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J. W. DICKSON & N. J. CARSON.

LIQUID SHOOTING GUN AND INSECT DESTROYER.

APPLICATION FILED JAN. 5, 1903.

NO MODEL.

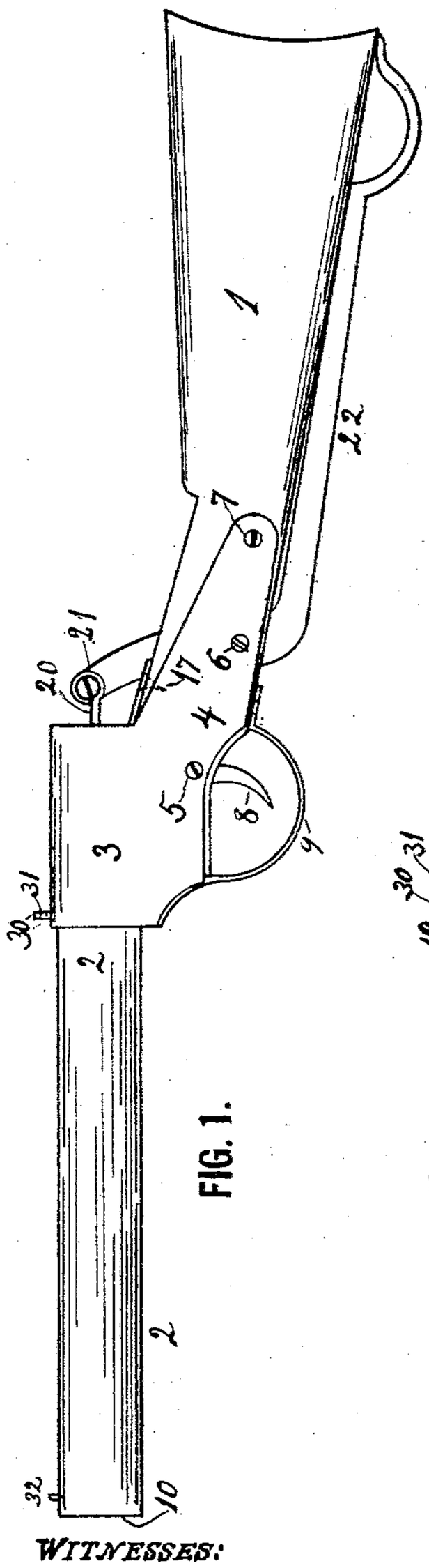

FIG. 1.

