P. GIFFARD.

Air Repeating-Guns.

No. 136,315. Patented Feb. 25, 1873.

fig. 1

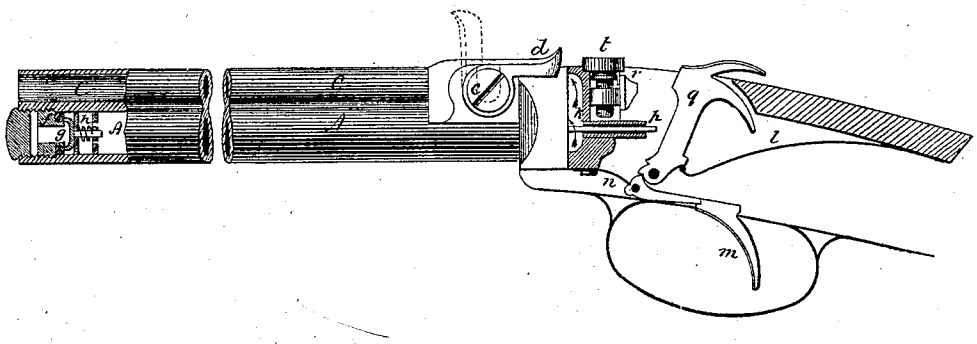
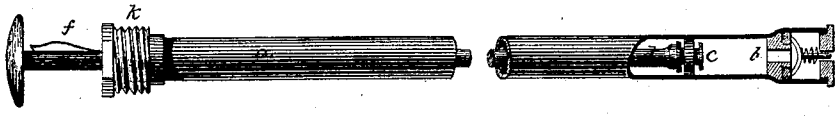


fig. 2



Witnesses.

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UNITED STATES PATENT OFFICE.

PAUL GIFFARD, OF PARIS, FRANCE.

IMPROVEMENT IN AIR REPEATING-GUNS.

Specification forming part of Letters Patent No. **136,315**, dated February 25, 1873.

To all whom it may concern:

Be it known that I, PAUL GIFFARD, of Paris, in the Republic of France, have invented a new and Improved Air Repeating-Gun; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1 a side and partial sectional view; and in Fig. 2 the charging-pump detached.

This invention relates to an improvement in arms designed to employ compressed air for the discharge; and it consists, first, in combining with the barrel a partially-rotating device, the axis of rotation being at right angles to the axis of the barrel, turning upward to receive the charge, and down to bring the charge into line with the barrel, combined with an air-chamber valve and hammer, so that the hammer actuating the said valve will open communication to permit air to pass to the rear of the barrel and cause the discharge; second, in combining with the barrel the air-chamber, valve, and hammer of an air-gun, an adjustable stop to regulate the quantity of air which may pass from the chamber to the barrel.

C is the barrel; A, the air-chamber, arranged beneath in substantially the usual manner for air-guns. The air-chamber may be supplied with air by any convenient device, or as hereinafter described. The barrel and air-chamber are attached to the stock in the usual manner for other arms. At the rear or breech end of the barrel is arranged a cylindrical breech-piece, *c*, turning freely upon an axis at right angles to the axis of the barrel, and provided with a lever, *d*, by which it may be turned up to the position denoted in broken lines. This breech-piece has an opening transversely through it and in line with the barrel, and so that when turned down it forms, practically, a part of the barrel or chamber to receive the ball or shot to be thrown, and when thrown up, as denoted in broken lines, this chamber is open at the top, so that the ball or shot may be dropped therein; then turned down, the breech is closed, presenting the ball to the barrel in position for discharge. In the frame a passage, *k*, leads from the air-chamber up to and communicating with the barrel. The rear end of the air-chamber is closed by a valve, the spindle *p* of which extends back through suitable guides, as seen in Fig. 1, so that the hammer *q*, when thrown forward, will strike the said spindle and force the valve to open so that the compressed air in the cylinder A will pass through the passage *k* to the barrel, to operate in the usual manner of air-guns. The hammer *q* is held at the cock by the screw *n*; this actuated by the trigger *m* to discharge the hammer, the main-spring *l* imparting to the hammer the required force. The pressure of the air upon the valve will close it after the stroke of the hammer, forcing the hammer back, a slight over-motion of the hammer being allowed for this purpose. To regulate the extent of movement of the valve, so that a greater or less quantity of air may be admitted to pass to the barrel, is desirable; and this I do by a stop, *r*, forward of the hammer, adjusted by turning the screw *t* so as to rise up and down and stop the hammer sooner or later, according to the position of the said stop. The hammer striking the said stop sooner will give a proportionately less movement to the spindle, and opening the valve; and, later, a proportionately greater movement. The air-pump, which is arranged within the cylinder, is shown detatched in Fig. 2. *a* is the cylinder, of considerably less diameter than the air-chamber A, its upper end *k* provided with a threaded head to secure the said cylinder into the air-chamber, leaving a space around the pump for the reservoir for the compressed air. *d* is the piston-rod; *c*, the piston, operated by the head *g* and a valve, *b*, at the lower end, so that as the piston is forced down air will pass through the piston into the reservoir. *f* is a spring at the head to retain the piston-rod in its closed position.

I claim as my invention—

1. In combination with the barrel C provided with the partially-rotating breech-piece *c*, the air-cylinder A constructed and arranged relatively to the barrel, and the passage *k* and spindle *p* by means of which the air within the cylinder is discharged into the barrel, substantially as described.

2. In combination with the barrel C and air-chamber A and its connecting mechanism, the inclined stop *r* to adjust the stroke of the hammer, substantially as described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

PAUL GIFFARD.

Witnesses:
ALBERT CAHEN,
EUG. LE LAY.