

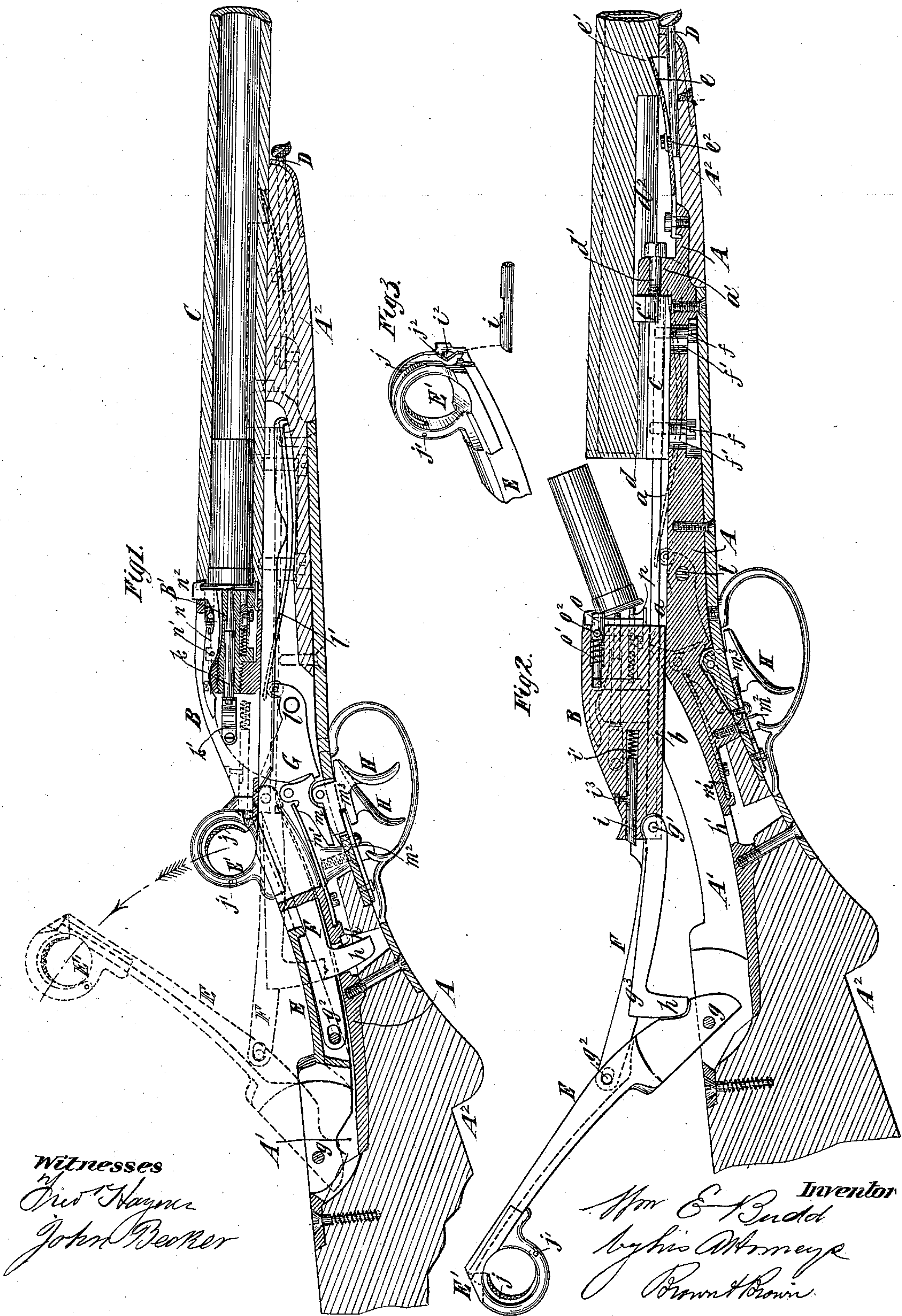
(No Model.)

2 Sheets—Sheet 1.

W. E. BUDD.
BREECH LOADING FIRE ARM.

No. 259,361.

Patented June 13, 1882.



