E. DE MOULIN.

WATER GUN.

APPLICATION FILED NOV. 9, 1908.

933,961. Patented Sept. 14, 1909.

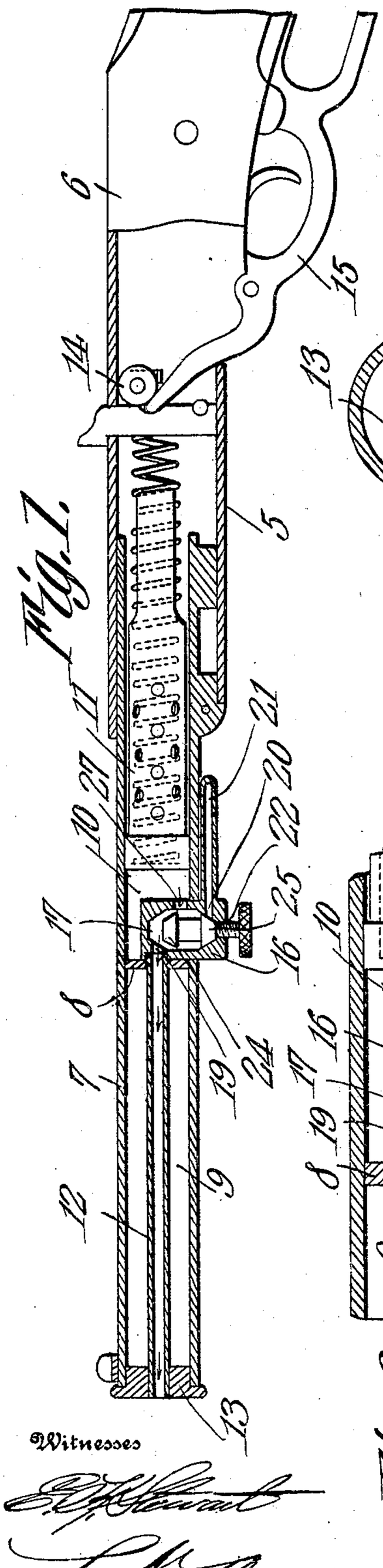

Fig. 1.

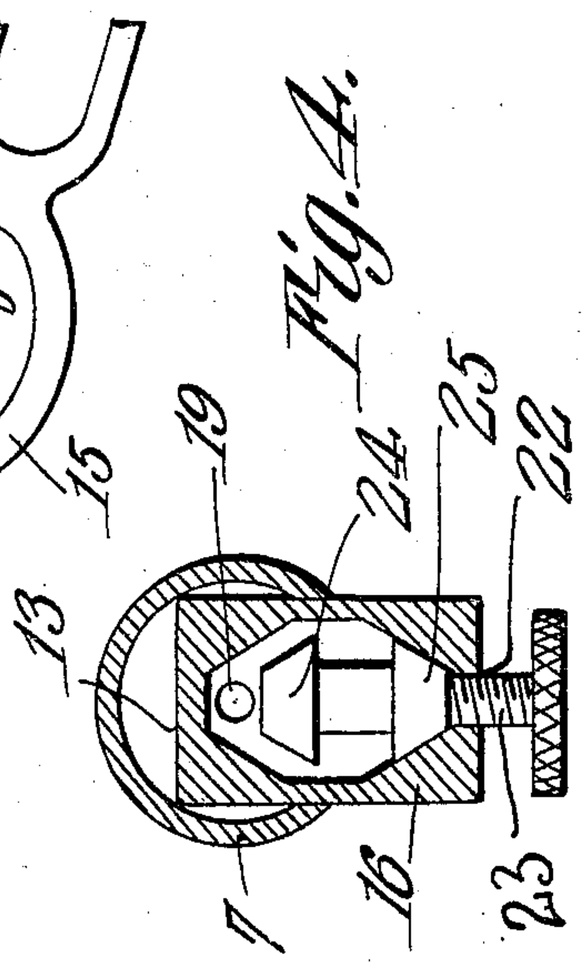

Fig. 4.

