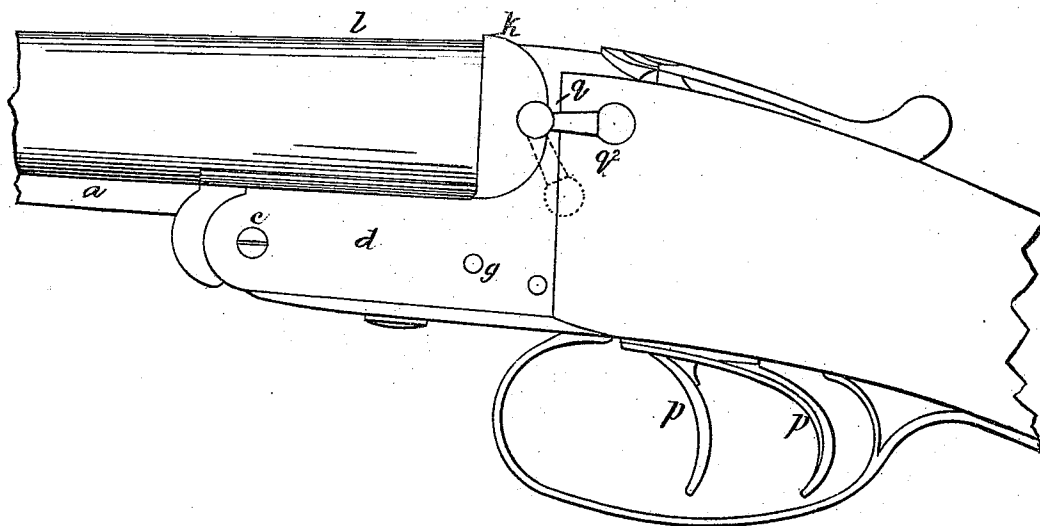
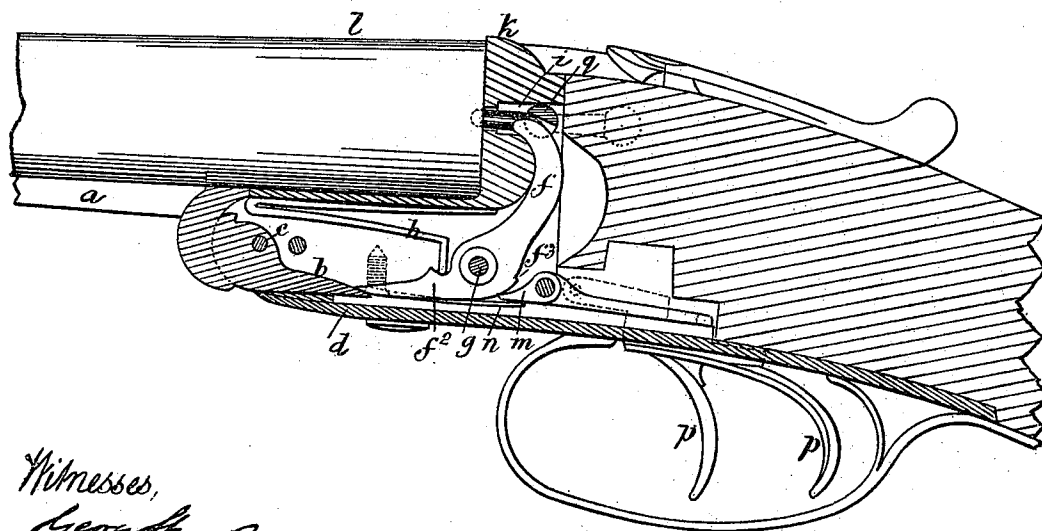


F I G I



F I G II



Witnesses,
George Shaw
Richard Everett

Inventors
William Anson,
John Deeley

W. ANSON & J. DEELEY.
BREECH-LOADING FIRE-ARM.

No. 172,943.

Patented Feb. 1, 1876.

