2 Sheets—Sheet 1.

A. HENRY & D. FRASER.

Fire Arm.

No. 201,524. **Patented March 19, 1878.**

FIG. 1

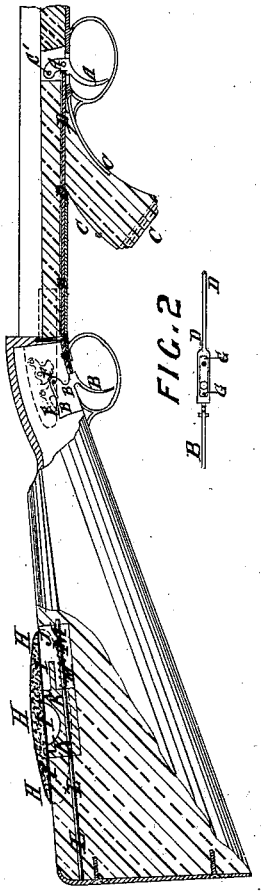
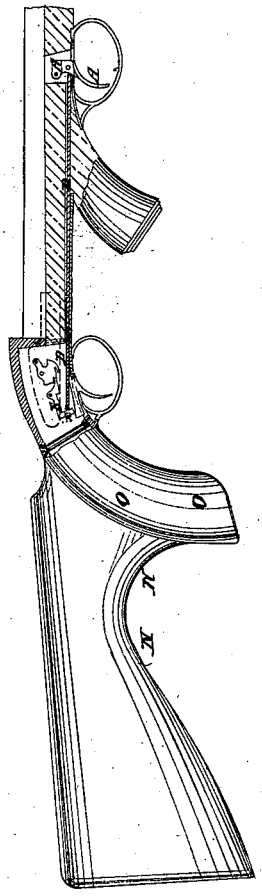


FIG. 2

FIG. 3



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2 Sheets—Sheet 2.

A. HENRY & D. FRASER.

Fire Arm.

No. 201,524. Patented March 19, 1878.

