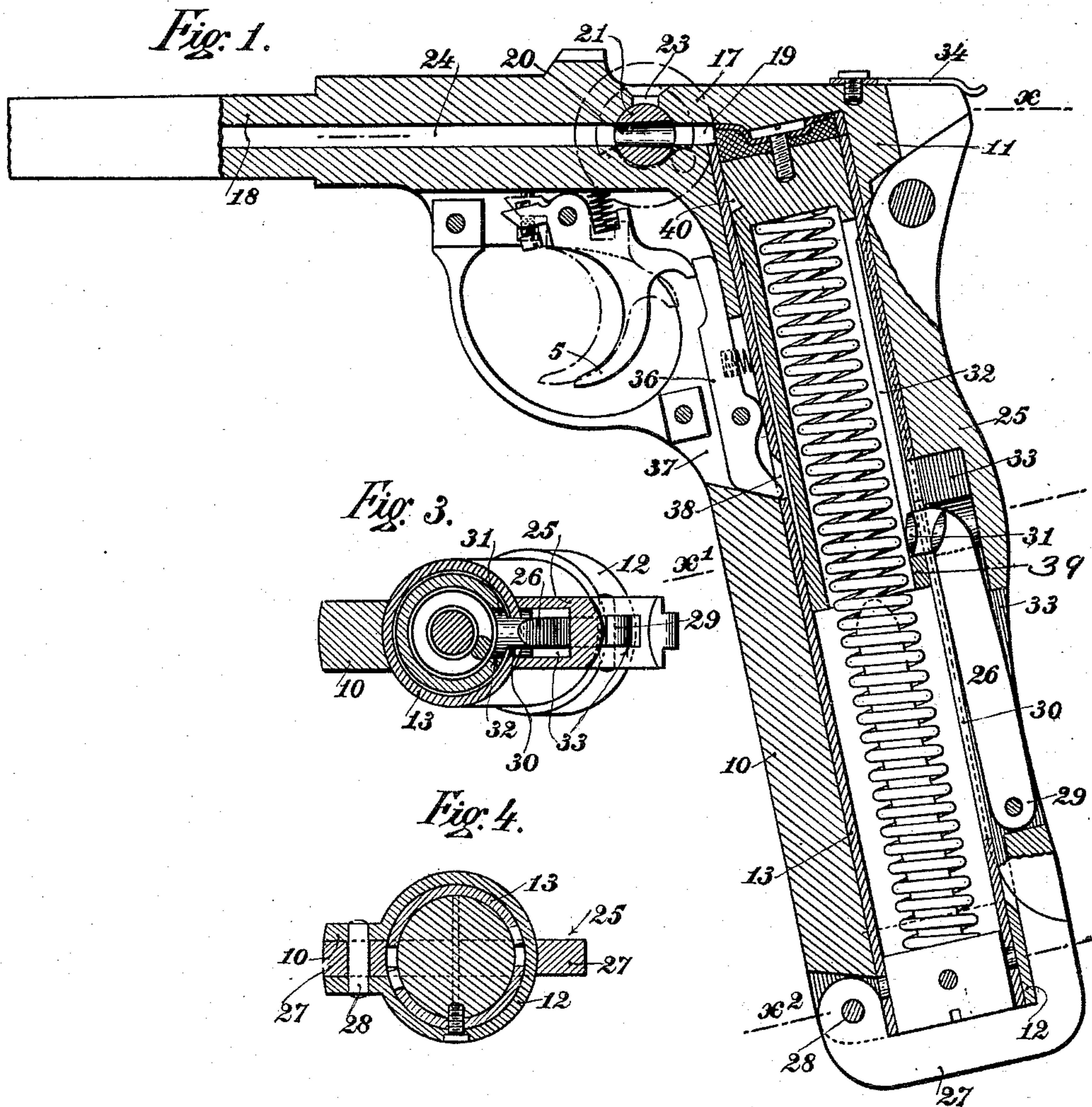


L. JEFFRIES.  
 SPRING AIR PISTOL AND GUN.  
 APPLICATION FILED AUG. 12, 1910.

995,146.

Patented June 13, 1911.

4 SHEETS—SHEET 1.



WITNESSES

*W. B. K. K. K.*  
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INVENTOR

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995,146.

4 SHEETS--SHEET 2.



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4 SHEETS-SHEET 3.