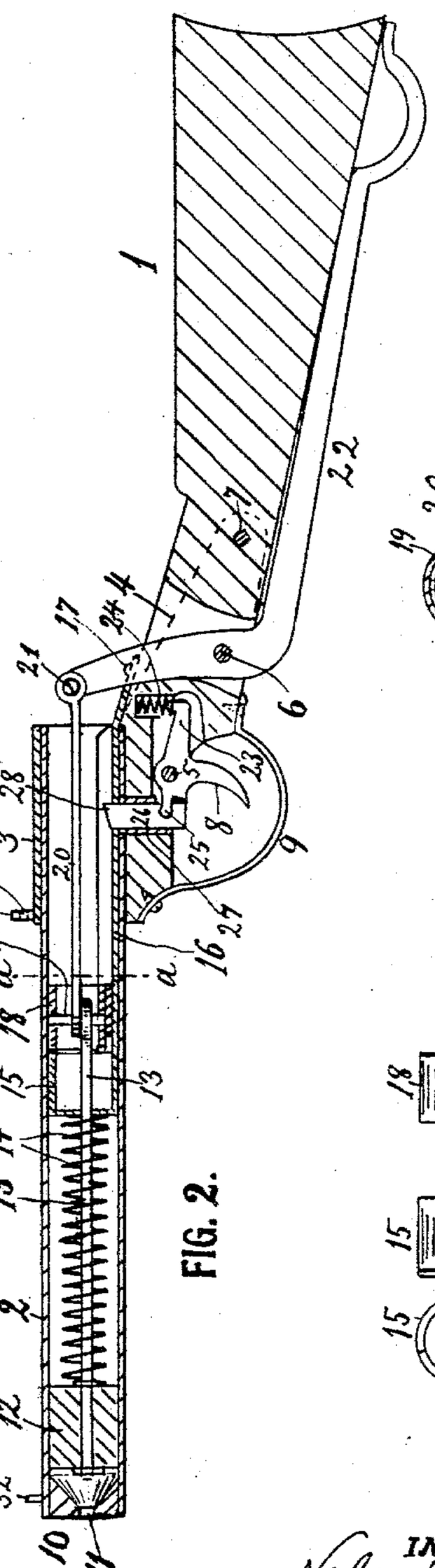

FIG. 2.

FIG. 7.

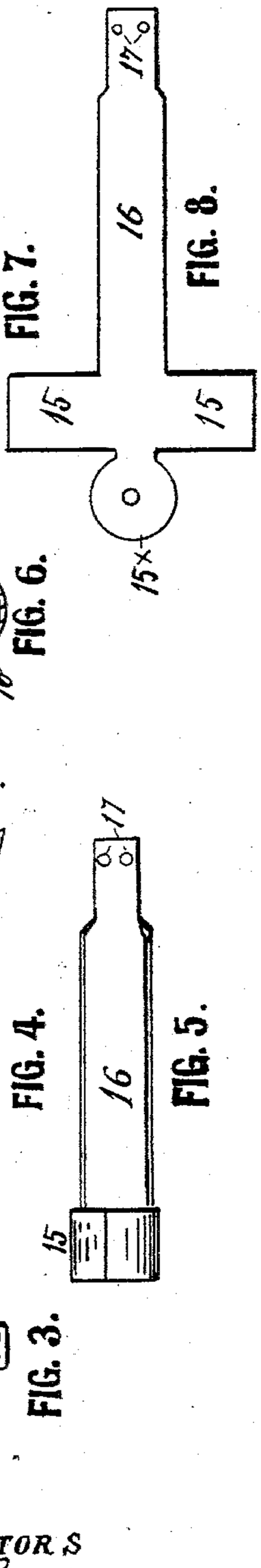

FIG. 8.

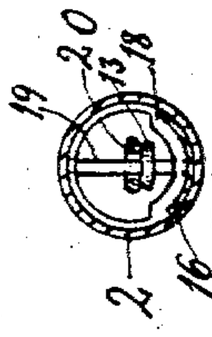

FIG. 6.

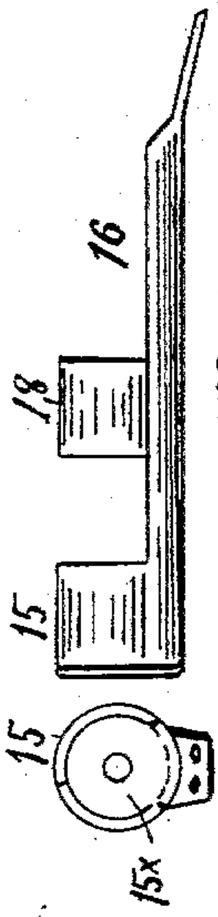

FIG. 4.

FIG. 3.

FIG. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN WILLIAM DICKSON AND NILS J. CARSON, OF CASTLEROCK, WASHINGTON.

LIQUID-SHOOTING GUN AND INSECT-DESTROYER.

SPECIFICATION forming part of Letters Patent No. 753,127, dated February 23, 1904.

Application filed January 5, 1903. Serial No. 137,809. (No model.)

To all whom it may concern:

Be it known that we, JOHN WILLIAM DICKSON and NILS J. CARSON, citizens of the United States, residing at Castlerock, in the county of Cowlitz and State of Washington, have invented certain new and useful Improvements in Liquid-Shooting Guns and Insect-Destroyers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention is an improved liquid-shooting gun especially adapted for destroying the nests of the woolly aphis, tent-caterpillars, and other noxious insects, but also adapted for other purposes; and it consists in the construction and combination of devices hereinafter described and claimed. These and other objects we attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the "liquid-gun," as we may well term it. Fig. 2 is a longitudinal vertical central section of Fig. 1. Fig. 3 is a front end view of the piece resisting the rear end of the mainspring in Fig. 2. Fig. 4 is a side view of said part in Fig. 3. Fig. 5 is a top view of Fig. 4. Fig. 6 is a cross-section on the line, *a a* in Fig. 2 looking forwardly over the gun. Fig. 7 is a top view of the wire loop or double bar 20 in other views. Fig. 8 is a stamped blank from which the spring-resister is made.