FIG. 3

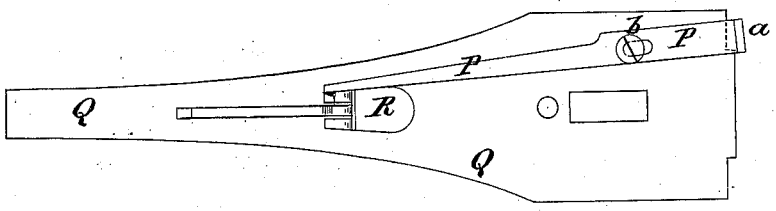


FIG. 2

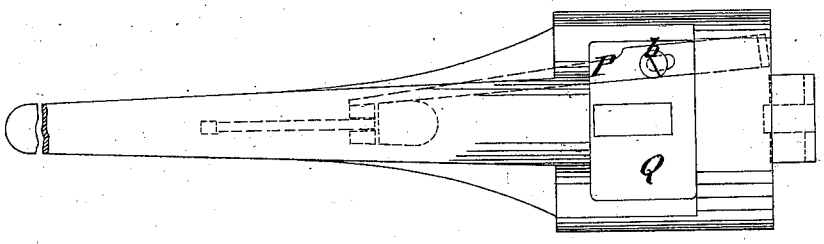


FIG. 1

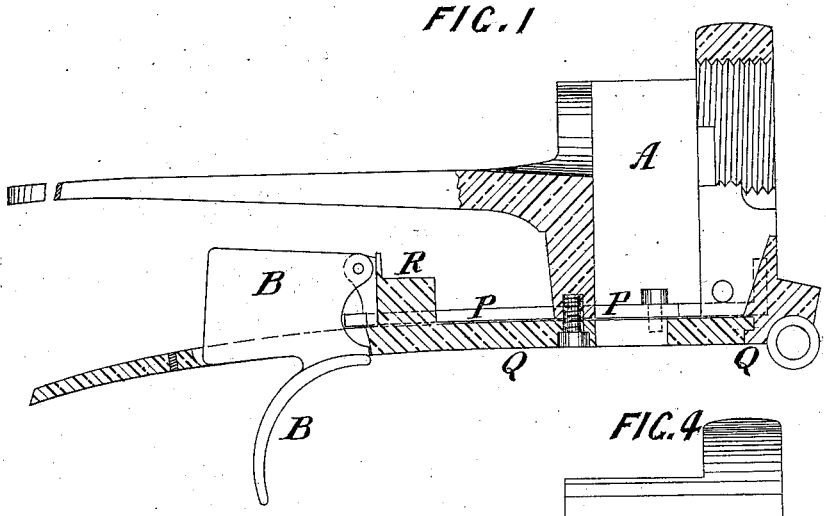


FIG. 5

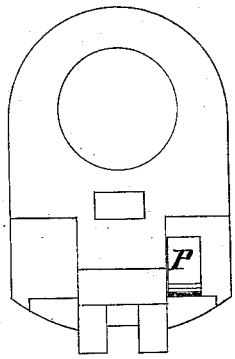
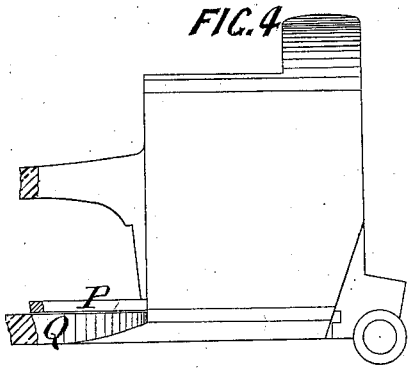


FIG. 4



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UNITED STATES PATENT OFFICE.

ALEXANDER HENRY AND DANIEL FRASER, OF EDINBURGH, NORTH BRITAIN; SAID FRASER ASSIGNOR TO SAID HENRY.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. **201,524,** dated March 19, 1878; application filed August 15, 1877.

To all whom it may concern:

Be it known that we, ALEXANDER HENRY, gun and rifle manufacturer, and DANIEL FRASER, both of Edinburgh, in the county of Mid-Lothian, North Britain, have invented Improvements in Fire-Arms, of which the following is a specification:

Our said invention, which relates to certain improvements in fire-arms, is applicable both to those which are muzzle-loading and to breech-loading arms; and it has reference more especially to such fire-arms as are used in rifle matches or competitions, and which are fired from the back position.

The first part of the improvements consists in providing the fire-arm with a second trigger some distance in advance of the ordinary trigger, and in forming the stock at the part where the second trigger is situated with a pistol grip or handle, or the equivalent thereof, for enabling the fire-arm to be conveniently held when the person using it is lying in the back position. In that portion of the stock which is situated between the second trigger and the lock or action of the fire-arm a long slot or groove is cut, in which a sliding rod or bar is situated. This rod or bar is so arranged that when the second trigger is pulled or moved but very slightly the rod or bar is correspondingly moved backward, and either acts directly upon the ordinary trigger or upon the sear, (in either case so as to lift the sear out of the bent or notch of the tumbler,) and, thereby releasing the tumbler, causes the arm to be discharged.

Another part of the improvements consists in forming the butt or large portion of the stock with a deep hollow cut up into it from the under side, and with a long pistol grip or handle projecting below, thus forming an ample rest for the fire-arm against the shoulder of the person using it when in the back position.

Another improvement consists in adapting to the upper part of the butt-end of the stock a sliding pad, the object of which is that, coming into contact as it does with the cheek of the person using the fire-arm at the instant of firing, any abrasion of the flesh, due to the recoil, is prevented.

On Sheet 1 of the drawings are shown the arrangements for applying our invention to muzzle-loading fire-arms, and on Sheet 2 the arrangement for applying the same to fire-arms fitted with the breech-loading action of the said ALEXANDER HENRY.

Figure 1, Sheet 1, of the appended drawings is a part section and a part side elevation of the butt-end or stock of a muzzle-loading fire-arm fitted with a second trigger, A, some distance in advance of the ordinary trigger B; and that part of the stock in the neighborhood of which the second trigger A is situated is formed with what is known as a "pistol grip or handle," C, which enables the fire-arm to be conveniently held when the person using it is lying in the back position. The second trigger A is suspended from and movable on a pin, C′, and between the two triggers A and B the stock has formed in it a long slot, through which a long rod, D, capable of sliding therein, is passed. The sliding bolt D is of such a length that its ends bear upon or touch the respective triggers A and B, so that, as the trigger A is pulled by the person using the fire-arm when in the back position, that pull is communicated by the long rod D to the ordinary trigger B, which is thereby moved or lifted on its axis or pivot, just as if it had been directly pulled by the hand in the ordinary manner, and, in being so operated, it lifts the sear E out of the bent or notch in the tumbler F, which, being thereby released, causes the discharge of the fire-arm.

In order to enable the rod D to pass freely over or around the screws or pins by which the action and trigger-guard are secured to the stock of the fire-arm, its after part is formed with a long slot therein, as shown in plan in the detailed view, Fig. 2, Sheet 1, in which the slot is marked G.

