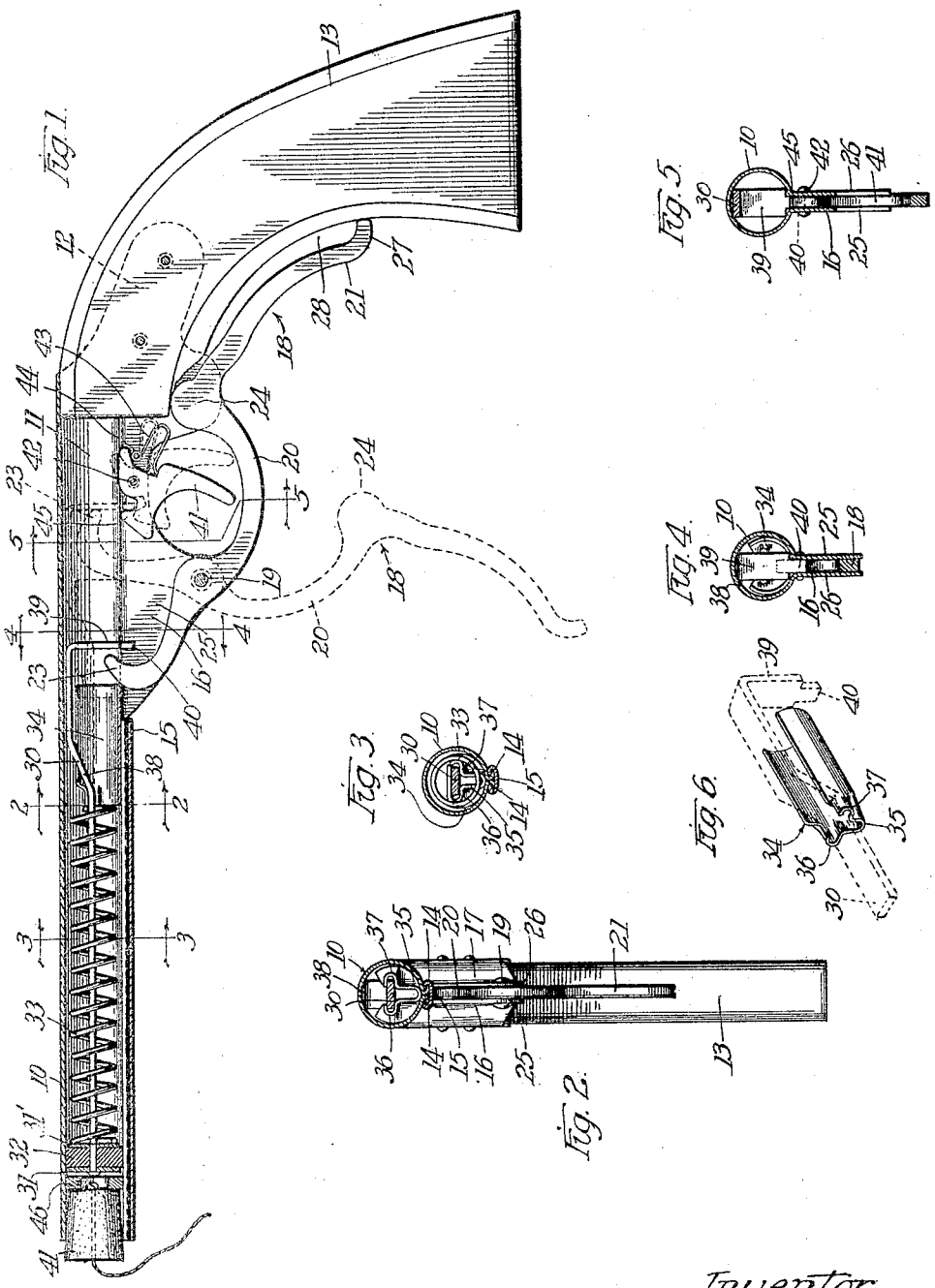
J. R. SANDAGE.

AIR PISTOL.

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UNITED STATES PATENT OFFICE.

JACOB R. SANDAGE, OF ST. JOSEPH, MICHIGAN, ASSIGNOR TO UPTON MACHINE COMPANY, OF ST. JOSEPH, MICHIGAN, A CORPORATION OF MICHIGAN.

AIR-PISTOL.

1,205,668. Specification of Letters Patent. Patented Nov. 21, 1916.

Application filed February 13, 1915. Serial No. 7,926.

To all whom it may concern:

Be it known that I, JACOB R. SANDAGE, a citizen of the United States, residing at St. Joseph, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Air-Pistols, of which the following is a specification.

My invention relates to improvements in air pistols or "pop guns."

One of the objects of my invention is to simplify and generally improve the structure of devices of this character.

Other, further and more specific objects of my invention will become readily apparent, to persons skilled in the art, from a consideration of the following description when taken in conjunction with the drawings wherein:—

Figure 1 is a side elevation showing parts in section. Fig. 2 is a transverse section taken on line 2—2 of Fig. 1. Fig. 3 is a transverse section taken on line 3—3 of Fig. 1. Fig. 4 is a transverse section taken on line 4—4 of Fig. 1. Fig. 5 is a transverse section taken on line 5—5 of Fig. 1. Fig. 6 is an isometric perspective view of the longitudinally movable spring abutment.

In all the views the same reference characters are employed to indicate similar parts.

