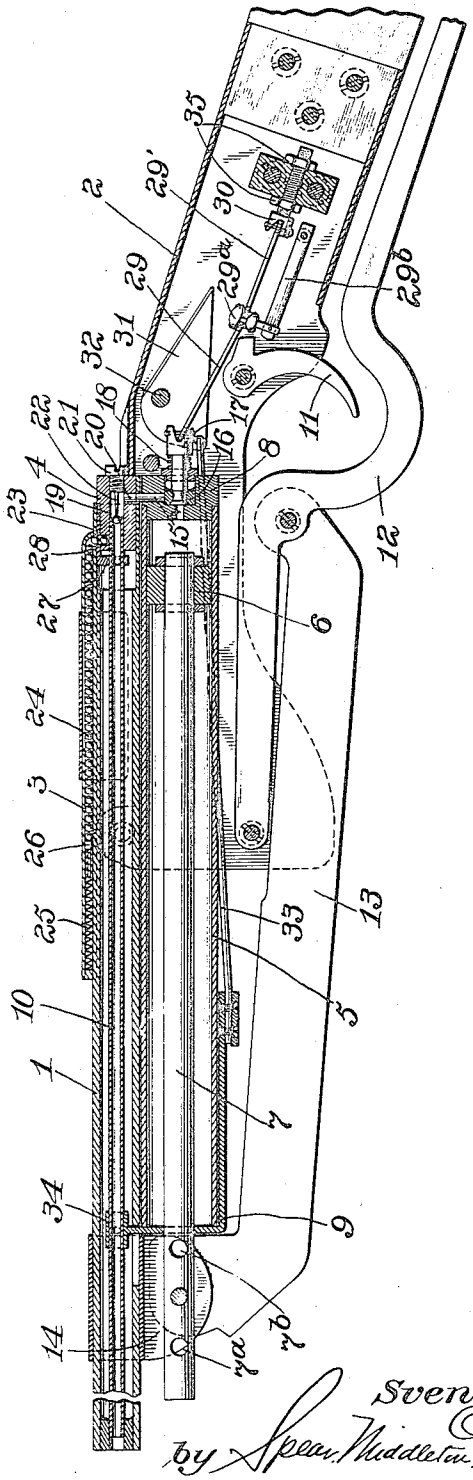
S. SVENSON.

AIR GUN.

APPLICATION FILED OCT. 8, 1917.

1,276,989. Patented Aug. 27, 1918.



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UNITED STATES PATENT OFFICE.

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AIR-GUN.

1,276,989. Specification of Letters Patent. Patented Aug. 27, 1918.

Application filed October 8, 1917. Serial No. 195,377.

To all whom it may concern:

Be it known that I, SVEN SVENSON, a citizen of the United States, residing at La Crosse, Wisconsin, have invented certain new and useful Improvements in Air-Guns, of which the following is a specification.

This invention relates to air guns or rifles of the type in which a charge of compressed air is permitted to act upon a shot to discharge it from the gun. The object of the invention is to make a magazine rifle in which a single operation of the trigger guard lever will simultaneously compress a charge of air and feed a shot from the magazine into firing position in the barrel.

With this and other objects in view, the invention consists in the arrangement, combination and construction of parts hereinafter described and particularly pointed out in the claims, it being understood that I do not intend to limit myself to the details of construction of the various parts.

The invention has been illustrated in the accompanying drawing in which the figure shows a sectional side view of my improved rifle.

In the drawing, the numeral 1 indicates the barrel of the gun. 2 indicates the stock. 3 represents a shot magazine superimposed upon the barrel 1. 4 is a breech block. 5 is an air compressing chamber having a plunger 6 therein attached to a stem 7. The rear end of this chamber 5 is closed by a plug 8. The fore end of this chamber is closed by a movable member 9. 10 represents a reciprocating inner barrel located within the barrel 1. 11 indicates a trigger, 12 a trigger guard lever, 13 a pivoted link connecting the lever 12 with the plunger stem 7, and 14 is a supporting link encircling the barrel 1 and secured to the plunger stem 7.

The plug 8 has a right angled passage 15 therein and a valve 16 located in said passage. The valve has a stem 17 and an encircling spring 18 adapted to maintain the valve normally open. The breech block 4 also has a longitudinal passage 19 and a short passage 20 communicating with the passage 15 of the plug 8 and the longitudinal passage 19. The rear end of the passage 19 is closed by a screw 21 which carries a projecting pin 22. The forward end of the passage 19 has the inner barrel 10 slidably held therein. Near the forward end of the block 4 is a passage 23 communicating with the passage 19 and with the magazine 3. 24 represents the shot in the magazine which shot are spring pressed by means of the spring 25 and plunger 26. The inner barrel 10 near the breech block 4 carries an arm 27 which has a lateral projection 28. Holes 7^a and 7^b may be provided in the plunger stem 7 to allow for adjustment of the amount of pressure by either shortening or lengthening the stroke of the plunger.

