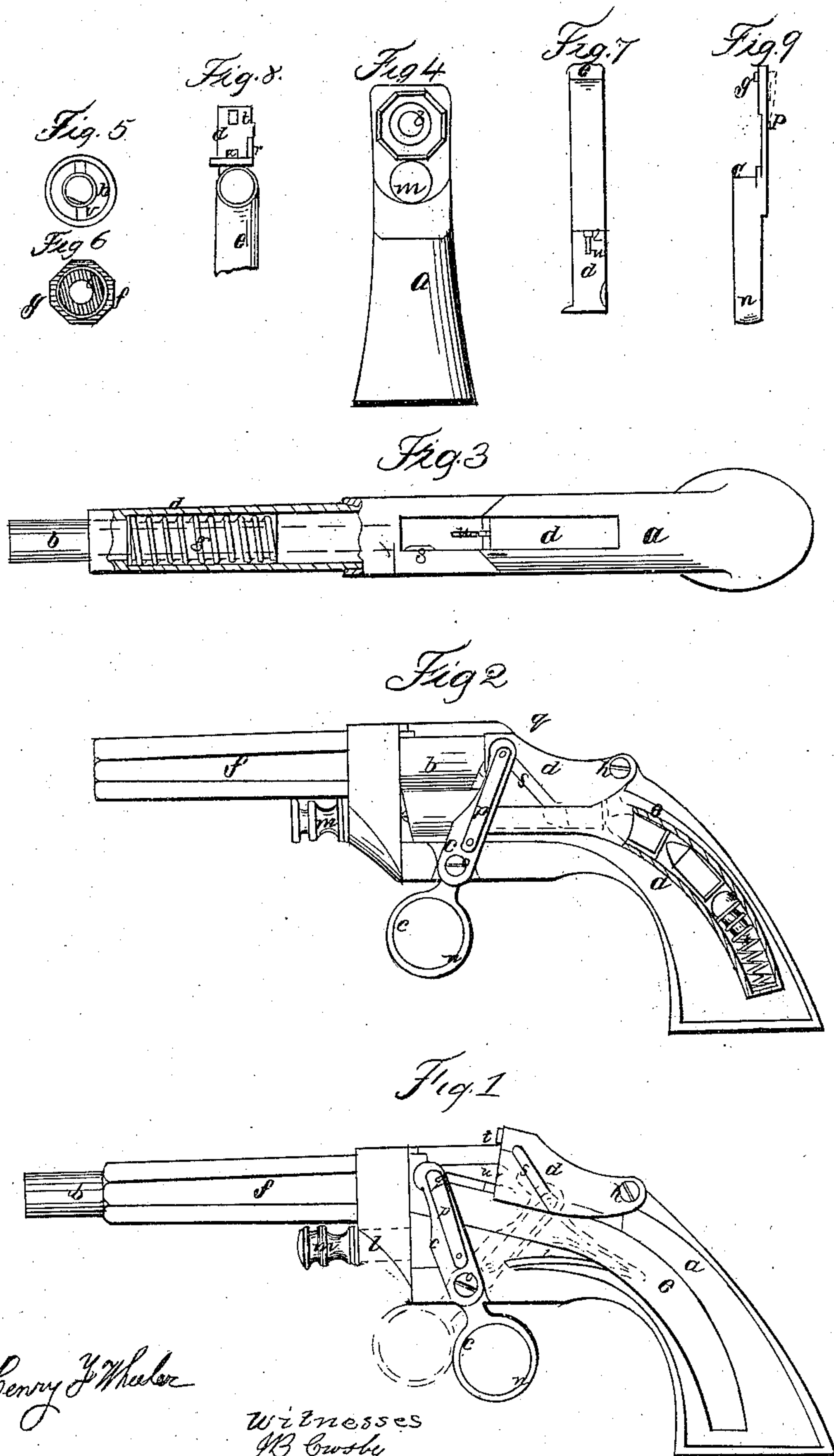


H. F. WHEELER.

Magazine Gun.

No. 46,286.

Patented Feb. 7, 1865.



Henry F. Wheeler

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY F. WHEELER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MAGAZINE BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 46,286, dated February 7, 1865.

To all whom it may concern:

Be it known that I, HENRY F. WHEELER, of Boston, in the county of Suffolk and State of Massachusetts, have invented Improvements in Fire-Arms; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to the construction of that class of magazine or repeating fire-arms in which fixed ammunition loaded at the breech is employed.

The invention consists, primarily, in a pistol having a sliding barrel, the charge of which, inserted at the breech, is fired by driving the barrel back against a percussion or breech block.