The cylindrical barrel 10, the housing for the trigger and setting mechanism 11 and the two parallel projections 12, by which this structure is secured to the wooden stock 13, are made of a single integral piece of punched out sheet metal. The cylinder or barrel part of the structure is formed into a tube with the salient edges 14—14 of the contacting surfaces turned outwardly, as shown in Figs. 2 and 3. A bead 15 comprising a strip substantially as long as the front portion of the barrel 10 has its longitudinal salient edges turned inwardly to overlie the out-turned edges 14—14 of the barrel, thereby to form a complete cylinder 10 and to hold the meeting edges thereof in air tight contact. In the rear portion of the barrel 10, the confronting flat portions 16 and 17 are substantially parallel to provide support for the composite setting lever and trigger guard 18, which is pivoted therein, as at 19 and which is provided with a part 20 serving as a trigger guard when in place, as shown in Fig. 1, and provided with a hand lever part 21 by which the device is moved upon its pivot. It is also provided with a front end 22 turned rearwardly, as at 23. The part 24 of the lever passes in between the confronting flat rear end guide portions 25 and 26 when the lever is in its normal position. The extreme end 27, of the lever, is inturned to provide space 28 between the stock 13 and the main portion 21 of the lever 18, so that the ends of the fingers of the operator may enter the space 28 in order to move the lever 18 into dotted line position in the act of setting the mechanism prior to "firing" the gun.

A spring compression rod 30 carries on its front end a washer 31, that is riveted thereto, and another washer 31′ that is preferably loose thereon, and an expansible, relatively soft material, such as leather 32, or the like, to provide a movable piston. Surrounding the rod 30 is an open helical spring 33 that presses against the loose washer 31′ and extends rearwardly to a longitudinally movable spring abutment 34. The abutment 34 is crimped at its forward end, as at 35, 36, 37 to provide projections to receive the rear end of the spring 33. The last two projections, 36 and 37, provide guiding grooves within which the rod 30 is freely slidable. Near the rear end of the rod 30, it is upwardly deflected, as at 38, and is downwardly deflected, as at 39. The vertically extending end 39 is provided with a part 40 for coöperation with the trigger 41. The trigger 41 is pivoted between the flat surfaces 16 and 17, as at 42, and is provided with a sear spring 43, secured to a pin 44, which passes through said flat surfaces. The trigger is provided with a shoulder 45 behind which the lower end 40 of the rod 30 passes and by which it is held. Near the front end of the barrel 10 is a washer 46 against which the cork 47 may abut when the cork is in the end of the barrel. The cork may be secured by a string 48 to any part of the structure, preferably to the trigger guard 20. The washer 46 is held in place by the compression provided by the bead 15.

The operation of the device is as follows:—To set the gun, preliminarily to firing it, the lever 18 is moved from its full line position to its dotted line position at which time the forward, rearwardly curved end 23, of the lever, strikes the down-turned end 39 of the compressing rod 30 and carries

rearwardly the rod, the spring abutment 34, the spring 33, and the piston 32 until the parts are moved into dotted line position, at which time the down-turned end 40, of the rod 30, engages the shoulder 45 of the trigger 41, the stress effected by the spring 33 being in a direct line with the pivot 42 of the trigger so that the relatively light sear spring 43 holds the trigger in contact with the downturned part 40 of the rod 30 against the tension of the spring until the trigger is pulled rearwardly to fire the gun. When the parts have been placed in dotted line position, in the act of setting the gun, the movable abutment 34 is moved forward by the end 23 of the lever 18, thereby compressing the spring 33 and leaving the rear end of the rod 30 in engagement with the shoulder 45 of the trigger. The piston 32 is moved rearwardly from the washer 46 in setting the gun, leaving considerable air space between the end of the piston 32 and the confronting end of the cork 44. The end 23, of the lever 18 holds the rear abutment against the tension of the spring in the position in which it has been moved by the lever, so that when the trigger is pulled, in the act of firing the gun, the shoulder 45 of the trigger is moved below the end 40 of the rod 30 and the rod is thereby released, when the spring 33 will forcibly move the rod and the piston 32 forwardly, compressing the air between the said piston and the cork, causing the cork to leave the end of the barrel 10 by the effect of the air compressed in the vacant space in the barrel by the rapid movement of the piston, superinduced by the relaxation of the spring, thereby causing a loud report. After the gun has been fired, the parts will assume their normal positions, shown in full lines in Fig. 1. To shoot the gun, therefore, it is only necessary to move the lever 18 from full line position to dotted line position and to return it to full line position, then pull the trigger.

While I have herein shown a single embodiment of my invention for the purpose of clear disclosure it is evident that considerable change in the structure and disposition of the parts may be made within the spirit and scope of the appended claims.

Having described my invention, what I claim is:

1. An air gun comprising a barrel; a housing, for a setting lever and a trigger, and two parallel, rearwardly extending projections between which to receive the stock, made of a single integral piece of sheet metal; a bead joining the longitudinally extending meeting edges of the barrel part and a washer in the barrel near the front end thereof held in place by compression produced by said bead.

2. A device of the character described comprising a barrel; a piston rod; a piston on the front end thereof; an open helical spring surrounding the rod; a lever for moving said rod, piston and spring rearwardly when the lever is moved in one direction; a trigger for holding said rod and piston in the position in which they have been moved by said lever, and a spring abutment crimped at its forward edges to slidably engage the said rod and movable rearwardly with said rod, piston and spring and movable forwardly to compress the spring by the lever, when it is returned to normal position, and held in such returned position by the lever to prepare the gun for firing.

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

JACOB R. SANDAGE.

In the presence of—
STANLEY W. COOK,
MARY F. ALLEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."