FIG III

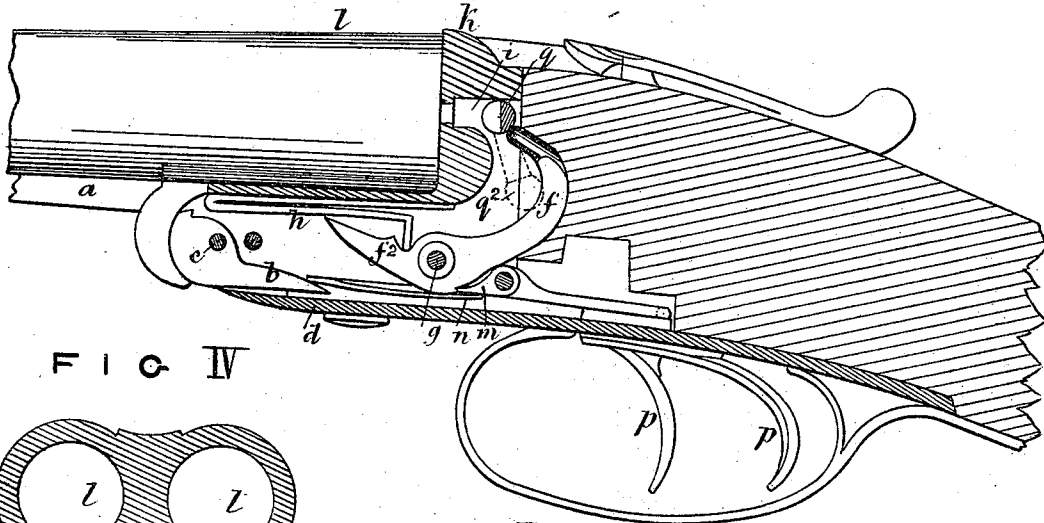


FIG IV

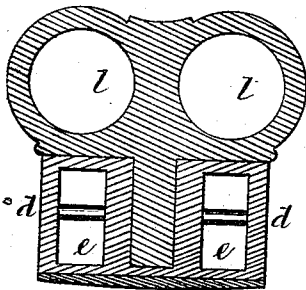


FIG IV A

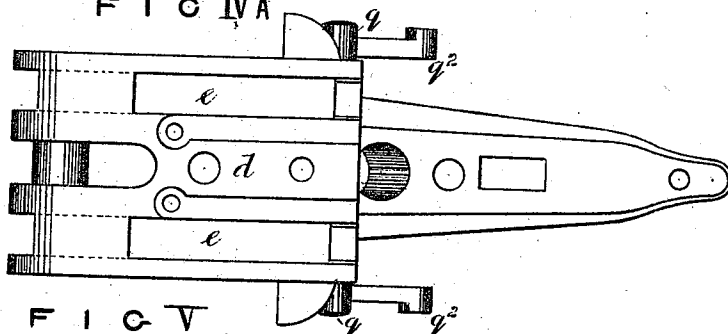
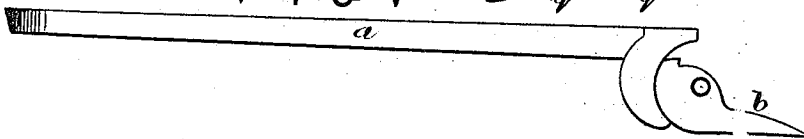


FIG V



Witnesses,
George Shaw
Richard Kerrett

Inventors
William Anson.
John Deeley

W. ANSON & J. DEELEY.
BREECH-LOADING FIRE-ARM.

No. 172,943.

Patented Feb. 1, 1876.

