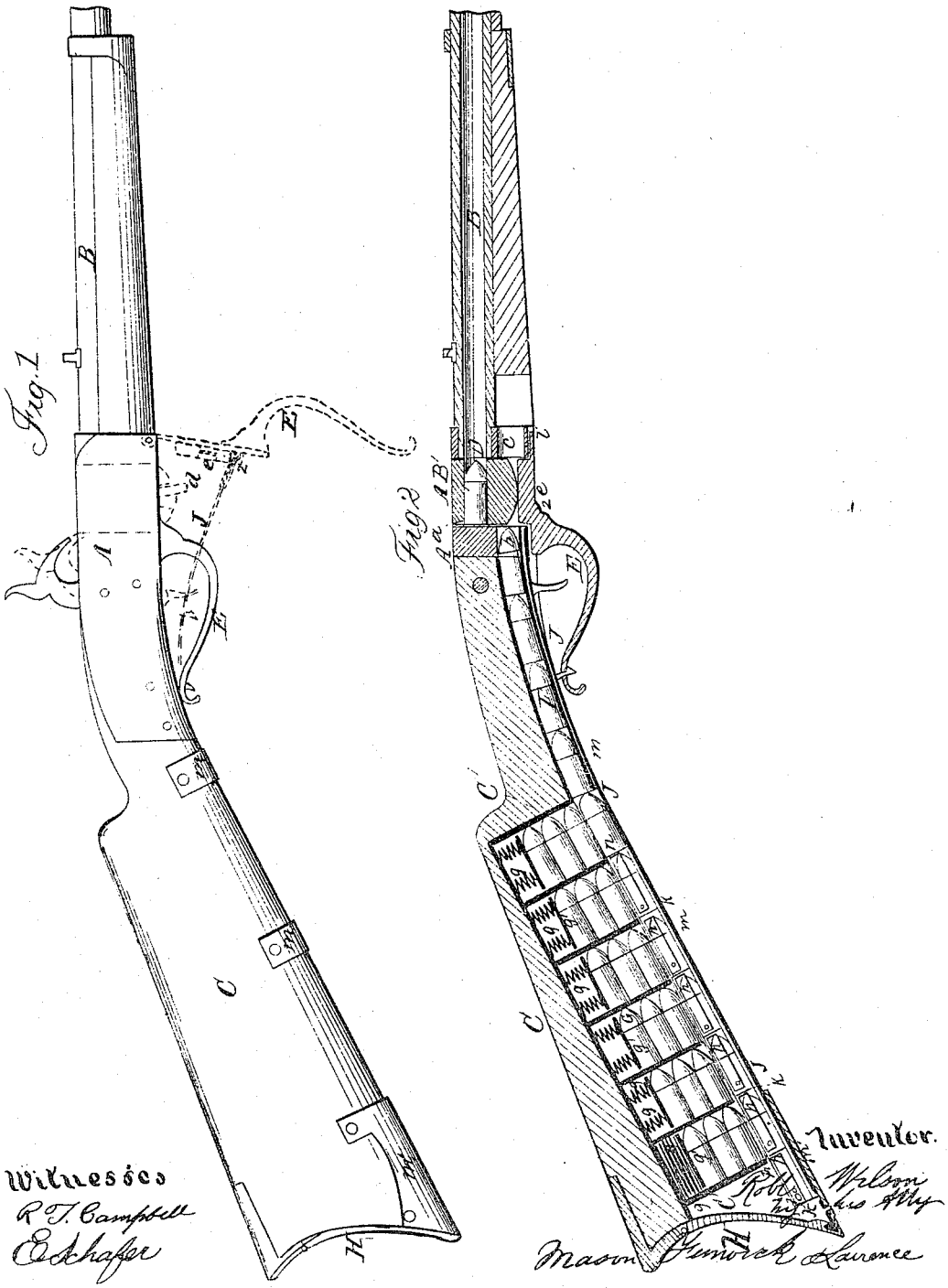
2 Sheets—Sheet 1.

R. WILSON.

Magazine Fire-Arm.

No. 45,105. Patented Nov. 15, 1864.