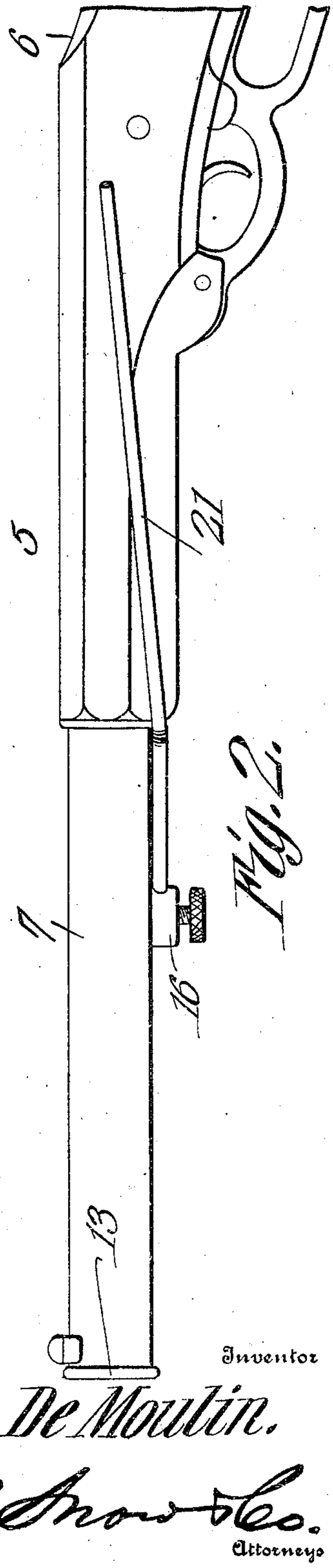

Fig. 2.

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

ERASTUS DE MOULIN, OF GREENVILLE, ILLINOIS.

WATER-GUN.

933,961. Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed November 9, 1908. Serial No. 461,770.

To all whom it may concern:

Be it known that I ERASTUS DE MOULIN, a citizen of the United States, residing at Greenville, in the county of Bond and State of Illinois, have invented a new and useful Water-Gun, of which the following is a specification.

This invention relates to trick guns of that general class shown and described in former United States Letters Patent issued to me on the 14th day of July 1908, under No. 893573.

The object of the invention is generally to improve and simplify the construction of the gun and to provide a single valve for controlling the direction of flight of a projectable substance through either discharge passage.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification:—Figure 1 is a longitudinal sectional view of a trick gun constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged detail longitudinal sectional view of the valve and its associated parts. Fig. 4 is a transverse sectional view of the valve chamber, partly in section and partly in elevation.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The device forming the subject matter of the present invention is in the nature of an attachment to an air rifle, whereby the latter may be used as a water gun, and by way of illustration is shown applied to a "Daisy" air rifle of the ordinary construction in which 5 designates the casing or housing, 6 the stock and 7 the false barrel.

Disposed within the false barrel 7 is the usual transverse partition 8 dividing the false barrel into two compartments 9 and 10, one of which constitutes a fluid containing compartment and the other a chamber for the reception of a plunger 11, the chamber 10 also serving to receive the water from the compartment 9 when the plunger is retracted and the rifle used as a water gun. The partition 8 is provided with a central perforation, the walls of which are threaded, and engaging the threads of said perforation and spaced from the interior walls of the false barrel 7 is a true barrel 12. The free end of the barrel 12 is soldered or otherwise rigidly secured to a terminal cap 13 removably seated in the adjacent end of the barrel 7 so that by rotating the cap the true barrel 12 may be unscrewed from the partition 8 and said barrel and cap disconnected from the false barrel 7 when it is desired to fill the containing chamber 9 with water or other fluid.

The spring actuated plunger 11 is slidably mounted for longitudinal movement in the chamber 10 and is provided at one end thereof with a terminal roller 14 for engagement with the usual operating lever 15, it being here stated that when the plunger is retracted the water in the compartment 9 will be drawn into the receiving chamber 10 and forcibly ejected from said receiving chamber when the plunger is released, in the manner hereinafter described.

The several parts above referred to are of the usual construction, the present invention residing in the mechanism employed for controlling the discharge of a stream of water through either end of the gun.

The controlling means embodies a valve casing or housing 16 arranged within the compartment 10 at the rear of the partition 8, said casing being provided with upper and lower valve seats 17 and 18 arranged in vertical alinement, as shown. The true barrel 12 communicates with the valve seat 17 through a port 19, while a similar port 20 forms a source of communication between the lower valve seat 18 and a rear discharge tube 21, the latter being preferably extended along one side of the casing or housing 5 and having its discharge end deflected upwardly so as to assist in preventing the water from escaping through said tube during the forward discharge of the gun or to avoid dripping when valve is open for rear discharge. The lower end of the valve casing 16 projects through the false barrel 7 and is provided with a threaded aperture 22 for the

reception of a correspondingly threaded valve stem 23.