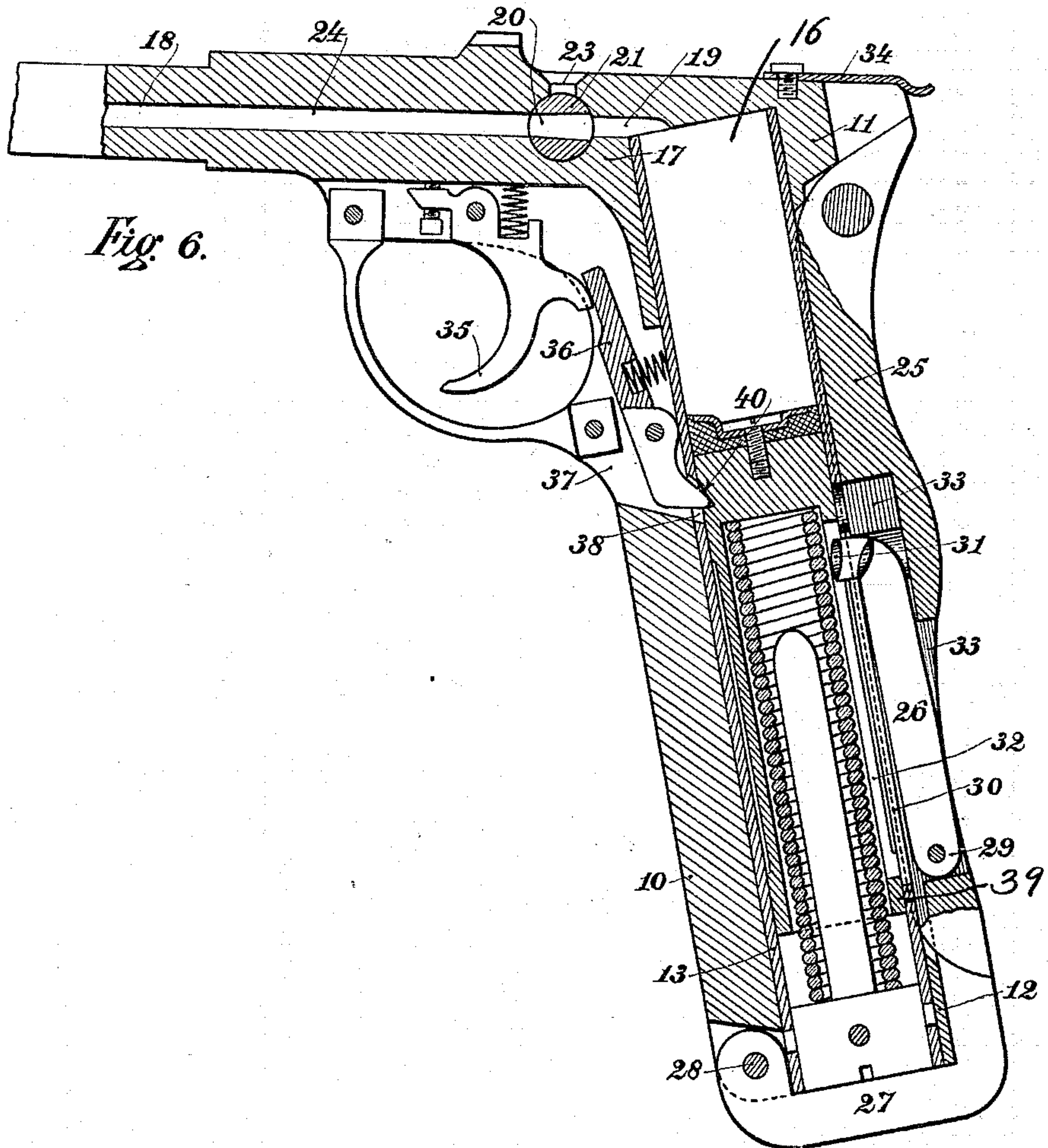


Fig. 6.