Referring to the drawings by reference-numerals, 1 designates the stock, and 2 the barrel, of the gun. The barrel is secured with its rear end in an arched plate 3, having its ends formed into parallel cheeks 4, secured to the stock by three screws 5, 6, and 7, all of which have their ends screw-threaded into one of the cheeks and traversing the space between the cheeks and screw 5 form the support or pivot for the trigger 8, inside the trigger-guard 9. The front end of the barrel 2 is closed by an internally funnel-shaped bottom 10, having in its center a small aperture 11. In the barrel moves a snugly-fitting piston or plunger 12, secured on a central rod 13, encircled by a coiled spring 14, compressed between the plunger and the bottom of a spring-resisting cylinder 15, formed on a segmentally-grooved bar 16, which extends rearwardly and has its rear end secured by screws 17 to the stock.

18 is a hollow head sliding loosely in the rear end of the barrel and is cut away at its bottom side to straddle the bar 16. In said head 18 is secured a vertical pin 19, on which the rear end of the plunger-rod and the front end or loop of the double rod 20 are secured. To the rear end or ends of the rod 20, which we prefer to have double, as shown, is pivoted at 21 the short end of the loading-lever 22, which is pivoted on the screw 6.

The trigger has a rear and upwardly-extending arm 23, normally pressed downwardly by the spring 24, inserted in a spring-pocket in the stock. It also has a forwardly-projecting arm 25, engaging a notch in the rearward edge of a slide 26, sliding in a metallic lining 27, and having a forwardly-beveled top end forming a tooth 28, projecting upwardly into the rear portion of the barrel, where it engages the lower front edge of the slide or sliding head 18, and thus holds the spring compressed and the plunger retracted until the trigger 8 is pulled, when slide 26 will descend and release the head 18.

In Fig. 8 is shown a sheet metallic blank from which we prefer to form the spring-resisting piece 15 16 by forming the arms 15 into a cylinder closed by the bottom $15^{\times}$, formed integral with the blank. The rear sight 30 has an aperture 31, through which the front sight 32 is seen in taking aim.

The projectile may be water pure and simple; but in many instances it will be well to use an oily or otherwise strong solution to kill the insect afterward if it does not die from the mere blow of the water. When the water or solution is ready, the operator places the muzzle of the gun into it and swings the lever 22 downward or away from the stock. This motion retracts the plunger and fills the barrel with liquid, and the trigger-slide 26 holds

the head 18, and thereby the plunger, retracted. The lever 22 is then folded to the stock, and when the trigger is pulled the plunger is caused by the action of the spring 14 to shoot the liquid with great force.

Our improved liquid-shooting gun is very accurate when properly aimed and discharges the liquid with such force as to effectually destroy the nest of the woolly aphis, tent-caterpillars, and other noxious insects which injure fruit and other trees and affords a convenient means for ridding an orchard of such pests. Moreover, the use of the gun affords an attractive sport, such as will particularly commend itself to boys and induce them to use the gun to advantage.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

A gun for shooting liquid, comprising a stock, a loading-lever pivotally connected thereto and having an upwardly-extending arm, a barrel, open at the breech, an arched plate bent over the rear portion of the barrel, having cheek-pieces secured to opposite sides of the stock and thereby securing the barrel to the stock, a piston in the barrel, a connection between the piston and the arm of the lever, a spring to force the piston forward in the barrel, a trigger, and means coacting therewith to lock the piston in a retracted position in the barrel.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN WILLIAM DICKSON.
NILS J. CARSON.

Witnesses:
Jos. O'Neill,
E. J. Johnson.