Secured to the valve-stem 23 are spaced conical shaped valve-heads 24 and 25, said valve-heads being so arranged that when the valve-head 24 engages its seat 17 to cut off the flow of fluid through the barrel 12, the other valve-head 25 will be spaced from its seat 18 to permit the passage of fluid between the seat 18 and the valve-head 25 to the rear discharge barrel, and vice-versa.

The lower end of the valve stem 23 is provided with a milled head 26, by means of which the valve stem may be actuated to alternately open and close the ports 19 and 20.

In operation the cap 13 carrying the true barrel 12 is removed by rotating the same, and a small quantity of water introduced into the compartment 9 through the open end of the barrel 7, after which the plunger is retracted by manipulating the lever 15 in the usual manner, thus causing the fluid in the compartment 9 to enter the chamber 10 through the ports 19 and 27. If a rearward discharge is desired, the valve head 24 is moved into engagement with the valve seat 17 by rotating the finger piece 26 which closes the port 19 thus allowing the water in the chamber 10 to flow through the port 27 and port 20 to the discharge tube 21 from which it will be forcibly ejected in the form of a small stream. If a forward discharge is desired, the finger piece 26 is rotated in the opposite direction so as to cause the valve head 25 to engage the valve seat 18 and close the port 20, the water in the chamber 10 being free to flow through the ports 27 and 19 to the true barrel 12 and thus produce a forward discharge. It will thus be seen that by manipulating the valve the flow of fluid through either discharge barrel may be controlled at will.

Having thus described the invention what is claimed is:—

1. A trick gun having front and rear discharge passages, and a single valve controlling the discharge of a projectable substance through either passage.

2. A trick gun having front and rear discharge passages, means for discharging a projectable substance through either passage, and a double ended valve so disposed that it may be used to close either of said passages.

3. A trick gun having a plurality of passages discharging in different directions, and a single valve controlling the discharge of a projectable substance through either passage.

4. A trick gun having a plurality of passages discharging in different directions, and a double ended valve so disposed that it may be used to close either of said passages.

5. A trick gun having front and rear discharge passages, a valve stem, and spaced heads constituting a double ended valve secured to the stem and so disposed that the heads may be used to close either of said passages.

6. A trick gun including a valve casing, a plurality of passages communicating with the interior of the valve casing and discharging in different directions, and a single valve arranged within the casing and controlling the discharge of a projectable substance through either passage.

7. A trick gun including a valve casing, front and rear discharge passages communicating with the interior of the casing, and a double ended valve arranged within the casing to open or close one passage and simultaneously close or open the other.

8. A trick gun including a valve casing having a plurality of conical shaped valve seats, passages communicating with said valve seats and discharging in different directions, a valve stem, and spaced conical shaped heads carried by the stem and adapted to engage the valve seats, thereby to control the discharge of a projectable substance through either passage.

9. A trick gun including a valve casing provided with spaced valve seats, a front discharge tube communicating with one of said seats, a rear discharge tube communicating with the other seat, and a double ended valve operating within the casing and so disposed that it may be used for closing either of said tubes.

10. A trick gun including a chamber adapted to receive a projectable substance, a plunger operating within the chamber, and a valve having a port communicating with said chamber, front and rear discharge barrels communicating with the interior of the valve casing, and a double ended valve operating within the valve casing and so disposed as to control the discharge of a projectable substance through either barrel.

11. A trick gun including a false barrel provided with a fluid receiving chamber, a plunger operating within said chamber, a valve casing having a port leading into the chamber, a true barrel communicating with the interior of the valve casing at one end thereof, a rear discharge barrel communicating with the interior of the valve casing at the opposite end thereof, and a single valve arranged within the casing and so disposed that it may be used to close either of said barrels.

12. A trick gun including a false barrel provided with a fluid receiving chamber, a plunger operating within said chamber, a valve casing projecting through the wall of the false barrel and having a port communicating with said chamber, a true barrel disposed within the false barrel and communicating with the interior of the valve cas-

ing at one end thereof, a rear discharge barrel carried by the projecting end of the valve casing and communicating with the interior of said valve casing, a double ended valve operating within the valve casing and so disposed that it may be used to close either the true barrel or the rear discharge barrel, a threaded shank depending from the valve and extending through one wall of the valve casing, and a finger piece secured to the shank of the valve.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ERASTUS DE MOULIN.

Witnesses:

NEWTON W. FINK,

H. C. DIEHL.