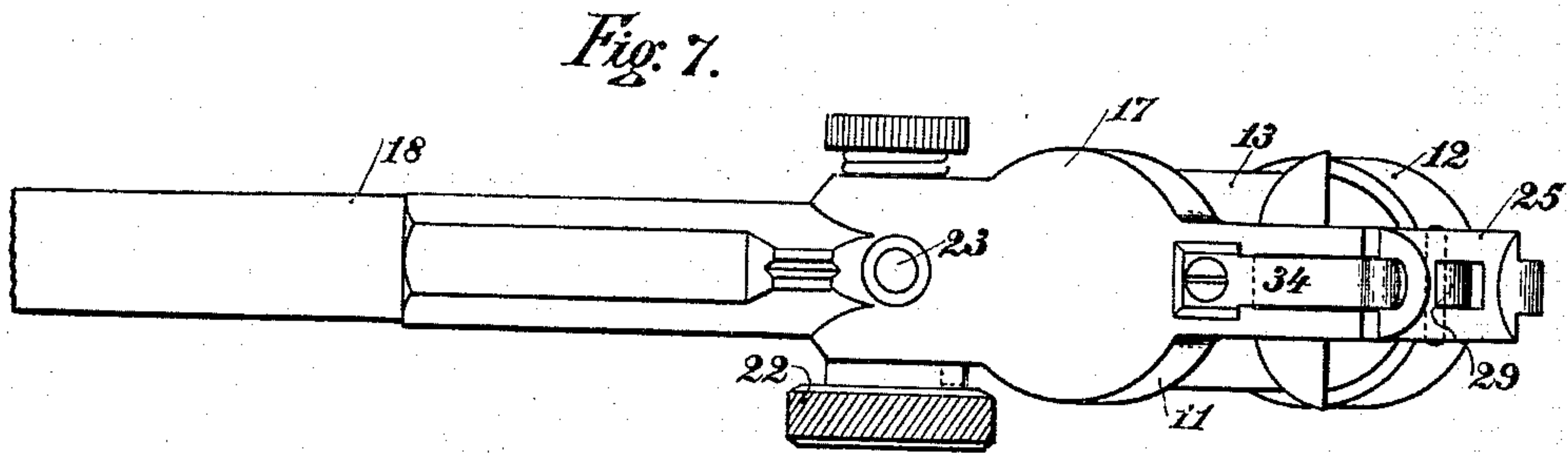


Fig. 7.

WITNESSES

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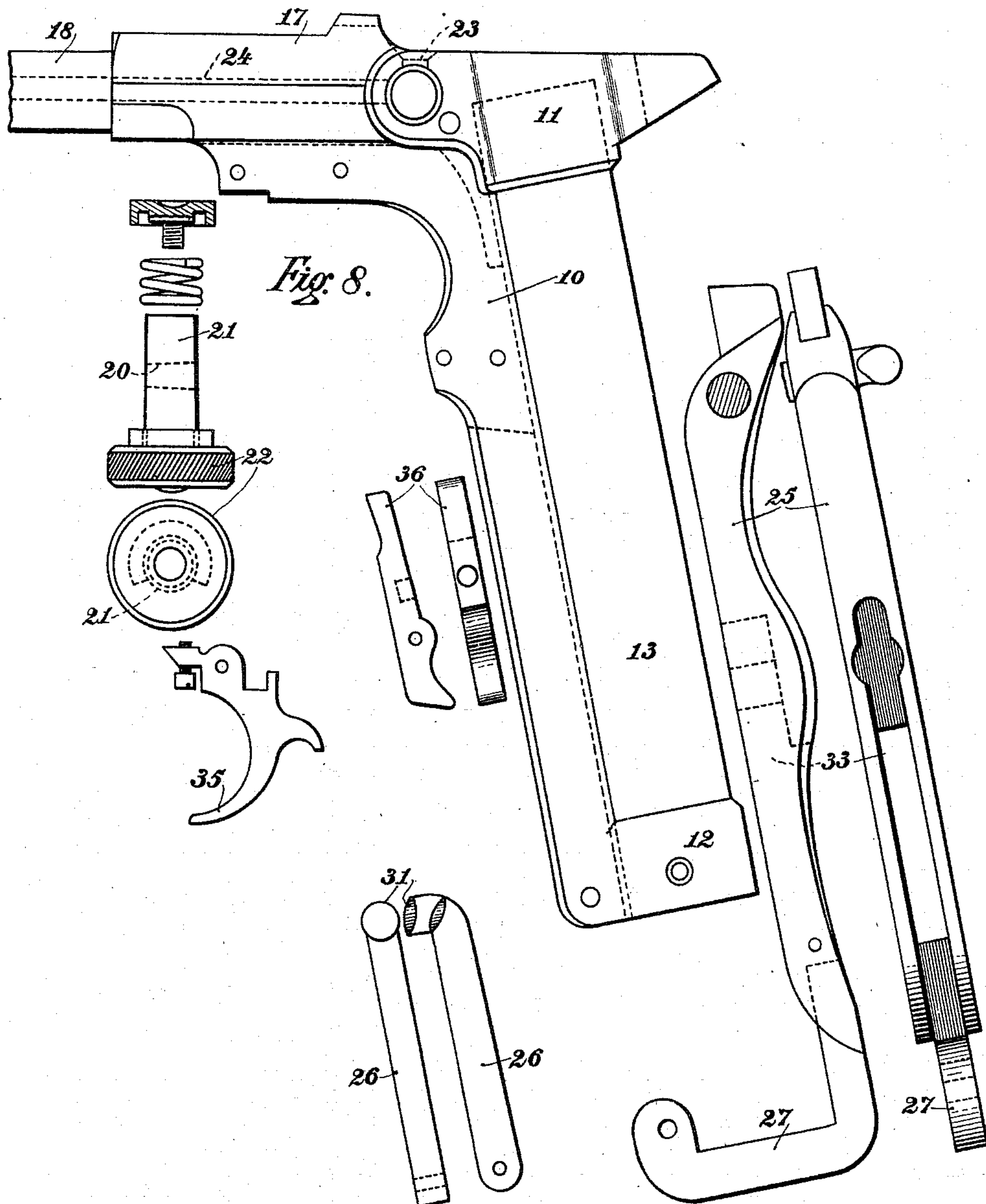