That part of the invention for preventing the abrasion of the cheek of the person using the fire-arm is also shown at Fig. 1, Sheet 1, of the appended drawings. It consists in the sliding pad H, fitted to the upper part of the stock. This pad may be covered with leather, cloth, or other equivalent smooth or soft material; and its under part consists of a thin metallic plate, I, onto which the pad or cushion of soft material is fastened, this

plate I being shaped so as to correspond with and slide freely upon the upper side of the butt. In this upper side of the butt a deep slot, J, is cut, for the purpose of receiving the block K, to which the pad and plate H and I are fastened by screws, as shown at Fig. 1, Sheet 1.

The sliding block K is kept in its place by a long pin or bolt, L, driven longitudinally into the stock, as shown at Fig. 1, Sheet 1; and over the forward end of this pin or bolt L a spiral spring, M, is placed, which, being compressed between one end of the block K and the forward end of the slot J, presses the block K and pad H into their rearmost position, so that the pad H may rest quietly, or with but little motion, against or upon the cheek of the person using the fire-arm, while the arm itself recoils at the instant of firing, and thus the abrasion of the cheek or flesh of the person using the arm, which would be otherwise caused by the bare and rigid surface of the stock being suddenly rubbed against the cheek by the recoil due to the discharge of the weapon, is prevented.

At Fig. 3, Sheet 1, of the appended drawings the butt or large end of the stock is shown as formed with a deep hollow, N, cut up into it from the under side, so as to form a long pistol grip or handle, O, this arrangement admitting of an ample rest for the fire-arm against or upon the shoulder of the person using it when in the back position. The sliding pad H and its connections (shown at Fig. 1, Sheet 1) may also be applied to a stock constructed as shown on Fig. 3, Sheet 1.

At Fig. 3, Sheet 1, the long sliding rod D, in place of being made to bear directly upon the trigger, is shown as bearing upon the sear E, which is formed with a tail-piece, *x*, for that purpose.

At Sheet 2 of the appended drawings are shown such parts of the said ALEXANDER HENRY'S breech-action—namely, that wherein a sliding breech-piece is used—as are necessary to illustrate the application of our arrangement for firing from the back position. Of these figures, Fig. 1 is a longitudinal section of that portion of the breech-loading arrangement in which the breech-cavity A is situated, and to which the lock or firing parts of the arrangement are attached, which, with the exception of the trigger B, are not shown in the drawings, it being unnecessary for the purpose of illustrating the application thereto of our present improvements to there show them.

Fig. 2 is a plan corresponding to Fig. 1; Fig. 3, a plan of the under trigger-plate; Fig. 4, a side elevation of the breech-cavity; and Fig. 5, an elevation of the face of the breech-cavity, showing the application of our present improvements.

The forward end of the stock, to which the breech-loading arrangement illustrated on Sheet 2 of the appended drawings is applied, is fitted with a second trigger and long rod, after the manner of those hereinbefore described, with reference to Sheet 1 of the drawings, and this rod acts upon the head *a* of a second sliding bar, P, carried in the lower part of the breech-action on the bottom plate Q, to which it is held by a screw, *b*, which passes through a slot therein of sufficient length to allow of the bar P being moved sufficiently to operate the trigger B, for lifting the sear out of the bent or notch of the tumbler. In the muzzle-loader the same arrangement may be applied—viz., the rod in the fore end acting on a separate bar on the trigger-plate.

At its after part the bar P is enlarged and formed somewhat fork-like, as shown at the several figures on Sheet 2, this larger portion passing to some extent beneath the projecting bracket or trigger-box R, to which the trigger B is attached, which arrangement also affords additional security for keeping the bar P in its proper position.

With the arrangement hereinbefore described, in place of using the second trigger A, its equivalent, such as a thumb or finger piece, acting after the manner of a wedge or lever upon the sliding bolt or rod D, may be substituted, and the rod may be arranged either to pull or push the trigger.

The foregoing improvements are applicable both to new fire-arms and for converting old arms.

Having thus described our invention, the following is what we claim as new, and desire to secure by Letters Patent:

1. In a fire-arm, the combination of two triggers, arranged one in advance of the other, and connected by a suitable rod or coupling, by which the arm is adapted to be fired by pressing either trigger, as and for the purpose set forth.

2. A rear stock for fire-arms, provided with a cut or recess, N, in its under side, to fit over the shoulder of the operator, by which the front trigger is placed within reach of the hand, as and for the purpose set forth.

3. The combination of the pad H, sliding block K, bolt L, and a suitable spring, as and for the purpose set forth.

In witness whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ALEX. HENRY.
D. FRASER.

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