Witnesses
Geo. Wagner
John Becker

Inventor
Wm. E. Budd
By his Attorneys
Brown & Brown

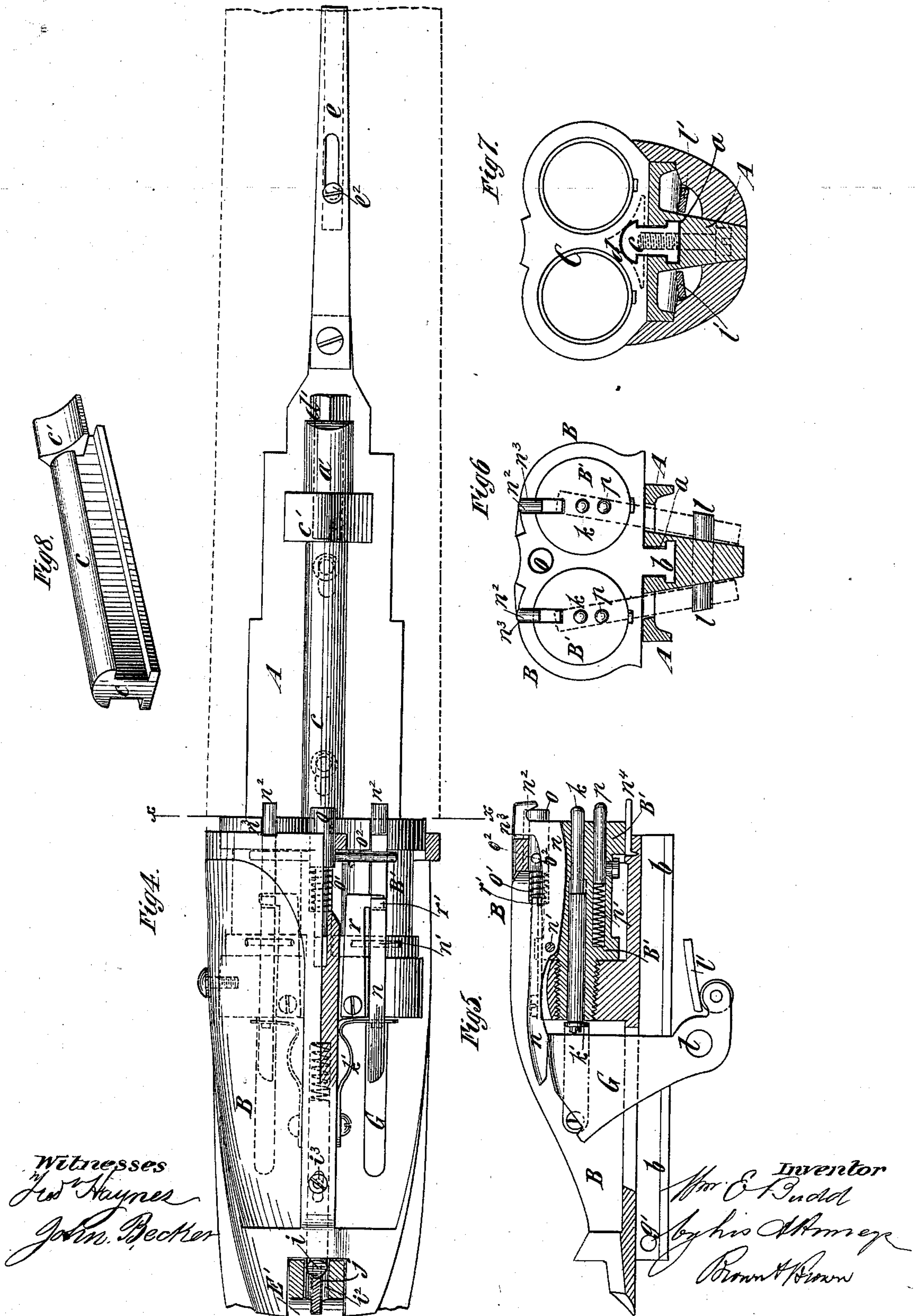
(No Model.)

2 Sheets—Sheet 2.

W. E. BUDD.
BREECH LOADING FIRE ARM.

No. 259,361.

Patented June 13, 1882.



UNITED STATES PATENT OFFICE.

WILLIAM E. BUDD, OF CHATHAM, ASSIGNOR OF ONE-HALF TO JAMES
BRYCE, JR., OF MADISON, NEW JERSEY.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 259,361, dated June 13, 1882.

Application filed June 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BUDD, of Chatham, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Breech-Loading Fire-Arms, of which the following is a specification.

My invention relates particularly to "hammerless" guns, or guns having concealed hammers, although certain features of the invention are applicable to guns generally.

The invention consists in a novel means of holding the barrel rigid upon the base plate or piece, so that it cannot get accidentally displaced, and yet may be readily detached, when necessary.

