

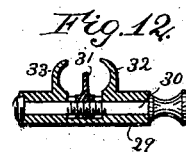
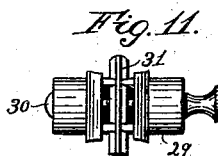
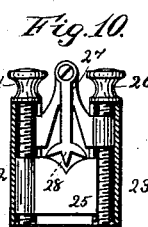
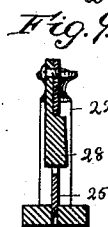
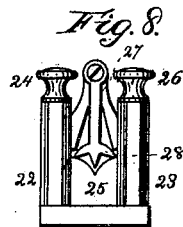
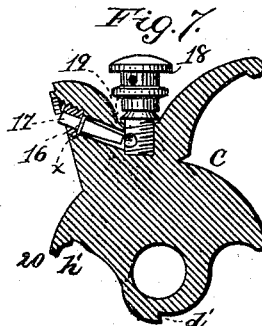
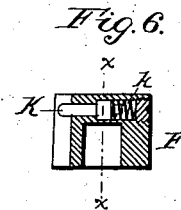
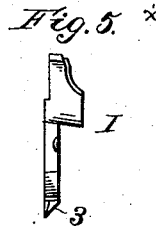
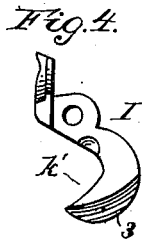
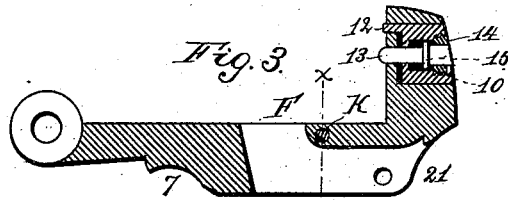
(No Model.)

2 Sheets—Sheet 2.

P. A. ALTMAIER.
BREECH LOADING FIRE ARM.

No. 261,648.

Patented July 25, 1882.



Witnesses:

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W. S. O. Harris.

Inventor:

Peter A. Altmaier,
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att'y.

UNITED STATES PATENT OFFICE.

PETER A. ALTMAIER, OF HARRISBURG, PENNSYLVANIA.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 261,648, dated July 25, 1882.

Application filed June 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, PETER A. ALTMAIER, a citizen of the United States of America, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Arms, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to breech-loading fire-arms; and the object is to provide a gun that shall be simple in construction and capable of rapid manipulation and firing, with little or no liability to get out of order; and to that end the novelty consists in the construction of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings similar letters of reference indicate like parts of the invention.

Figure 1 is a side elevation of the lock mechanism with the side lock-plate removed and the parts in their relative position when the gun is cocked and ready for firing. Fig. 2 is a similar view, showing the position of the parts in the act of loading or removing the exploded shell. Fig. 3 is a detached sectional view of the breech-block; Fig. 4, a side view of the shell-ejector; Fig. 5, an end view of the same; Fig. 6, a cross-section through the line *xx* in Fig. 3; Fig. 7, a longitudinal sectional view of the hammer; Figs. 8, 9, and 10, details of the rear sight, and Figs. 11 and 12 detail views of the front sight.

A is the barrel of the gun, and B the stock. The barrel is rigidly secured to the stock by the bolts *a a* and by being clamped between the lock-plates, one of which, *a'*, is shown in Figs. 1 and 2, the near one being removed to expose the lock.

C is the hammer, which is mounted between the lock-plates upon the stud *c*, secured to or cast upon the plate *a'*.

D is the mainspring, which is provided with a friction-roller, *d*, where it comes in contact with the hammer.

E is the trigger, the pawl *e* of which catches in the detent *d'* in the hammer C.

e' is the trigger-spring, which forces it into the detent, and *e''* is an adjusting-screw by which the "pull" of the trigger may be adjusted to suit the taste of the party using the gun.

F is the breech-block, which is pivoted to the barrel at *f*.

G is a bell-crank pivoted in the block F, its longer end, *g*, extending downward and connected by a toggle, *g'*, to the guard-lever H, so that a downward motion of the guard-lever will cause the block F to descend, as shown in Fig. 2.

To the shorter end, *g''*, of the crank G is pivoted a pawl, *h*, which, as the guard H is lowered, engages in the detent *h'* in the hammer and cocks it.

I is the shell-ejector, which is pivoted to the barrel by the screw *i*, and held in its normal position by the spring *i'*.

K is a pin projecting from the side of the breech-block F, and held in this position by a spiral spring, *k*, which at the same time allows it to recede into the block F when pressure is brought to bear on its projecting end. In lowering the breech-block F this pin K strikes the incline *k'* on the shell-ejector I, and rides down until it reaches the end, when it slips off. This motion causes the upper end of the ejector to withdraw the shell, and as the pin K slips over the end of the incline *k'* the ejector is forced by the flat spring *i'* back to its normal position. This motion ejects the exploded shell clear of the barrel. After a loaded shell has been placed in the gun, in replacing the breech-block the end of the pin K strikes the beveled edge 3 of the ejector I. This causes the pin to recede into the channel in the breech-block until it has passed up above the incline *k'*, when the spring *k* causes it to project so as to strike the incline in its downward passage.