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4 SHEETS—SHEET 4.



WITNESSES

*W. B. K. [Signature]*  
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INVENTOR *Lincoln Jeffries*

*James L. Morris, Jr.*  
*[Signature]*



# UNITED STATES PATENT OFFICE.

LINCOLN JEFFRIES, OF BIRMINGHAM, ENGLAND, ASSIGNOR TO LINCOLN JEFFRIES AND COMPANY, LIMITED, OF BIRMINGHAM, ENGLAND.

## SPRING AIR PISTOL AND GUN.

995,146.

Specification of Letters Patent. Patented June 13, 1911.

Application filed August 12, 1910. Serial No. 576,854.

*To all whom it may concern:*

Be it known that I, LINCOLN JEFFRIES, subject of the King of Great Britain, residing at 121 Steelhouse Lane, Birmingham, England, manufacturer, have invented certain new and useful Improvements in Spring Air Pistols and Guns, of which the following is a specification.

This invention relates principally to spring air pistols and has for its principal object to provide a simple, efficient and compact air-pistol, which has a solid or rigid barrel and an improved or simplified arrangement of the air chamber and cocking mechanism.

According to the said invention, the frame or body of the arm carries a solid or rigid barrel and an air compression and spring chamber or cylinder, which cylinder is dropped or disposed below the barrel and at a considerable angle to the same, and is housed or contained within or is arranged to constitute a part of a pistol-type handle or grip. In order to avoid joints or breaks where-through air might escape during the discharge, the body of the arm is provided with a solid or jointless extension of the breech which carries the cylinder in rigid relation to the barrel and also incloses or surrounds the upper part thereof and the air-way connection between the said cylinder and the barrel, which air-way is made through the solid metal of the said extension. For compressing the spring and cocking the plunger, the arm is provided with a lever and link cocking mechanism, the lever element of which is fulcrumed to the rigid frame of the pistol-handle, and is so arranged that in the normal position it lies close against the said handle or against the back of the cylinder part thereof, under which conditions the said lever also forms a part of the handle and is grasped in the hand when discharging the arm.

Figure 1 of the accompanying drawings represents a longitudinal vertical section of a spring air-pistol constructed according to my invention, and wherein the spring and plunger are arranged within an air-compression cylinder or chamber that is carried in rigid relation to the fixed barrel by a solid extension of the frame which constitutes part of a dropped handle or grip, while the cocking is performed by a lever system which is also mounted on or carried

by the depending frame of the rigid handle or grip. This view shows the several parts of the pistol in the positions which they assume after a discharge and before the cocking operation is commenced. Fig. 2 is a horizontal section taken upon the dotted line  $x$  Fig. 1, and showing the air-way or connection between the cylinder and the barrel. Fig. 3 is another section of Fig. 1, taken upon the dotted line  $x^1$  through the handle or grip and showing the connection between the cocking lever system and the plunger. Fig. 4 is a further section taken upon the dotted line  $x^2$  Fig. 1, through the fulcrum of the cocking lever. Fig. 5 is another longitudinal sectional view of the pistol showing the same in the act of being cocked by the lever system. Fig. 6 shows the pistol cocked and the parts of the lever system restored to and secured in their normal positions the arm being ready for discharge. Fig. 7 is a plan of the pistol, showing the loading arrangements. Fig. 8 shows various views of the principal component parts of the pistol, separated or dis-assembled from one another. Fig. 9 is a longitudinal sectional view of an alternative form of pistol in which the loading is effected through an open breech end of the barrel, instead of by a rotary loading plug.