The invention also consists in various novel features of construction, hereinafter particularly described, in the devices for drawing back the breech-block to open the gun and for holding and locking it in its forward position to close the gun, whereby greater strength to resist the recoil produced by the discharge is secured, and the security of the fire-arm is increased.

The invention also consists in the combination, with a hammer, of a novel form of extractor which is acted upon by the hammer to grasp the flange of the shell, and which also serves as an indicator for telling whether the gun has or has not been fired.

In the accompanying drawings, which illustrate a double-barreled shotgun, Figure 1 represents a longitudinal section through the right barrel of the fire-arm and its appurtenances, showing the breech closed. Fig. 2 represents a similar section taken in a plane between the barrels, showing the breech open. Fig. 3 represents a perspective detail view, hereinafter described. Fig. 4 represents a plan, partly in section, with the barrels removed and upon a larger scale. Fig. 5 represents a section through the breech-piece, removed, and also a view of the hammer on the same scale as Fig. 4. Fig. 6 represents a transverse section on the dotted line *xx*, Fig. 4, and an end view of the breech-block. Fig. 7 represents a section upon the same line and an end view of the barrels, and Fig. 8

represents a perspective view of a removable tongue with which the base-piece of the fire-arm is provided.

Similar letters of reference designate corresponding parts in all the figures.

A designates a base-piece, the form of which is shown in Figs. 1, 4, 6, and 7, and which may consist of a malleable iron, steel, or other casting, and is ribbed to give it the required strength. The said base-piece, in its rear end, has a cavity, *A'*, which receives the devices for moving the breech-block, hereinafter described, and to said base-piece is attached the wooden stock *A*².

B designates the breech-block, and C the barrels; and I will now describe their attachment with the base piece or plate A. The said base piece or plate is flat upon its upper side, and is planed off perfectly true, and has formed in it a rabbeted groove, *a*, which extends from the cavity *A'* forward to an upwardly-projecting lug, *a'*. The breech-block B is flat upon the under side, and is provided with a rabbeted tongue, *b*, as best seen in Figs. 5 and 6, which fits in the rabbeted groove *a* in the base piece or plate and guides the breech-block in its forward and backward movements. The flat upper surface of the base piece or plate affords an ample bearing for the movable breech-block, and the rabbeted tongue and groove prevent all lateral or upward movement or displacement of the breech-block.

In the portion of the groove *a* in the base piece or plate A which is in front of the breech-block B, when in its forward position, is fitted a removable tongue, *c*, which is rabbeted upon the lower side to engage with the groove *a* and upon the upper side to engage with a rabbeted groove, *d*, in the under side of the barrels C, as seen in Figs. 2 and 7. The removable tongue *c* has at one end a head, *c'*, and when the tongue is inserted in the groove *a* in the base piece or plate A it is shoved forward until it strikes the lug *a'*, in which position it is secured by a screw, *d'*, inserted through said lug and entering the head *c'* of the tongue. When thus secured the tongue *c* is held perfectly rigid and constitutes in effect a part of

the base piece or plate A. The barrels C, forward of the rabbeted groove d , have a cavity or deeper groove, d^2 , which is of a size to receive the head c' of the tongue c and is of a length slightly greater than the length of said tongue. In placing the barrels in position their groove d is first made to engage with the tongue c , and they are then pushed forward until the end of the deeper groove, d^2 , strikes upon the head c' of the tongue c , which forms a solid shoulder to prevent forward movement of the barrels when fired. The barrels are held up against the head c' by means of a spring-catch, e , which is secured to the base piece or plate and is adapted to engage with a notch, e' , in the barrels, as seen in Fig. 2.

D designates a push-pin extending through the front of the stock below the barrel, and engaging with the spring-catch e by means of a screw, e^2 , which enters a slot in said catch, and hence it will be seen that by pushing the rod or pin D inward the catch e is made to engage with the notch e' , while by pulling it outward the said catch is disengaged from said notch and permits the barrels to be moved backward to release them from the removable tongue c . The tongue c may be adjusted longitudinally by the screw d' , inserted through the lug a' , and after being properly adjusted it may be rigidly secured by screws f , which are inserted through elongated holes or slots f' in the base piece or plate, which provide for adjusting said tongue as may be found necessary. The manner of holding the said tongue in place on the base piece or plate A is best seen in Fig. 2.