FIG VIA

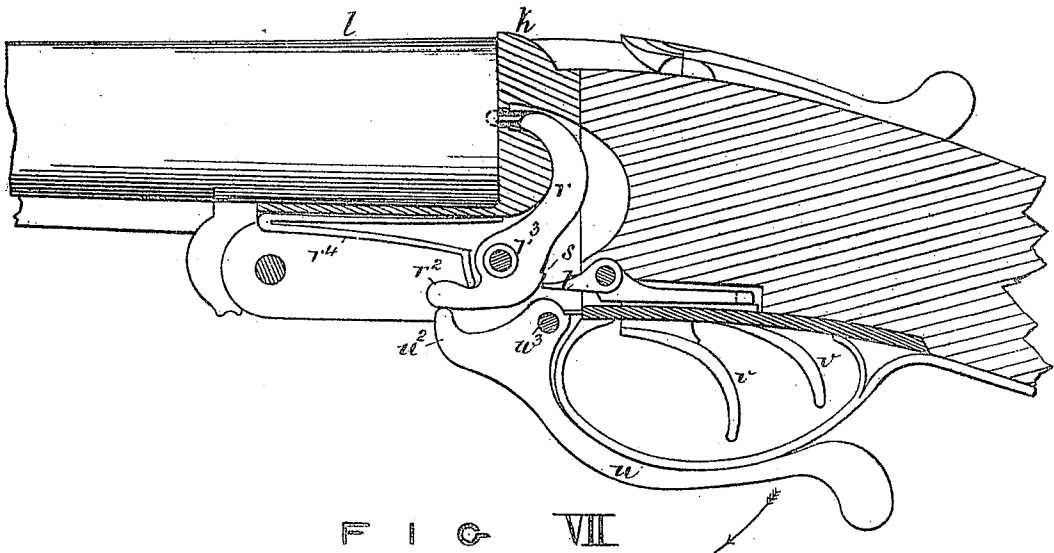
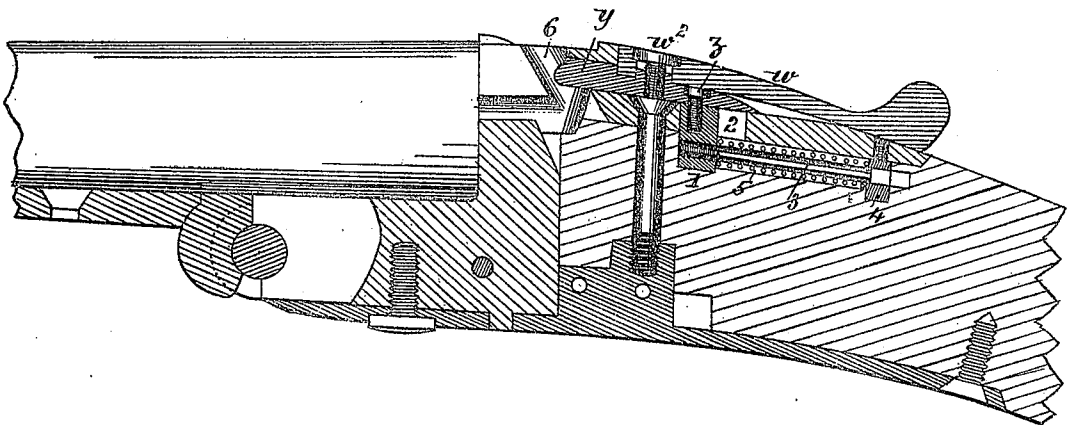


FIG VII



Witnesses,
George Shaw
Richard Bennett

Inventors
William Anson
John Deeley

W. ANSON & J. DEELEY.
BREECH-LOADING FIRE-ARM.

No. 172,943.

Patented Feb. 1, 1876.