A lever, 4, is pivoted at 5, and its outer end, 6, is rounded to conform to the recess 7 in under side of the breech-block F, and a dog, 8, is secured to the trigger-guard H. The object of this dog is to force the lever 4 into the recess 7 in the breech-block and lock it there when the guard is in its normal position against the stock. These devices rigidly secure the breech-block in position when the gun is in po-

sition for firing, and it is impossible for the block to be moved until the guard has been lowered. By means of the set-screw 9 the dog 8 may be adjusted, should occasion require it.

10 is a collar or sleeve held in place in the breech-block F by the set-screw 11, which allows it a little end motion.

12 is a teat on the sleeve, and in the case of "rim-firing" shells the sleeve is struck by the hammer, which causes the teat to strike the rim of the shell and explode it.

13 is a central firing-pin, and is mounted in the sleeve 10, and held there by the collar 14, as the shoulder 15 prevents the pin 13 from coming out.

In the hammer C is a collar, 16, which secures the pin 17 in place, the shoulder allowing end-play and preventing it from coming out.

18 is a thumb-screw fitting tightly into the hammer C. The lower portion of this screw is provided with a recess, 19, which is in a radial line with the pin 17, so that when the recess and the pin are in line the pin will extend into the recess. If, however, the screw 18 is given a quarter of a turn, the recess 19 is thrown out of line with the pin 17, so that the pin does not enter the recess. It will thus be seen that if "rim-fire" shells are used the screw 18 is turned so that the recess 19 is in line with the pin 17. This prevents the pin 17 from coming in contact with the pin 13 in the breech-block; but at the same time the face of the hammer strikes the sleeve 10, which causes the teat 12 to impinge on the rim of the cartridge and explode it. In the operation of firing the rim-shells the pins 13 and 17 perform no part or function. If, on the contrary, it is desirable to use central-firing shells, the screw 18 is turned so as to throw the recess 19 out of line with the pin 17. This prevents the pin from receding and holds it rigid. In this condition it strikes the central pin, 13, in the block F, which comes in contact with the cap on the central-fire cartridge and explodes it, and during the operation of these pins the sleeve 10 and teat 12 are inoperative and play no part. It will thus be seen that by simply turning the screw 18 the arm is readily adapted to the use of either rim or center firing shells.

When the gun is cocked and ready for firing in the descent of the hammer the portion 20 passes under the concave part 21 of the breech-block; but if the block is moved a trifle down it prevents the portion 20 from passing. Therefore it is impossible for the hammer to fall, unless the breech-block is in its normal position; and, further, when the breech is open the pawl *h* is in contact with the detent *h'* of the hammer C, which would prevent it from falling, so that it is impossible to explode the charge in the gun by accident, carelessness, or otherwise during the act of loading.

The rear sight consists of two hollow standards, 22 and 23. The standard 22 is provided

with a thumb-screw, 24, which engages with the lower sight, 25, so that by turning the screw the sight may be raised or lowered, and the standard 23 has a similar screw, 26, which engages with a yoke, 27, from which is suspended the upper sight or pendulum, 28, so that by turning the screw 26 the sight-pendulum 28 may be raised or lowered in a manner similar to and to correspond to the adjustment of the lower sight, 25. It will thus be seen that this rear sight adjusts the gun for range or distance shooting, and by the position of the pendulum it can readily be determined when the gun is in the proper position for firing.

The front sight consists of a barrel, 29, through which passes a screw, 30, by means of which the sight 31 may be adjusted to the right or left to compensate for the wind or the peculiar shooting of the gun itself. Should it have a tendency to carry to the right or left, the barrel 29 is provided with two sight-guards, 32 and 33, which assist the eye when observing the sight 31.

I do not herein claim the sight mechanism, as that will be the subject-matter of a separate application.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the pivoted breech-block, of the crank-lever G, pivoted in the breech-block, the guard-lever H, and toggle *g'*, connecting the two said levers, the pawl *h*, pivoted to the free end of the lever G, and the hammer C, the parts being arranged substantially as shown, whereby the breech is opened and the hammer cocked by a single movement of the guard-lever.

2. The pivoted extractor I, arranged under the rear end of the barrel, and the swinging breech-block F, pivoted forward of the extractor, and provided with a spring-pin projecting from its side in such relation to the extractor as to engage the incline *h'* of the latter in opening the breech and extract the shell, and constructed, as described, to pass the end of the extractor in closing the breech, as set forth.

3. The breech-block F, pivoted under the barrel at *f*, and provided on its under side with the recess 7, the lever 4, pivoted in the frame below the breech-block, and the guard-lever H, provided with the adjustable dog 8, arranged to engage the free end of the lever 4 and press the same against the breech-block to tightly close the breech, as set forth.

4. The sleeve 10, provided with firing-pin 12 for rim-fire shells, arranged in a recess in the breech so as to have longitudinal movement therein, and a firing-pin, 13, for center-fire shells, arranged in the sleeve and to move therewith or independently, in combination with the hammer, as set forth.

5. The hammer C, provided with a rigid fir-

ing-nose, and with a sliding pin in its front face
and a screw, 18, in the top, said screw having
a recess in its side for the reception of the end
of the sliding pin, whereby the pin is adjusted,
5 in combination with a double firing-pin ar-
ranged as shown, so that either rim or central
fire shells may be used at the will of the op-
erator.

In testimony whereof I affix my signature in
presence of two witnesses.

PETER A. ALTMAIER

Witnesses:

EUGENE SNYDER,
SAMUEL A. HUMMEL.