The devices for moving the breech-block B to open and close the breech of the barrels C consist of a lever, E, and a link, F, which, when the breech is closed, are both under cover of the cavity A' in the base piece or plate A, and are thereby protected. The lever E is pivoted at g in the base-piece A, and has at its other or free end a ring-shaped finger-piece, E', whereby it may be raised. The link F is pivoted at one end, at g' , to the breech-block B and at the other end, g^2 , to the lever E at some distance from its fulcrum. The under side of the lever E is recessed, and in said recess, between the sides thereof, is received the link F when the breech is closed and the link and lever are both closed down, as seen in Fig. 1. The lower portion of the link F is considerably greater in thickness than the upper portion, which fits in the recess in the lever E for the purpose of giving it additional strength and forming shoulders g^3 upon the sides thereof. Upon the link F is a downwardly-projecting horn, h , which, when the parts are adjusted to close the breech, as seen in Fig. 1, enters a hole, h' , provided for it in the bottom of the cavity A' in the base-piece A, and thus forms a strong and effective shoulder or stop for receiving all the recoil of the breech-block when the fire-arm is discharged, all the force of the recoil

being transmitted from the breech-block B through the link F and received by the horn h , bearing against the back end of the hole h' . By the formation of the horn h upon the link F the lever E, the lever-pivot g , and the pivotal connection g^2 between the said lever and link are all relieved of strain from the recoil of the breech-block. When the breech-block is to be drawn back to open the breech of the barrels the finger is inserted through the ring-shaped finger-piece E' and the lever E pulled up and outward in the direction of the arrow, Fig. 1. In order to prevent the accidental movement of the lever, however, I employ a bolt, i , which fits in a socket in the breech-block B, and is impelled outward by a spring, i' , as seen in Fig. 2, so as to protrude slightly from the rear of the breech-block B and into a hole, i^2 , in the end of the lever E, as shown in Fig. 3, thus preventing the raising of the lever until the bolt is pushed in. The outward movement of the bolt i is limited by a stop consisting of a screw, i^3 , inserted through the breech-block and entering a slot extending lengthwise of the bolt, as seen in Fig. 2.

The finger-piece E' is slotted at about the middle of its width, the slot intersecting the hole i^2 , and in said slot is fitted an arc-shaped or segmental plate or latch, j , which is pivoted at one end, j' , and is notched at the other end, j^2 , as seen in Fig. 3. When the lever E is down the notch j^2 is coincident with the hole i^2 , and therefore the outer end of the bolt i enters the said hole and holds the lever down. When the finger is inserted into the finger-piece E' to raise the lever E the plate or latch j is raised, and its notch j^2 , acting upon the end of the bolt i , pushes the bolt inward against the force of its spring i' sufficiently to disengage it from the hole i^2 , whereupon the lever E may be raised and the breech opened. When the lever E is pushed down the plate or latch j acts upon the taper or slanted outer end of the bolt i and pushes it inward, allowing the lever to be fully moved down, whereupon said bolt springs outward into the hole i^2 and locks the lever. Any other form of catch for holding the lever E down might be used with the other features of my fire-arm.

In the breech-block B are fitted movable firing-pins, k , which are inserted from the back end of the breech-block and are held in place by spring or elastic arms or fingers k' . (Best shown in Fig. 4, but also shown in Fig. 5.)

G designates the hammers, which are pivoted at l , and are acted upon by mainsprings l' in the usual way. H designates the triggers, and m the sears, which are impelled into engagement with the hammers by sear-springs m' to hold them cocked.

To hold the hammers against being accidentally pulled, I may employ a movable locking-plate, m^2 , (shown in Fig. 1,) which may be pushed forward to engage with notches m^3 in the back of the triggers; but I make no claim to such lock-

ing-plate or to the other lock mechanism. I will now describe the extractors and indicators, which are best shown in Figs. 4 and 5, but also in Fig. 1.

5 In the breech-block B are arranged two levers, n , which are pivoted or fulcrumed at n' and are adapted to vibrate or move slightly in vertical planes coincident with the centers of the bores of the barrels C. At the forward
10 or front end these levers n are provided with upwardly-projecting heads n^2 , which project through slots n^3 in the top of the breech-block, where they are in plain sight, as seen in Figs. 4 and 5, so that their movements are plainly
15 visible from the top of the breech-block. The ends of the levers n are hooked and are adapted to fit upon and grasp the flanged end of a cartridge-shell on the upper side, while the under or lower side of the flange end is held upon
20 or supported by a finger, n^4 , (shown in Fig. 5,) which enters a groove in the chamber of the barrel when the breech-block is moved forward to close the breech.