The invention also consists in the construction, arrangement, and mode of operating the barrel, the magazine, and the breech or percussion block.

A pistol embodying my improvements is shown in the drawings, Figures 1 and 2 representing side elevations thereof, with the side or face plate of the stock or handle removed. Fig. 3 is a top view, showing, partly in section, the mechanism for driving back the barrel. Fig. 4 is an end view of the pistol. Fig. 5 is a rear-end view of the barrel; Fig. 6, a cross-section of it; Fig. 7, a top view of the magazine-tube and breech or percussion block, and Fig. 8 a front-end view thereof. Fig. 9 is an edge view of the trigger-lever.

a denotes the handle or stock of the pistol; *b*, the barrel; *c*, the trigger; *d*, a movable breech or percussion piece, and *e* the cartridge-magazine. The barrel *b* is contained within a long cylinder or case, *f*, in which it slides, its forward end projecting from the case when the arm is cocked, as seen in Figs. 1 and 3, and the barrel sliding back when the arm is fired, so that said forward end is or may be flush with the corresponding end of its case *f*, as seen in Fig. 2.

The exterior and interior diameters of the barrel and its case, respectively, at the muzzle end correspond, but at a short distance within the case its diameter is enlarged, as seen in Fig. 3, and near the breech end of the barrel

its diameter is enlarged, a spiral spring, *g*, surrounding the barrel *b*, abutting at its opposite ends against the two shoulders formed in the case *f* and upon the barrel *b*; said spring driving the barrel *b* against the breech-piece or block *d* when the piece is fired, and holding it against the forward end of said breech-piece or the magazine connected therewith when the arm is cocked.

The breech-piece *d* is hung upon a screw pin, *h*, extending through the stock *a*, and upon the under side of this breech-piece is a long curved magazine or cartridge tube, *e*, said tube being made integral with the breech-piece, or so applied to it that they move as one piece, having only a vertical rocking movement upon the pin *h*.

The stock or handle *a* is made hollow for the movement of the magazine-tube, and a spring, *i*, holds the tube (and breech-piece) normally in position, as seen in Fig. 1. Within the magazine-tube are placed the cartridges to be fired, a spring, *k*, pressing them toward the front end of the tube, as will be readily understood, and as is common in other arms—like the Spencer rifle, for instance—having magazine-tubes within the stock.

In the position seen in Fig. 1, it will be observed that the forward end of the tube is in line with the barrel *b*, and when brought into this position, as the open end of the barrel and the adjacent end of the tube come into line, the spring *k*, pressing forward the line of cartridges, forces the forward one into the barrel, the flange upon the rear end of the cartridge-shell fitting into an enlargement of the extreme end of the barrel, and so that the rear end of the cartridge shall be flush, or nearly flush, with the end of the barrel and the cartridge held in position for firing.

The other position which the cartridge-tube and the breech-piece are made to assume (when the arm is fired) is seen in Fig. 2. In this position the forward end of the tube is in line with a supply tube or opening, *l*, through which the magazine is supplied with cartridges, as will be readily understood, a stopper, *m*, filling said tube when the magazine has been charged.

The conjoined movement of the magazine-tube and the breech-piece, resulting in the

loading and firing of the pistol, are produced through a trigger-lever, *c*. Just above the finger-ring *n* this lever turns upon a pin, *o*, its upper end extending up within the cavity of the stock, and upon one side of and in juxtaposition with the breech-piece *d*. Supposing the arm to have been fired, the upper end of the lever *c* is in the position seen in Fig. 2, its forward side or edge being in contact with or near the end of the barrel. By drawing back the finger-ring, the upper end of the lever, abutting against the barrel, pushes the barrel forward until the end of the barrel passes beyond the end of the cartridge-tube, (or the surface of the plate thereupon,) when the spring *i* tilts up the magazine-tube and breech-piece into the position seen in Fig. 1, the pressure of the trigger-lever carrying the end of the barrel a little beyond the path of movement of the end of the tube *e*, so as to allow of the easy ascent of the tube and the barrel-spring *g*, causing said end to impinge against the end of the tube *e* when the pressure upon the trigger-lever is released. It will be obvious that the cartridge-tube will now keep the barrel from receding, leaving the trigger-lever free. As the cartridge-tube reaches this position its forward cartridge will be projected into the barrel, as before explained.

