W. R. PAPE.

Breech-Loading Fire-Arm.

No 70,463. Patented Nov. 5, 1867.

Fig: 1.

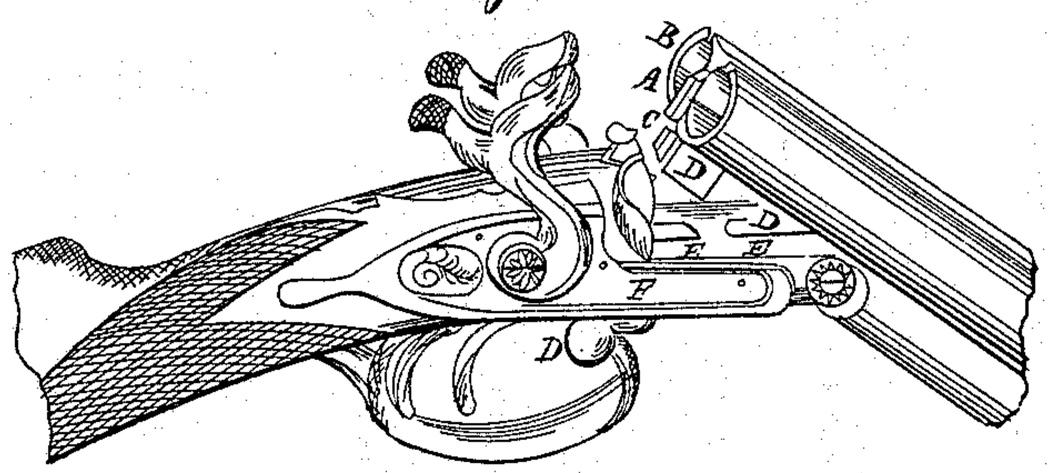
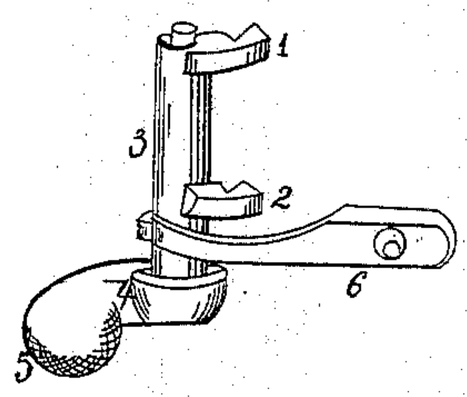


Fig: 2.



Witnesses { Wm Read
Jos Lemp }

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United States Patent Office.

WILLIAM R. PAPE, OF NEWCASTLE-ON-TYNE, GREAT BRITAIN.

Letters Patent No. 70,463, *dated November* 5, 1867; *patented in England, May* 29, 1866.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM IT MAY CONCERN:

Be it known that I, WILLIAM ROCHESTER PAPE, of Newcastle-on-Tyne, county of Northumberland, in the Kingdom of Great Britain, gun manufacturer, have invented a new and useful Improvement in the Manufacture and Construction of Breech-Loading and other Rifles and Guns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 of which is a gun open for loading, arranged according to my invention, and

Figure 2 an amplified view of the said mechanism for opening and closing the gun.

In fig. 1, A is the bar of steel between and below the barrels; B and C are slots in the said steel centre-bar, and D is the thumb-piece lever. In fig. 2, No. 1 is the upper latch or wedge-bolt, No. 2 the under wedge, No. 3 the centre-pin or spindle, No. 4 the lever, and No. 5 the thumb-piece.

In order that the said invention may be more fully understood, I shall now proceed more particularly to describe the same, and for that purpose I shall refer to the several figures on the sheet of drawings hereunto annexed.

This invention relates to certain improvements in that class of breech-loading rifles and guns known as depressing-barrelled guns, in which the Lefaucheaux cartridge is used, wheraby a rapid means of unlocking the barrels from the body is afforded, and whereby the gun or rifle becomes self-locking when the barrels are restored to their position ready for discharge.

The barrels are formed with open or through-and-through bored breeches, which close flush upon the face of the body F, when the barrels are locked. The barrels and fore part of the stock are hinged or pivoted to the extremity of the body, in order to permit of their depression and elevation for the purpose of withdrawing the discharged cartridge-case and inserting a new cartridge.

Underneath the breech-end of the barrel A, two "lumps" D D are formed, the rear surfaces being of an oblique or curvilinear outline, so as to fit into corresponding cavities E E cut in the body F, thereby causing the recoil to be sustained by these parts instead of straining the hinge or pivot, or creating recoil or pressure on the face of the body.