In the center of the width of the breech-
25 block B is a bolt, o , which is impelled outward by a spring, o' , and has projecting pins or arms o^2 on opposite sides, which project horizontally over the tops of the levers n forward or in front of their pivots or fulcrums and bear
30 upon the inclined upper edges of the levers n . When the breech is open and the breech-block is moved back the bolt o is impelled forward by the spring o' , and the arms o^2 , acting upon the inclined tops of the levers n , force said levers
35 down and cause their hooked heads n^2 to grip and hold the flanged end of the cartridge-shells between them and the fingers n^4 tightly enough to withdraw the shells from the barrels. As soon as the shells are withdrawn from the
40 barrels pushers or bolts p , which are arranged below the firing-pins, are impelled forward by their actuating-springs p' and tilt the shells upward into the position shown in Fig. 2, when they may be readily taken hold of by the fin-
45 gers and removed.

Although the levers n , the firing-pins k , and the spring-pushers p are described as arranged in the breech-block B, I would here remark that they are, for convenience in making the
50 arms, arranged in two cylindric blocks or hubs, B' , which are screwed into the breech-block, one in line with each barrel, and may very properly be considered as part of the breech-block.

55 When the breech-block is in its forward position the bolt o impinges on the end of the barrels, and is thus pressed and held in, so that its arms o^2 do not act on the levers n , and permit the forward ends of said levers to be raised by springs r , the ends of which fit in notches
60 r' in the levers n and exert a constant upward tendency thereon. When the heads of the levers n are raised so that the heads project above the breech-block, as seen in Fig. 1, they
65 serve as indicators, by glancing at which the

sportsman can readily ascertain whether either or both barrels have been fired. When the hammers G are either of them let down the top of the hammer passes under the tail of its adjacent lever, n , as seen in Fig. 5, and raises
70 the back end or tail of the said lever, thus lowering or depressing the head thereof, so that it will grip the flanged end of the cartridge-shell and also indicate that that barrel has been fired. The hammer G then holds the
75 head of the lever n down in engagement with the shell until the breech-block B commences its backward movement, whereupon the bolt o moves outward, and its arms o^2 , bearing upon the inclined upper edges of the levers n , hold
80 the heads thereof down in engagement with the cartridge-shells during the whole outward movement of the breech-block.

By my invention I provide a very convenient and reliable means of detachably securing
85 the barrels of breech-loading fire-arms to the base pieces or plates thereof, and I provide a very simple and reliable shell-extractor and indicator for fire-arms.

What I claim as my invention, and desire to
90 secure by Letters Patent, is—

1. In a breech-loading fire-arm, the combination of a base-piece grooved upon its upper surface, a breech-block provided with a tongue fitting in said groove, a removable tongue fitting and secured in said groove, and a barrel or barrels having a groove fitting said removable tongue, substantially as specified.

2. In a breech-loading fire-arm, the combination of the base-piece A, provided with a
100 groove, a , the removable tongue c , fitting and secured in said groove, the screw d' , for adjusting said tongue, and a barrel or barrels having the groove d , fitting said tongue, substantially as specified.

3. In a breech-loading fire-arm, the combination of the base-piece A, provided with a
105 groove, a , the removable tongue c , fitting in said groove and provided with a head, c' , the barrels C, provided with a groove, d , and the catch e , substantially as specified.

4. In a breech-loading fire-arm, the combination of the base-piece A, having in it the cavity A' , in the bottom of which is the hole
110 h' , the breech-block B, the lever E, and link F, for operating the breech-block, adapted to fit in the cavity A' when the breech is closed, and the horn h , projecting from said link and adapted to enter the hole h' , whereby the lever, its pivot, and the pivotal connection between
115 said lever and link are relieved of all strain from the recoil, substantially as specified.

5. In a breech-loading fire-arm, the combination of a sliding breech-block, an extractor and indicator consisting of a lever, the move-
120 ments of which are visible from the top of the breech-block, pivoted in said breech-block so as to vibrate or tilt upward and downward, and having a hooked head, and a hammer adapted to bear upon the under side of said lever to de-
125 130

press its hooked head into engagement with the flanged head of a cartridge-shell and to indicate that the fire-arm is fired, substantially as specified.

- 5 6. In a breech-loading fire-arm, the combination of the breech-block B, the hammers G, the pivoted levers *n*, having inclined upper edges, and the spring-actuated sliding bolt *o*,

having arms *o*², adapted to depress said levers when the breech-block is drawn back, substantially as specified. 10

WM. E. BUDD.

Witnesses:

FREDK. HAYNES,
ED. GLATZMAYER.