The parts are now in the position seen in Fig. 1, the piece being cocked ready to be fired, which firing is effected as follows: The finger-ring of the trigger-lever is pressed forward, carrying the upper end of the lever back. A spring, *p*, attached to said lever, carries at its upper end a pin, *q*, which projects through the lever, as seen in Fig. 9. As the upper end of the lever is forced back the end of this pin strikes upon an incline, *r*, in the face of the breech-piece. (Seen in Fig. 1, and also in Fig. 8.) This incline forces back the pin *q* and spring *p*, causing the pin to slide over the side face of the breech-block until in its movement it reaches a depression or groove, *s*, in the face of the block, when the spring forces back the pin, which enters this groove at its lower end, the other parts remaining stationary in the position seen in Fig. 1 during this movement of the trigger-lever. This brings said lever into the position seen by dotted lines in Fig. 1. If, now, the finger-ring or trigger *c* be drawn back, it will be obvious that the action of the pin *q* upon the lower surface of the groove *s* will depress the cartridge-tube and the breech-block. When in this movement the upper surface of the tube *e*, or the plate surmounting the same, is carried below or beyond the lower edge of the barrel *b*, which impinges against it, said barrel will be projected or forced by its spring back against the forward face of the breech-piece *d*, as shown in Fig. 2, the piercer *t* penetrating the rear end of the cartridge by the percussion of the barrel, thereby exploding the fulminate of the cartridge and firing the pistol. The rear movement of the barrel is or may be arrested by a check or shoulder in the stock, its movement,

however, being always sufficient to allow the explosion of the cartridge by percussion against the breech-piece or its cartridge-piercer *t*.

The firing of the pistol by the rear movement of its barrel leaves the parts in position as seen in Fig. 2. Pressure forward of the upper end of the lever will then carry back the pin *q*, allowing it to ride over the face of the breech-block, to force forward the barrel. Each depression of the cartridge-tube each time the pistol is fired carries its forward end into line with the supply-tube *l*, so that whenever it is desirable to reload the pistol after a discharge it can be effected.

The shell of the cartridge, after firing, is removed as follows: A tooth, *u*, (see Figs. 1 and 3,) projects from the upper surface of the cartridge-tube or the cap-plate surmounting the same. This tooth fits into or enters a slot, *v*, made in the rear end of the barrel, as seen in Fig. 5. When the piece is fired by the spring movement of the barrel to the rear the flange of the cartridge slips over this tooth, which slides up in front of said flange, as will be readily understood. When next the barrel is slid forward by the trigger-lever the hold of the tooth upon the flange of the cartridge detains the cartridge-shell, allowing the barrel to slide away therefrom until, as the barrel is projected beyond the cartridge-tube, leaving the shell detained thereupon, the upward spring movement of the cartridge-tube throws the shell off the piece. This upward spring movement of the cartridge-tube carries its mouth again into line with the discharged barrel. The spring in the tube again forces the forward cartridge into the barrel, thereby reloading it. The trigger-lever again forces down the cartridge-tube and breech-piece, thereby again discharging the piece, which operation is repeated until the magazine is exhausted of cartridges and replenished for continued use of the pistol.

The particular construction of the various parts described may be varied from that shown in the drawings without departing from the spirit of my invention, their arrangement and method of operation, however, being those preferred by me.

I claim—

1. A fire-arm having a sliding barrel, the charge of which, inserted at the breech, is fired by driving back the barrel against a percussion or breech block.
2. I also claim the swinging breech or percussion block, constructed and arranged to operate with respect to the barrel and the magazine or cartridge tube substantially as set forth.
3. I also claim the magazine or cartridge tube when arranged to connect with and be disconnected from the barrel, substantially as set forth.
4. I also claim holding the barrel in forward position (or the arm cocked) by the employment of the forward end of the magazine-tube, substantially as described.
5. I also claim the arrangement of the breech

or percussion block to swing above the path of movement of the cartridge-tube to permit the connection of the cartridge-tube and barrel and the cocking of the piece.

6. Also, the arrangement of the cartridge-tube to allow of its movement to permit the descent into place of the breech-block and the spring movement of the barrel.

7. I also claim the manner of withdrawing and expelling the shell of the exploded cartridge by detaining it upon the cartridge-tube or breech-block and throwing it therefrom, substantially as set forth.

8. I also claim producing the forward movement of the barrel and the downward movement of the cartridge-tube by the direct action of the trigger-lever, substantially as set forth.

9. I also claim the arrangement of the barrel within a case or cylinder containing the spring, by which the rear or percussion movement of the barrel is produced.

10. I also claim so combining the magazine-tube and percussion-block that they move together or as one piece, substantially as set forth.

In witness whereof I have hereunto set my hand this 27th day of December, A. D. 1864.

HENRY F. WHEELER.

In presence of—

J. B. CROSBY,
F. GOULD.