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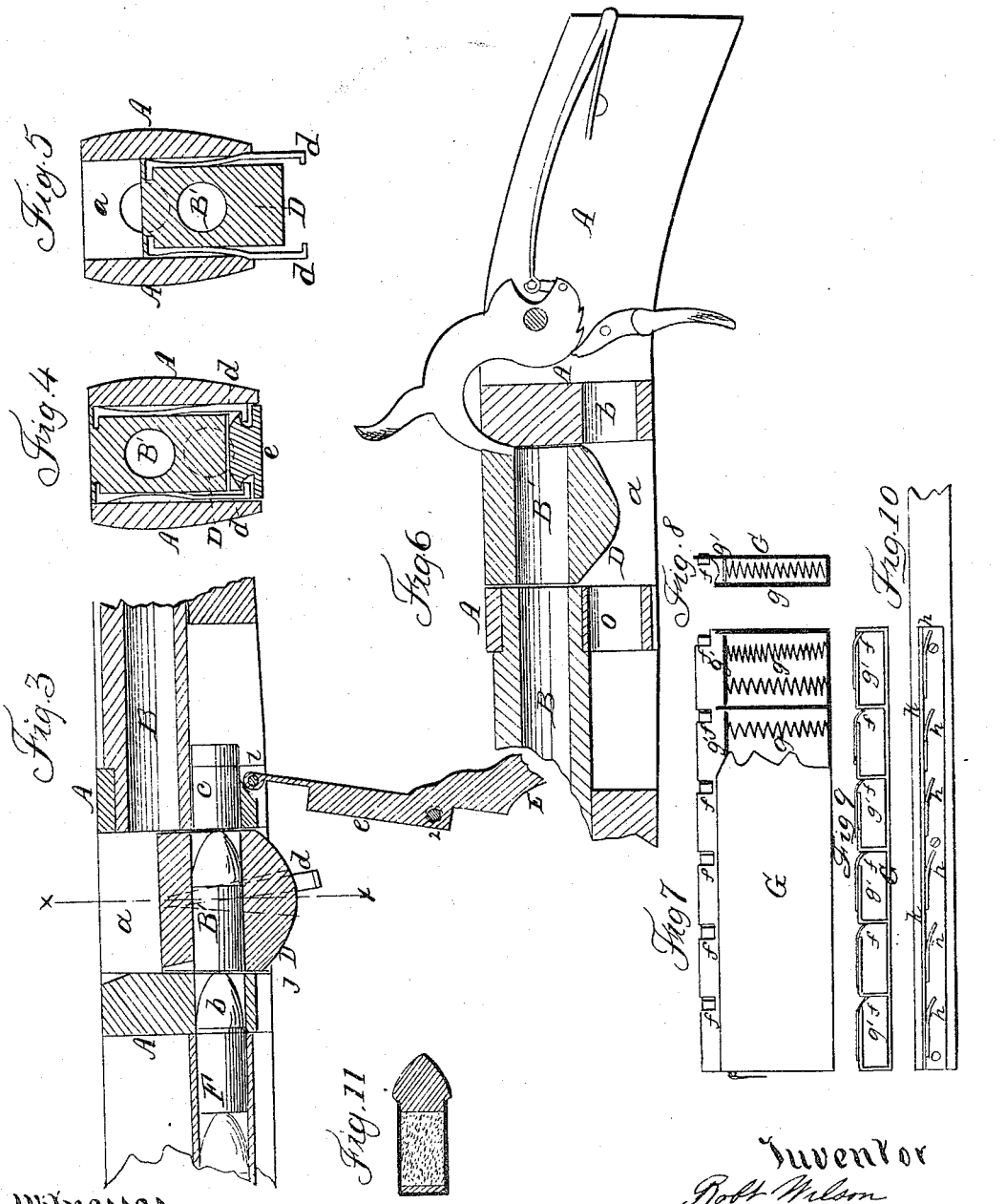

Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT WILSON, OF MACOMB, ILLINOIS.

IMPROVEMENT IN SELF-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **45,105**, dated November 15, 1864.