FIG VIII

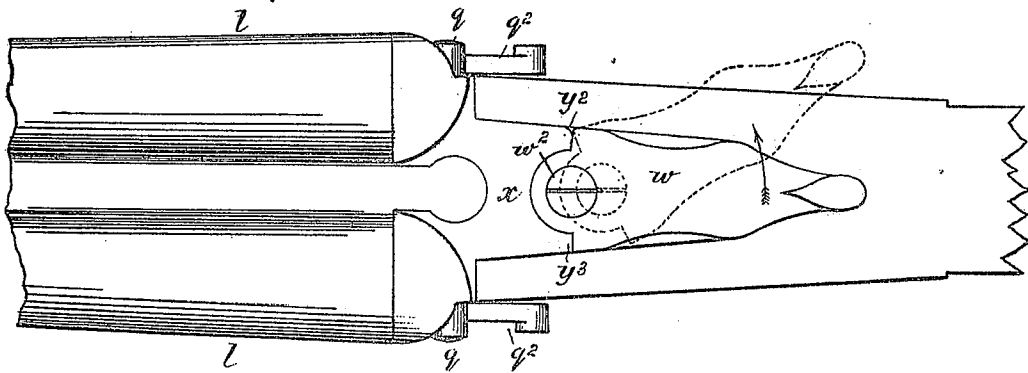


FIG IX

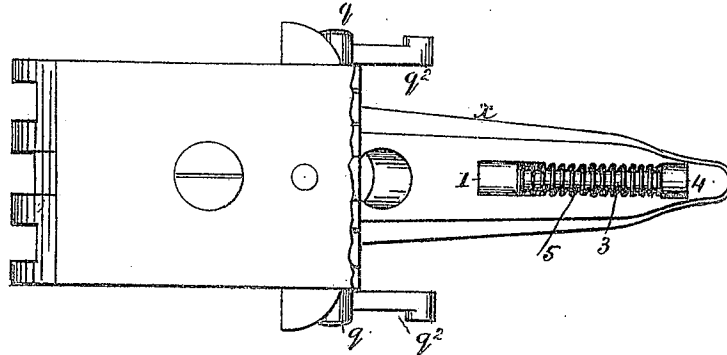
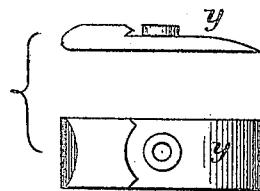


FIG X



Witnesses,
George Shaw
Richard Bennett

Inventors
William Anson
John Deeley

UNITED STATES PATENT OFFICE.

WILLIAM ANSON AND JOHN DEELEY, OF BIRMINGHAM, ENGLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 172,943, dated February 1, 1876; application filed December 16, 1875.

To all whom it may concern:

Be it known that we, WILLIAM ANSON, of Birmingham, in the county of Warwick, England, gun-maker, and JOHN DEELEY, of Birmingham, aforesaid, gun-maker, have invented Improvements in Breech-Loading Small-Arms, of which the following is a specification:

Our invention has reference to breech-loading small-arms of the kind commonly called drop-down guns and pistols—that is, breech-loading guns and pistols in which the barrels turn upon a joint, the open breech ends being raised from the break-off for charging, and shut down and fastened against the break-off during discharge.

Our improvements consist, first, of the following construction and arrangement of parts of the lock mechanism, whereby the cocking of the arm is effected by the raising of the breech ends of the barrels for charging. The fore end of the arm is prolonged backward beyond the joint on which the barrels turn, the prolonged part entering into and working in a groove in the body of the arm. The fore end thus constitutes the long arm of a lever, and the part of the said fore end prolonged backward the short arm of the same lever, the ordinary joint of the fore end constituting the fulcrum of the said lever. The hammer or striker consists of a lever situated for the most part within the groove in which the short arm of the fore-end lever works, the end of the short arm of the fore-end lever bearing against the under side of the end of the hammer or striker lever within the groove described. The other end of the hammer or striker lever projects out of the body of the arm, and is turned upward at the back of the break-off into a nearly semicircular form, its end entering into and working in a hole in the said break-off in a line with the axis of the barrel, when the said barrel is shut down for firing. The said hammer or striker lever is provided with a mainspring, and a sear is pressed by a sear-spring against the under side of the said hammer or striker lever, and takes into a bent in the said hammer or striker lever when the latter has been brought into a cocked position.

The action of the parts is as follows: When, on raising the breech end of the barrels, the

fore end is depressed its short arm rises and lifts the end of the hammer or striker lever bearing upon it. The other or striking end of the said hammer or striker lever is thereby drawn back, the sear taking into the bent described, and thereby retaining the hammer in its cocked position on the shutting down of the barrels for firing. The pressure of the finger on the trigger releases the sear from the bent in the hammer-lever in the usual manner, and the hammer by the action of the mainspring discharges the gun or pistol. Instead of making the end of the hammer-lever strike directly on the primer of the cartridge, it may drive forward a loose striker sliding in a hole in the break-off. Our improvements consist, secondly, in the following arrangement of the lever mechanism situated on the tang of the break-off, for locking down and unlocking the barrels. We simplify and improve the said mechanism in the following manner: The head of the lever is jointed at one side to the tang of the break-off, a short link being jointed to the middle and under side of the head of the said lever. The other end of the link carries a pin, which passes through and travels in a slot in the tang of the break-off. This pin is connected with a rod parallel with the slot, and capable of a sliding motion, its rear end working through a fixed bearing. By means of a coiled spring the sliding rod is pressed toward the face of the break-off, tending to bring the lever to its normal or locking position. On pressing the thumb-plate of the lever aside the unlocking of the barrels is effected, and on shutting down the barrels their locking is effected by a snapping action.

Our improvements are applicable to double and single barrel drop-down guns and pistols.

We will now proceed to describe, with reference to the accompanying drawings, the manner in which our invention may be performed.

