle member pivoted thereto, air compressing means in said bar-

rel member and having a discharge port, means operative upon the breaking of the pistol for setting said air compressing means, a paper-ribbon receptacle carried by said barrel member, means for clamping said ribbon over said discharge port, and means operative upon the breaking of the pistol for automatically advancing the ribbon past said port.

17. In a pneumatic pistol, a barrel member made from a single piece of sheet metal having a narrow elongated top portion and spaced sides depending from opposite edges thereof, each of said sides having a longitudinal portion thereof outwardly swelled and also having a substantially semi-circular depending portion below said swelled portion and at the rear of the muzzle end, the rearward half of each of said semi-circular depending portions being inset from the plane of the remainder thereof and apertured to form a trigger guard, each of said inset portions being formed with a marginal inward flange abutting against the flange of the opposite similar portion whereby a trigger receiving space is defined.

18. In a pneumatic pistol, a barrel member made from a single piece of sheet metal having a narrow elongated top portion and spaced sides depending from opposite edges thereof, each of said sides having a substantially semi-circular depending portion at the edge opposite said top portion and at the rear of the muzzle end, the rearward half of each of said semi-circular depending portions being inset from the plane of the remainder thereof and apertured to form a trigger guard, an apertured plate connecting said sides at the muzzle end thereof, and a hinged cover shaped to conform to the lower edges of said sides and to said depending portion and adapted to form therewith a closed ammunition chamber.

19. In a pneumatic pistol, the combination, with a barrel member having a pair of spaced depending sides, a longitudinal portion of each of said sides being swelled outwardly to simulate the barrel of a firearm, an apertured plate closing the forward end of the chamber defined by said sides and having the portion surrounding such aperture embossed outwardly to simulate the muzzle of a firearm, a packing ring secured to the inner face of said plate, a tubular member slidably mounted within said chamber and projecting into the outwardly swelled portions of said sides, means for generating air pressure within said tubular member, and means for shifting said tubular member forwardly so as to clamp a paper strip against said packing ring prior to the generation of such pressure.

20. In a pneumatic pistol, the combination, with a hollow barrel member, a closure member carried by said barrel member and

having an aperture therethrough whose axis is substantially parallel with said barrel member, a tubular member at the rear of said closure member and surrounding said aperture, means for shifting said tubular member and said closure member relatively to each other to clamp a strip of frangible fabric therebetween, means for generating air pressure within said tubular member whereby said fabric may be ruptured and a portion thereof projected through said aperture, and means for thereafter shifting said tubular member and said closure member relatively away from each other so as to permit the insertion of an unbroken portion of fabric.

21. In a pneumatic pistol, the combination, with an elongated hollow barrel member, of an apertured closure member, an abutment member spaced rearwardly from said closure member, a cylinder slidably mounted in the space between said abutment member and said closure member and having a length slightly less than the distance therebetween, said cylinder having its axis substantially parallel to the axis of the barrel member, a piston rod guided by said abutment member, a piston carried by the end of said piston rod and fitting closely the walls of said cylinder, lost-motion tension means connected to said piston rod whereby the piston may be retracted, a second abutment member spaced rearwardly of said first abutment member, a spring interposed between said second abutment member and said piston rod and opposing the retraction of said piston, a trigger for retaining said piston in retracted position, and means operated simultaneously with the retraction of said piston for advancing a paper ribbon between said closure member and said cylinder.

22. In a pneumatic pistol, the combination, with a barrel member having therein an air pressure generating device and an apertured plate adapted to clamp a paper ribbon against the end of said generating device, said generating device comprising an air cylinder and a spring pressed piston, of means for retracting said piston, a spring for advancing said piston, a trigger for holding said piston against the action of said spring, a reciprocable feeder, means associated with said feeder for engaging said paper ribbon to advance the same past said plate, and means for operating said feeder simultaneously with the retraction of

said piston, said feeder operating means including a lost motion connection whereby the amount of movement thereof may be less than that of the piston.

23. In a pneumatic pistol, the combination, with a barrel member and a handle member pivoted thereto, of an air pressure generating device in said barrel member, said device comprising a cylinder and a spring pressed piston, lost-motion tension means connected to said piston and handle member whereby said piston will be retracted when the pistol is broken, a trigger for retaining said piston in retracted position against the tension of said spring, a feeder in said barrel member and reciprocable therealong, gripping means carried by said feeder and adapted to engage a paper strip to advance the same past said air-pressure-generating-device, and tension means connecting said handle member with said feeder whereby said feeder will be actuated simultaneously with the retraction of said piston rod.

24. In a pneumatic pistol, the combination, with a barrel member and a handle member pivoted thereto adjacent to the lower side thereof, of an air pressure generating device carried within the lower side of said barrel member, said device comprising a cylinder and a spring pressed piston, tension means connected to said piston and to the portion of said handle member opposite thereto whereby said piston will be retracted when the pistol is broken, a trigger for retaining said piston in retracted position against the tension of said spring, a feeder in the upper part of said barrel member and reciprocable therealong, gripping means carried by said feeder and adapted to engage a paper strip to advance the same past said air pressure generating device, and tension means connecting said feeder with the portion of said handle opposite thereto, whereby said feeder will be actuated simultaneously with the retraction of said piston rod, said feeder operating means comprising a lost motion connection whereby the movement of said feeder may be less than that of said piston.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

DANIEL R. SACKMAN.

Witnesses:

HAROLD S. SMITH,
BRENNAN B. WEST.