To all whom it may concern:

Be it known that I, ROBERT WILSON, of Macomb, McDonough county, State of Illinois, have invented a new and Improved Breech-Loading Magazine Fire-Arm; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my improved arm, showing the guard-lever in two positions. Fig. 2 is a vertical longitudinal section through the arm. Fig. 3 is a sectional view in detail, showing the breech-block in a position for receiving a cartridge from the magazine. Fig. 4 is a cross-section taken in the plane indicated by red line *x x*, Fig. 3, showing the breech-block in the position represented in Fig. 2. Fig. 5 is a similar section, showing said block in the position indicated in Fig. 3. Fig. 6 is a longitudinal vertical sectional view of the metal frame of the arm, showing the position and construction of the lock. Figs. 7, 8, and 9 are views of the cartridge-case, which is inserted into the stock of the arm, as shown in Fig. 2. Fig. 10 shows the spring-fingers for feeding the cartridges one at a time into the breech-block. Fig. 11 shows one form of ball-cartridge which I use in my arm.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to combine with a vertically-sliding breech-block, which is operated by means of a guard-lever, certain contrivances by which cartridges can be supplied from a chamber formed in the stock of the piece, or from a removable cartridge-case arranged therein, to said breech-block, and the spent cartridge-shells discharged therefrom by a single forward movement of the guard-lever, all as will be hereinafter described.

Another object of my invention is to so construct a cartridge case or magazine that when it is filled and introduced within the stock of the arm, the cartridges in this magazine will be regularly supplied to the feeding mechanism, and thereby introduced one at a time into the chamber of the barrel, as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the metal frame, to which the barrel B and the stock C are suitably secured. The rear end of the barrel B terminates at the forward side of a vertical slot, *a*, which is made through the frame A, within which a chambered breech-block, D, moves up and down. The chamber B′ in this breech-block D is in a line with and forms a part of the bore of the barrel B when the block is moved up to the position indicated in Figs. 2, 4, and 6; but when said block is depressed to its fullest extent the chamber B′ through it is in a line with the openings *b* and *c*, as shown in Fig. 3.

The forward and rear ends of the block D are tapered upward so that these surfaces will fit snugly against the corresponding surfaces of the opening *a* when the block is moved up to a position for discharging the ball. This arrangement and form of block will prevent the escape of gas at the breech of the barrel.

The breech-block D is moved downward and thrust upward, by means of a guard-lever, E, which is pivoted at *i* to the frame A. This lever has a catch-piece, *e*, formed on it, adapted for receiving two spring-hooks, *d d*, which are pivoted at their upper ends to the sides of the block D, as shown in Figs. 4 and 5. The lower ends of these springs *d d* are free to play back and forward, and these ends project below the bottom of block D a sufficient distance to catch under the overhanging portions of the piece *e* when this piece is brought up in contact with the bottom of the block D. The hooked springs *d d* are recessed into the sides of the block D, so that when this latter is forced upward by means of lever E the hooks on these springs will fall into the notched piece *e* and allow the block D to be forced to its place for discharging the load. When the lever E is drawn downward the hooked springs *d d* will grasp the piece *e* until the block D is drawn down to its fullest extent—*i. e.*, until it is stopped by the pin at *j*, Fig. 3—when any further downward movement of the guard-lever will cause the springs *d d* to fly outward and release this lever from the block. In returning the guard-lever back to its place

again the spring-hooks *d d* will fall into the notched piece *e* again, and also into their recesses in block D, so that they will pass up into the opening *a*.

The opening through the back portion of the frame A, which is lettered *b*, communicates with a chamber, C′, which is formed in the stock of the gun, through a tube, F, as shown clearly in Fig. 2. This tube F is slightly curved, so as to conform to the curvature of the neck of the stock, as shown in Fig. 2, and its rear end terminates at the forward end of the chamber C′. Within this chamber C′ a cartridge-case, G, is arranged, which is a narrow oblong box, subdivided into a number of oblong compartments, each one of which is capable of containing three or more ball-cartridges, arranged one above the other, as shown in Fig. 2.