A spring toggle extends just above the trigger between the valve stem 17 and the adjusting screw 30. This toggle is formed of two separate plates 29 29′ held at their adjacent ends by a support 29^a in the shape of a button. This support is attached to a pivoted guide lever 29^b which controls the upward and downward movement of the toggle. Above the front portion of the toggle, is located a triangular plate 31 pivoted at 32 and having a connection 33 between it and the closing member 9. The closing member 9 is reciprocatable and depends from a sleeve 34 which is secured to the inner barrel 10.

The operation of the device is as follows:

Assuming that the rifle is to be prepared for discharge: the magazine is first filled; next the trigger guard lever 12 is operated, which by means of the link 13 moves the plunger 6 to its forward position. In so moving it draws air in through the passages 19, 20 and 15 as the valve 16 is opened.

When the plunger 6 reaches its extreme forward movement, it engages the closure member 9 and gives it a forward movement. This forward movement of the closure member 9 moves the inner barrel 10 forward so that one shot will drop into the breech block passage 19 from the magazine passage 23 and also will rotate the plate 31 by means of its connection 33 so that it will engage the toggle support 29^a and bend the toggle downwardly. This downward bending will cause and maintain the closure of the valve 16 and render the spring 29 in firing position in proximity to the trigger.

When the trigger lever is returned to its normal position, the inner barrel 10 is returned to its normal position and there will be a shot in position at its rear end ready for firing. The pin 22 on the screw 21 will prevent the shot from falling into the passage 20. The arm 27 with its lateral projection 28 acts as a closure in the magazine opening 23 as shown in the drawing to prevent the entry of more than one shot at a

time from the magazine. The parts as shown in the drawing are all in position ready for firing. 35 represent lock nuts so that the member 30 may be adjusted as required by the toggle spring 29.

What I claim is:

1. In an air rifle having a barrel, a shot magazine, an inner barrel, an air compressing plunger, and a pivoted trigger guard lever, means operated by said lever for simultaneously reciprocating said plunger and said inner barrel.

2. In an air rifle, an air compression cylinder, a piston therein with means for operating it, a magazine, a barrel mounted to have limited movement to permit the passage of a projectile from said magazine to said barrel, and means for imparting movement to said barrel.

3. In an air rifle, an air compression chamber with means for storing air therein under pressure, a projectile magazine having a terminal lateral delivery passage, a barrel mounted in proximity to said magazine to have a limited movement, and means for moving said barrel to bring its end into communication with said delivery passage to receive a projectile and for returning it to firing position.

4. In an air rifle an air compression chamber with means for storing air therein under pressure, a barrel, a breech block having a barrel passage in which the rear end of said barrel is movably held, a magazine supported in proximity to said barrel, said breech block having a passage adapted to be uncovered by movement of the barrel to permit entrance of a projectile to the barrel, said breech block having also a passage for placing the barrel in communication with the air chamber, and a trigger operated valve for controlling said last named passage.

5. In an air rifle an air compression reservoir, a breech block having a barrel passage, a projectile magazine, said breech block having a passage to permit the entrance of a projectile into the barrel passage from said magazine, a barrel having its end seated in said barrel passage, said barrel being capable of limited movement to cover and uncover said projectile passage, said breech block having also a valve controlled passage leading from said barrel passage to said air reservoir, and a projectile pin in said barrel passage of less diameter than said barrel passage.

6. In an air rifle having a barrel, an air compressing plunger, and a trigger, a triangular pivoted plate adapted to reset the trigger and a connection carried thereby whereby the plate is rotated by the reciprocation of said plunger.

7. In an air rifle having a barrel, a shot magazine, an inner reciprocating barrel, a breech block encircling one end thereof, and means carried by said inner barrel for permitting only one shot to enter the breech block from the magazine upon reciprocation of said inner barrel.

8. In an air rifle having a barrel, an air compressing chamber communicating with said barrel, a valve in said passage, and a toggle controlling said valve comprising two plates, a support between their adjacent ends and a pivoted guide lever operating upon said support.

9. In an air rifle, a barrel, an air reservoir having a passage communicating with said barrel, a valve in said passage, a toggle connected with said valve, and a trigger for operating said toggle.

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

SVEN SVENSON.

Witnesses:
MARIE A. SIMMERLING,
A. C. WOLFE.