Figure 1 represents, in side elevation, and Fig. 2 in longitudinal vertical section, a double-barrel breech-loading drop-down gun containing cocking mechanism constructed according to our invention, the hammer or striker lever being represented in its discharged position. Fig. 3 represents the said mechanism with the

hammer or striker lever in its cocked position, ready for firing. Fig. 4 represents, in cross-section, and Fig. 4^A in plan of under side, the body of the gun without the fore-end lever. Fig. 5 represents, in side elevation, and Fig. 6 in plan, the fore-end lever detached. Fig. 7 represents, in longitudinal section, and Fig. 8 in plan, our arrangement of lever mechanism for locking and unlocking the barrels. Fig. 9 is a plan of the under side of the body; and Fig. 10 represents the bolt separately.

The same letters of reference indicate the same parts.

We will first describe the cocking mechanism represented in Figs. 1, 2, 3, 4, 4^A, 5, and 6.

$a\ b\ b$ is the fore-end lever, turning on the joint c , the ordinary fore end, marked a , constituting the long arm of the lever, and each of the parts $b\ b$, which are prolonged backward beyond the joint c , constituting the short arm of the same lever. The head of the fore-end lever $a\ b\ b$ bears against the joint end of the body d in the ordinary way, the cross-pin e , forming the fulcrum of the said fore-end lever, passing through the sides of the body d , and also through the short arms $b\ b$. The said short arms $b\ b$ of the fore-end lever work in the channels or grooves e in the body d . (See the plan and cross-section, Figs. 4 and 4^A.) The tail end of each of the short arms $b\ b$ is inclined, as represented. $f\ f^2$ is one of the hammer or striker levers of a gun, a hammer or striker lever being situated opposite each of the arms $b\ b$, by which it is operated. The said hammer or striker levers turn on the center g , and their short arms f^2 are pressed upon by the mainspring h . The hammer or strikers levers $f\ f^2$ are situated for the most part in the channels or grooves $e\ e$ in the body in which the short arms $b\ b$ of the fore-end levers work, the end of each of the short arms $b\ b$ of the fore-end levers bearing against the under side of the respective arms f^2 of the hammer or striker levers $f\ f^2$. (See Figs. 2 and 3.) The other end of the hammer or striker lever projects out of the body of the gun, and has a nearly semicircular form, its nose or striking end working in a hole, i , in the break-off k in a line with the axis of the barrel l , when in its depressed position. In each of the hammer or striker levers $f\ f^2$ is a bent, f^3 , with which a sear, m , engages, the said sear being pressed down by a spring, n .

When the gun has been discharged the parts of the cocking mechanism occupy the respective positions represented in Figs. 1 and 2, the hammer or striker lever being represented in its released position, and its nose end having been projected by the action of the spring h through the break-off k , so as to strike upon the cartridge and discharge the gun. The barrels being unfastened, their breech ends rise and the fore end a is depressed. By the depression of the fore end a the short arms $b\ b$ of the fore-end lever turn upon the center c , and, their ends, acting against the under side of the ends of the arms $f^2\ f^2$ of the hammer

or striker levers bearing upon them, lift the said arms $f^2\ f^2$ and draw back the opposite or striking-arms $f\ f$ into the break-off, the sears m taking into the bents in the said hammer or striker levers, and retaining them in their cocked positions, as illustrated in Fig. 3. After the barrels have been charged and shut down, the acting arms $b\ b$ of the fore-end lever descend from the short arms f^2 of the hammer-levers $f\ f^2$, leaving the said hammer-levers ready for the next discharge of the gun, as illustrated in Fig. 3, the said hammer-levers being released and the gun discharged by pressure on the triggers $p\ p$ in the usual way.

For the purpose of holding the hammer or striker levers $f\ f^2$ in a position of safety when the gun is not required to be discharged, we combine with the gun a safety-bolt for each hammer-lever. The said safety-bolts are marked $g\ g$. Each of the said safety-bolts consists of a cylinder, working in the break-off k . The opening in which the said bolt g works crosses the striker-hole through which the nose of the striker-lever acts to discharge the gun. A portion of the bolt is cut away, so that when the bolt is turned in one position the striker-hole is closed, as represented in Fig. 3; but when turned at a right angle to that position the striker-hole is open, as represented in Fig. 2. The said bolt has at its end a small lever, g^2 , by which it can be turned, as hereinafter explained, the weight of which lever brings the bolt into the position, Fig. 3, in which it closes the striker-hole when the said bolt is at liberty to move.