I cause the locking and unlocking of the barrels from the body by the following means: I cut out a space from the under surface of the body, just in front of the trigger-guard, such cavity or space extending vertically nearly through the centre of the body, but leaving the face of the body flush. In this cavity a pin on spindle, No. 3, fig. 2, is set, which carries two curvilinear or bevelled catches, or wedge-bolts, Nos. 1 and 2, fig. 2, the borders of which protrude from the spindle through the face of the body, two small apertures being cut in the face for the purpose.

The upper catch, No. 1, fig. 2, enters a corresponding cavity or recess, B, cut in the upper part of the solid metal between the barrels, but the lower catch, No. 2, fig. 2, is placed in such a position as to enter a cavity cut just under the rear of the breech, and in the rear lump which has a curvilinear outline. On face of the barrel exists a horizontal bar of steel, A, fitting into face of false breech, for preventing any shaking to right or left, and affording a large bearing surface for bites of upper and lower wedges 1 2.

The lower portion of the shaft or spindle No. 3, fig. 2, (contained in that part of the body level with the main-spring of the lock,) is provided with a short lever, No. 4, fig. 2, projecting horizontally therefrom. On the edge of this lever No. 4, fig. 2, a flat spring, No. 6, fig. 2, always bears, for the purpose of maintaining the pin or spindle in such position that the catches Nos. 1 and 2, fig. 2, shall always protrude from the body, unless forced back for the purpose of closing and unlocking the barrels, as hereafter mentioned. The flat spring No. 6, fig. 2, is set so far in the interior of the body as to leave room for the insertion of the lock-plate and main-spring. It is secured by a screw penetrating the fore part of the body.

The lowermost or exposed portion of the spindle No. 3, fig. 2, is furnished with a short thumb-piece, D, fig. 1, and No. 5, fig. 2, keyed thereon, and extending to the side of the body on the right and front of the trigger-guard.

Now the action of these arrangments is as follows: Assuming the barrels to be closed down, they will necessarily be also locked by the entrance of the two catches Nos. 1 and 2, fig. 2, into the cavities of the false breech or face of the body F. When it is desired to depress the barrels, the thumb-lever No. 5, fig. 2, and D,

fig. 1, is pushed forward, causing the spindle No. 3, fig. 2, to turn, (in a contrary direction,) carrying with it, in a circular or sweeping motion, the two catches or wedge-bolts Nos. 1 and 2, fig. 2, which retreat into the body and allow the breech to be raised by the weight of the barrels, in order to withdraw the empty cartridge if the piece has been previously discharged, or to insert a cartridge.

Then by closing down the breech, the rear curvilinear lump acts first upon the bevel face of the lower catch No. 2, fig. 2, forcing it back with the spindle No. 3, fig. 2, which turns and simultaneously carries back the upper catch, No. 1, fig. 2, until the cavities in the lump and upper part of the breech, and the steel centre-bar, come in front of those in the body, when the spring No. 6, fig 2, instantly drives the spindle No. 3, fig. 2, round, and the catches Nos. 1 and 2, fig. 2, fly into the cavities in the breech, and thus self-lock the barrels by the combined spring-snap, No. 6, fig. 2, and lever action No. 4, fig. 2.

It will be observed that by means of this arrangement the barrels are firmly fastened down on the body F, independently of the lock-frame, and that extra binding or locking power is free to be applied to the lever 4 and the spindle 3 after the gun is locked, in order to drive the catches or wedge-bolts further into the cavities B C of the breech. And further, if the bearing surface of the bites or cavities B C become worn, the wear thereof is supplied by the wedge-bolts revolving and entering further into the bites, and replacing or supplying such wear.

This invention is applicable to single-barrelled as well as to double-barrelled guns, and I have in this example shown it applied to one of the latter class.

Having now described the nature of the said improvements, and the manner in which the same are or may be used or carried into effect, I would have it understood that I do not confine myself to the precise details above enumerated, as these may obviously be modified without departing from the principle of the invention according to the special construction and intended applications of the fire-arms in which they are adopted; but what I claim is—

The vertical rotating spindle, carrying bevelled catches 1 and 2, and spring 6, operating in combination with the lumps D and horizontal slots B and C in the rear of the breech, substantially as and for the purposes specified.

W. R. PAPE.

Witnesses:

W. A. Reid,

Jos. Cleugh.