The length of each compartment should be exactly equal to the length of a ball-cartridge which is adapted to the chamber B′ in the breech-block. One side of this cartridge-case or magazine is projected beyond the opposite side thereof a distance equal to the diameter of a ball-cartridge, and this projection is provided with a number of springs, *f f*, as shown in Figs. 7, 8, and 9, which are arranged in such relation to their respective compartments in case G as to abut against the rear ends of all the cartridges which are brought in a line with the tube F, and prevent them from being moved backward, but allow them to be moved forward toward and through said tube.

The cartridges are forced out of their case or magazine G and put into position to be carried forward through tube F by means of springs *g g*, of any suitable form, which act upon followers *g′ g′*, and these force the cartridges downward.

The cartridges are forced out of their case G and received in front of spring-fingers *f*, which prevent them from moving backward and out of a position opposite their respective compartments, as above stated; but there are other spring-fingers, *h h*, Figs. 2 and 10, opposite the fingers *f f*, which are intended for moving the cartridges forward and forcing them one at a time into the chamber of block D. For this purpose the fingers *h h* are secured one behind the other, and at the proper distances apart, to a plate, *k*, which is secured to a longitudinally-sliding spring-strap, J, which is fitted along the lower edge of the gun-stock, and attached thereto by means of straps *m m m′*. The forward end of this strap J is pivoted at 2 to the guard-lever E, and its rear end is free to move above the covering-strap or guard *m′*.

When the guard-lever E is drawn back and latched, as shown in Fig. 2, the sliding strap J lies flush with the lower edge of the stock C; but when the guard-lever is moved forward to its fullest extent, said strap is curved downward at its forward end—*i. e.*, all that portion of the strap beyond the forward guard *m* accommodates itself to the sweep of the lever E, as indicated in Fig. 1 in red.

It is not intended that the strap J, which feeds up the cartridges, shall move forward until the block D shall have been drawn down to its fullest extent and released from the guard-lever; then this strap J is moved forward a distance equal to the length of a cartridge, and no farther.

When the lever E is drawn back the strap J, with its spring-fingers, slides back without moving any of the cartridges.

As soon as a line of cartridges leave their places opposite the several compartments in the case G, those which are in this case will supply their places until the case is emptied, when it can be readily removed by opening the butt H of the stock, and a filled case introduced in its stead.

In constructing the magazines or cartridge-cases G it will be necessary to cover them with a sliding plate, applied at their open edges, to prevent the cartridges from being forced out of their compartments.

When the covered case is properly inserted into the stock C the sliding cover can be withdrawn to allow the first row of cartridges to fall into their proper positions to be forced forward through the tube F into the breech-block D, as above described.

As it is desirable to dispense with the percussion-flange on the cartridge-shells, I employ a thin disk of metal having an annular groove around its periphery. This groove is filled with the percussion compound, and the disk is inserted into the shell of the cartridge, as shown in Fig. 11.

By this means the cartridge-shells can be made of an equal diameter throughout, and adapted to the feeding mechanism which I have above described.

The construction of the lock of my arm is clearly shown in Fig. 6, and it will not be necessary to refer particularly to it. The hammer strikes directly upon the rim of the percussion-disk in the shell of the cartridge, and this shell is left within the chamber of the breech-block after the discharge, to be ejected from the arm when this block receives a fresh cartridge.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Combining with a vertically-sliding chambered breech-block, D, and pivoted guard-lever E a sliding feeder, J, or its equivalent, constructed and applied to said lever and a chambered gun-stock in such manner as to feed the cartridges therefrom and introduce them one at a time into said breech-block, substantially as described.

2. The use of spring-hooks *d d*, or their equivalents, applied to the breech-block D, and operating in conjunction with the guard-lever E, substantially as described.

3. The sliding strap J, when constructed with spring-fingers *h* and applied to a lever-guard, E, and the stock of a gun, substantially as described.

4. The cartridge-magazine G, when it is provided with lateral followers *g' g'* and spring-fingers *f f*, or their equivalents, substantially as described.

5. A removable cartridge case or holder, G, in combination with contrivances for impelling the cartridges laterally downward and then forward, substantially as and for the purpose described.

ROBERT WILSON.

Witnesses:
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I. B. B. STAPP.