The action of the safety-bolt is as follows:

On depressing the barrels to open the breech ends the short arm of the fore-end lever withdraws the hammer, and the safety-bolt being no longer supported by the said hammer the said bolt turns into the position in which it closes the striker-hole by the weight of the lever at its end. The gun is now in a position of safety, for, the striker-hole being closed, the hammer cannot reach the cartridge.

In order to discharge the gun the thumb or finger presses the said lever g^2 upward, when the changed position of the bolt brings its cut-away part opposite the nose of the hammer, which advances a short distance and engages with the sear, at the same time supporting the bolt in the position to which it has been brought. By pulling the trigger the gun may now be discharged.

The position of the safety-bolts is best seen in the gun represented in Figs. 4^A, 8, and 9.

When the hammer or striker levers $f\ f^2$ are used for actuating loose strikers, the nose ends of the said levers are shortened, the said loose strikers working in holes in the break-off, and being forced forward by the action of the nose ends of the said hammer-levers upon them.

We will now describe our arrangement of lever mechanism for locking down and unlocking the barrels represented in Figs. 7, 8, 9, and

10. w is the hand-lever on the tang x of the break-off, the said hand-lever being connected to the sliding bolt y by a screw-pin, w^2 , the head of the screw-pin w^2 being capable of rotatory motion in the hole in the said hand-lever. On the tang x are two cheeks, y^2 y^3 , against which the head of the hand-lever w bears. The cheek y^2 constitutes a fulcrum or bearing about which the hand-lever w turns when moved aside to withdraw the bolt, as indicated in dotted lines, and the cheek y^3 constitutes a stop. The front end of the sliding bolt y is connected by the screw z to a strong pin or bar, 1, sliding in the slot 2 in the tang of the break-off. This pin or bar 1 is connected with a sliding rod, 3, working through a fixed bearing, 4, on the under side of the tang. A coiled spring, 5, is situated around the said sliding rod 3, the said spring taking its abutment at one end against the fixed bearing 4 and at the other end against the pin or bar 1. By means of the said coiled spring the snapping action of the bolt y is effected and the hand-lever w returned to its normal position. On pressing the thumb-plate end of the hand-lever w in the direction of the arrow, Fig. 8, it turns on the fixed fulcrum at y^2 , and thereby withdraws the bolt y from the prolonged rib 6 between the barrels, and unfastens the said barrels, the hand-lever being carried with the said bolt. On the withdrawal of the bolt y the bar 1 slides in the slot 2 and the rod 3 in its bearing 4, and the coiled spring 5 is compressed. By loosing the hand-lever w the coiled spring 5 forces the bolt y toward the face of the break-off, and its front end snaps into the prolonged rib 6 and fastens down the barrels, the hand-lever w , at the same time, being returned to its normal position, as

shown in the drawing. The sliding bolt works in a channel or cut-away part in the tang of the break-off. Instead of connecting the hand-lever directly to the pin or bar 1, as represented, it may be connected by a link.

Having now described the nature of our invention, and the manner in which the same is to be performed, we wish it to be understood that we do not limit ourselves to the precise details herein described and illustrated, as the same may be varied without departing from the nature of our invention; but

We claim as our invention of improvements in breech-loading small-arms of the kind called drop-down guns and pistols—

1. In breech-loading small-arms, the combination, with the hammer or striker, of the fore end, formed with a prolonged part that constitutes the short arm of a lever, which, on the tilting of the barrels, acts upon and cocks the hammer, substantially as set forth.

2. In combination with the hammer or striker, the safety-bolt, arranged to be upheld by the hammer and to automatically drop to close the striker-hole when the hammer or striker is withdrawn, substantially as described.

3. In combination with the tang of the break-off, the described lever and locking mechanism, consisting of the sliding bolt, the pivoted lever, movable to either side to operate the bolt, and the coiled spring, connected together and arranged on the tang, as shown and set forth.

WILLIAM ANSON. [L. S.]
JOHN DEELEY. [L. S.]

Witnesses:

GEORGE SHAW,
RICHARD SKERRETT,
37 Temple Street, Birmingham.