The same reference numerals indicate corresponding parts in the several figures of the drawings.

In the pistol represented in these figures the frame or body of the arm comprises a solid breech portion 17 carrying a rigid barrel 18 and a dropped or depending member or strap 10 which constitutes a rigid part of the handle or grip and carries the air-compression cylinder or chamber 13 of the pistol in rigid or fixed relationship to the said barrel and at a considerable angle thereto, so that the said cylinder also constitutes a part of the dropped or pistol-type handle. The frame structure also comprises a pair of caps or shoes 11, 12, of which the upper one 11 forms a solid or integral extension of the breech portion 17 and sockets over and incloses the upper part of the cylinder which is mounted behind the said strap 10, while the lower shoe 12 receives and incloses the bottom end of the said cylinder. By this construction the barrel 18, the breech portion 17 of the frame, the rear-



ward extension or socket 11 that incloses the top of the dropped cylinder 13, and the depending strap 10 supporting the said cylinder, constitute one integral or rigid element  
5 or unit, without any breech-joint or other break wherethrough air might escape and so reduce the efficiency of the pistol.

The solid breech portion 17 of the frame, forward of the cylinder-socket 11, is provided with an air-way or passage 19 disposed between the inclosed air-chamber end 16 of the cylinder and the breech chamber 20 of the barrel and wherethrough the air displaced by the plunger is conveyed from  
15 the cylinder to the said breech chamber on the arm being discharged.

In the particular pistol represented, a rotary loading plug 21 is fitted in the breech part 17 of the frame and is operated by an  
20 external button 22, while the breech chamber 20 is made through the said plug, which when in the loading position, presents the said chamber to the loading aperture 23 in the frame but normally positions the said  
25 chamber in alinement with the air-passage 19 and the bore 24 of the barrel, as shown in Figs. 1, 2, 5 and 6 of the drawings.

The lever system for cocking the arm consists of a main lever 25, which is fulcrumed  
30 to the handle of the pistol, and a link 26 which makes the connection between the said lever and the plunger in the cylinder. In the arrangement represented, the lever 25 is arranged behind the cylinder and in order  
35 to obtain a powerful and effective cocking leverage, the lower end of the said lever is cranked at 27 and is fulcrumed at 28 to the foot of the front strap 10 of the handle, while the main part of the said lever is so  
40 formed or arranged that normally, or when the arm is ready for firing, it fits closely against the back of the cylinder, so that the said lever becomes, for the time being, a part of the handle of the pistol and is  
45 grasped with the other parts 10, 13, when the pistol is held in the hand for discharging. The link 26 is pivoted at one end 29 to the lever, near to the crank portion thereof, while the other end passes through a  
50 slot 30 formed along the back of the cylinder 13 and is furnished with a head 31 that engages with a slot 32 in the corresponding side of the plunger; this slot 32 being of a length which will permit of  
55 the plunger making its discharging movement under the expansion of the spring on the said plunger being disengaged from the sear of the trigger mechanism after the closing of the lever system into the position represented in Figs. 1 and 6. To permit of the  
60 lever being closed against the back of the cylinder, its inner side is channeled or recessed at 33 to form a clearance for the link 26, which may thus also be made to fit  
65 against the cylinder back, while its head 31

will lie in the upper end of the plunger slot 32 when the arm is in the cocked condition represented in Fig. 6.

A spring catch such as 34, or any other fastening may be fitted for engaging the  
70 upper end of the cocking lever and securing the two elements of the lever system in their normal positions behind the cylinder in the handle, while the front of the body part carries a trigger 35 controlling a spring  
75 sear 36 which is pivoted in a slot or clearance 37 in the upper part of the body member 10, the nose of the sear being extended by the sear spring through a hole 38 in the front of the cylinder and being adapted to  
80 engage automatically with a bent 40 in the plunger during the cocking operation.

With such an arrangement as above described, assuming the arm to be in the cocked condition shown in Fig. 6, on the trigger being pulled, and the released plunger being driven upward within the cylinder by the expansion of the spring, the air displaced from the upper inclosed end of the cylinder is driven through the air-passage 19 in the  
85 solid frame of the pistol, and discharges the pellet or the like from breech-chamber in the loading plug. The parts of the arm are then in the positions shown in Fig. 1, and in order to cock the pistol, after the same  
90 has been re-loaded, the main lever 25 is disengaged from the catch 34 and is swung backwardly and downwardly away from the handle, whereupon the link 26 first engages the solid metal 39 at the lower end of the  
95 plunger slot and then, as the angular movement of the lever is continued, its motion is transmitted through the link for drawing down the plunger and compressing the spring, until, by the time that the said  
100 spring is fully compressed, the bent comes into register with the hole 38 in the cylinder front and is then engaged by the sear. Then the lever 25 is swung back against the rear of the cylinder while the link 26 is also  
105 permitted, by the clearance 33 to lie in a plane parallel, or approximately so, with the back of the cylinder, and both parts are secured in these positions by the catch or fastening 34.  
115

It is to be understood that the invention is not confined to the particular construction illustrated in the drawings for carrying the dropped cylinder in fixed or rigid relationship to a body or frame that carries a rigid  
120 barrel, and that the said cylinder may be mounted within, or arranged as a part of, the pistol handle in any other manner so long as joints or breaks between the barrel and cylinder are avoided and the air-way  
125 connection is made through a solid part of the frame that carries the said barrel to serve as a rigid support for the lever cocking mechanism. Further, in lieu of the rotary loading plug arrangement as represented  
130



in Figs. 1 to 8, the alternative construction shown in Fig. 9 may be adopted. In this alternative, the bore of the barrel 18 is continued right through the frame-extension 11 that sockets over the upper end of the cylinder 13 in the handle and its rear end is open to the back of the pistol and constitutes a breech chamber 23 into which the pellet is inserted in loading the pistol. This breech chamber is thus disposed in the part of the frame against which the upper end of the cocking lever 25 abuts and is secured by the catch 34 in the normal or closed position, so that the said lever end serves as the breech closure when the pistol is ready for firing.

The air-way connection between the cylinder and the barrel consists of a slot 19, made through the solid metal of the frame and leading into the breech-chamber: the said slot being of a width less than the diameter of the pellet so that the latter will not be likely to drop therethrough in the loading operation, while in order to more effectually close the breech and also to push the inserted pellet forward along the bore and into a position in which the air driven through the passage or port 19 will impinge against the rear end of the said pellet, the face of the lever, where it seats against the breech of the frame, is furnished with a peg or stud 41 that is made to engage or socket into the breech on the completion of the inward movement of the lever.

If desired, the spring catch 34 as represented in the figure may be substituted by a spring bolt or other fastening for positively securing the cocking lever in its breech-closing position.

Having fully described my invention, what I desire to claim and secure by Letters Patent is:—

1. An air-pistol having a depending handle provided with an interiorly-located air-compression chamber communicating at its upper end with the breech chamber, said compression chamber being formed with a longitudinal slot in its back wall; a hollow plunger movable within said compression chamber and provided with an interiorly-located controlling spring, and with a longitudinal slot registering with the first-named slot; a cocking lever pivoted to said handle;

and a link pivoted at one end to said lever and having its other end extending through said slots into the interior of said plunger and terminating in a head arranged to engage the lower end of the plunger, for forcing the latter in one direction to compress said spring.

2. An air-pistol having a depending handle provided with an interiorly-located air-compression chamber communicating at its upper end with the breech chamber, said compression chamber being formed with a longitudinal slot in its back wall; a hollow plunger movable within said compression chamber and provided with an interiorly-located controlling spring, and with a longitudinal slot registering with the first-named slot; a longitudinally-channeled cocking lever pivoted to said handle and constituting a portion of the same when the pistol is grasped for discharge; and a link pivoted at one end in the channel in said lever and having its other end extending through said slots into the interior of said plunger and terminating in a head arranged to engage the lower end of the plunger, for forcing the latter in one direction, to compress said spring, said link being adapted to lie in said channel when the pistol is discharged.

3. An air-pistol having a depending handle provided with an interiorly-located air-compression chamber communicating at its upper end with the breech chamber; a spring-controlled plunger movable within said compression chamber; a cocking lever pivoted to said handle and having its inner side longitudinally channeled, said lever constituting a part of said handle when the pistol is grasped for discharge; and a link pivoted at one end in the channel in said lever and having its other end connected with said plunger, for forcing the latter in one direction to compress its controlling spring, said link being adapted to lie in said channel when the pistol is discharged.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LINCOLN JEFFRIES.

Witnesses:

HY. SKERRETT,  
HENRY NORTON SKERRETT.