V. BOVY.

Breech-Loading Fire-Arm.

No. 196,781. Patented Nov. 6, 1877

Fig. 1

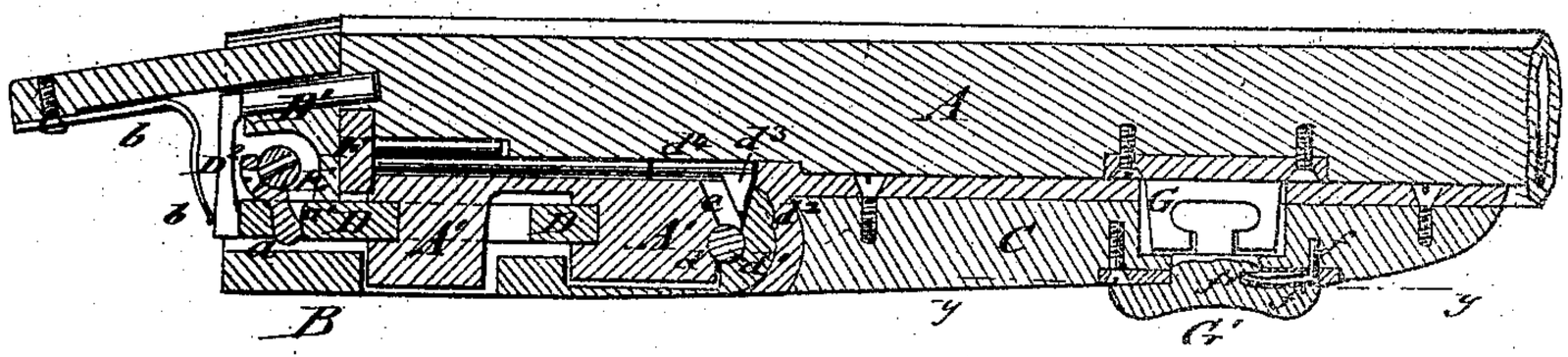

Fig. 2

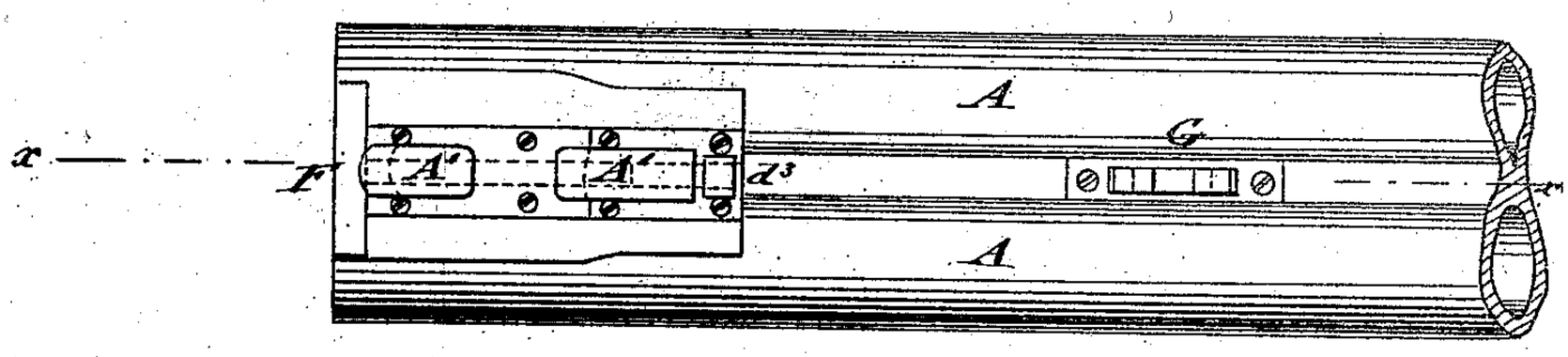

Fig. 3

Fig. 4

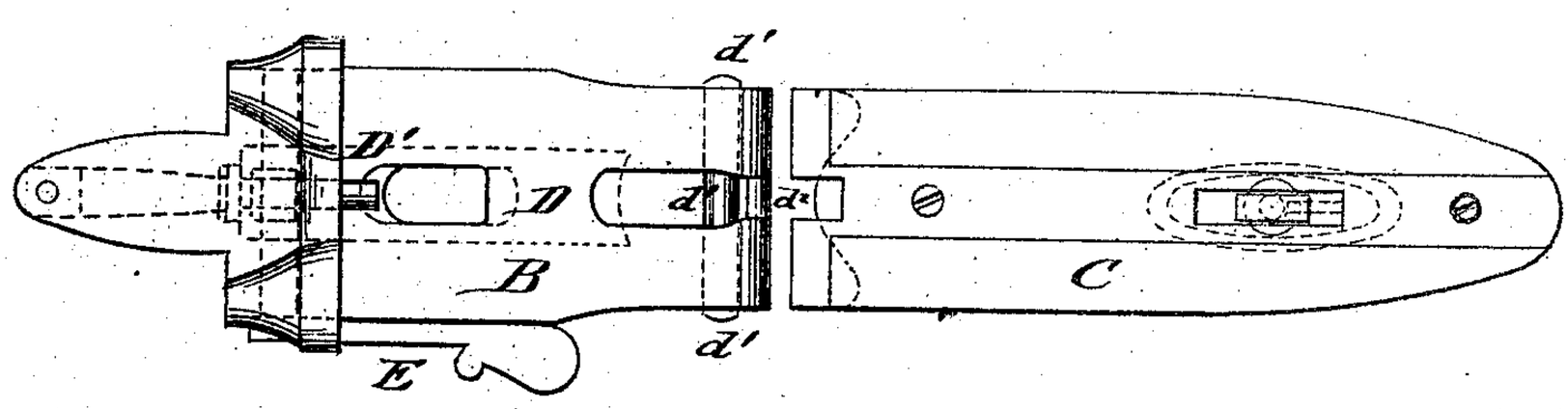

Fig. 5

WITNESSES:

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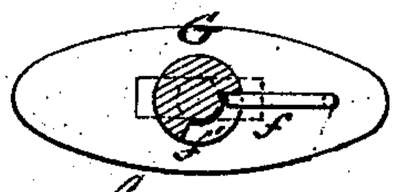

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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 196,781, dated November 6, 1877; application filed September 29, 1877.

To all whom it may concern:

Be it known that I, VICTOR BOVY, of the city, county, and State of New York, have invented a new and Improved Breech-Loading Fire-Arm, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved breech-loading fire-arm, taken on line *x x*, Fig. 2. Fig. 2 is a bottom view of the barrel detached from the breech-piece and fire-stock. Figs. 3 and 4 are top views of breech-piece and fore-stock detached from the barrel; and Fig. 5 is a bottom view of the locking mechanism of the fore-stock, partly in section, on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention is intended to so improve the breech-loading fire-arm for which Letters Patent were granted to me under date of June 5, 1877, No. 191,563, that the different devices for connecting the barrel, breech-piece, and fore-stock are simplified, and made more effective and reliable; and the invention consists, first, of an additional slide-bolt for locking the barrels and breech-piece of the breech-loading fire-arm; secondly, of an improved device for hinging the barrel to the breech-piece and fore-stock, and for working the extractor; and, lastly, of a device for locking the detachable fore-stock to the barrels and breech-piece.

By reference to the drawings, A represents a single or double barrel of my improved breech-loading fire-arm; B, the breech-piece; and C, the detachable fore-stock.

The barrel A is hinged to the front end of an extension of the breech-piece in such manner as to be readily detached therefrom on removing the fore-stock. The barrels A are locked to the breech-piece by recessed bottom-lugs A′, that enter into slotted recesses of the breech-piece B, and are engaged by a sliding and spring-acted lock-bolt, D, whose middle part is slotted so as to embrace the hind lug A′ and bind securely on the recessed portion of the lugs. The barrel is locked to or released from the breech-piece, so as to be thrown into inclined position for being loaded, by a lever and shaft, E, that engages, by a cam or arm, *a*, with a recess, *a′*, of the lock-bolt D.

A second auxiliary lock-bolt, D^1, is guided in the upper part of the breech-piece B, and extended, by an angular rear arm, D^2, down to the sliding lock-bolt D, so as to form contact with the same intermediately between the rear end of the same and the spring *b*, that serves to throw the lock-bolt D forward. The action of the spring *b* throws thus, also, the auxiliary bolt D^1 forward, so that the same enters into a socket-hole of the barrel A immediately above the extractor F. The connection of the lock-bolt D and auxiliary bolt D^1 causes their simultaneous withdrawal, by the action of crank-lever E, when it is desired to swing up the barrel for charging. In swinging down the barrel the bolt D^1 is held back until it may spring forward above the extractor into the socket-hole at the breech end of the barrel, and thereby form an additional locking device for the barrel, so as to furnish a positive, rigid, and intimate joint between the same and the breech-block.

The hinge-connection of the barrels A on the front end of the breech-piece B is made by means of the front lug A′, that has a semicircular front recess, *d*, bearing on a loose cross-pin, d^3, of the front extension of the breech-piece. The front end of this breech-piece B is rounded off and retained by the concaved end of the detachrable fore-stock C.

A projecting center lug, d^2, at the front end of the breech-piece B, bears on the wedge-shaped piece d^3 of a short pin, d^4, that slides in the guide-hole of the extractor-rod and forms contact with the end of the extractor-rod. The wedge-piece d^3 has sufficient play to move forward and back in a space, *e*, formed by the recessed front lug A′ and by the centrally-recessed edge of the fore-stock C. When, therefore, the barrel is thrown into inclined position the fore-stock moves around the rounded-off end of the breech-piece, while the front lug A′ turns on the cross-pin *b′*, the rounded-off end and pin forming together the pivot around which the barrel swings into inclined position, the concaved end of the fore-stock serving for securing the connection of the barrel and breech-piece, and for carrying the fore-stock

with the barrel around the end of the breech-piece.

The raised center lug d^2 bears on the wedge-piece d^3 when the barrel is thrown into inclined position, so as to slide the pin or shank back, and thereby push the extractor back for throwing out the empty cartridge-shells.

In locking the barrel to the breech-block, the contact of the latter with the extractor presses the same in so as to slide the wedge-piece forward against the center lug d^2, as shown in Fig. 1, the extractor being thus worked in reliable manner by the alternating action of the center lug and wedge-piece and of the breech-block.

The fore-stock C is locked to a lug, G, of the barrel by a button, G′, with T-shaped shank end that enters into a corresponding T-shaped recess of the lug G. The shank of the button G′ turns in a hole of the fore-stock, being allowed to make a quarter-revolution only by means of a stop-piece, *f*, entering a quadrantal groove, *f′*, of the shank. The stop-piece *f* is made of spring-steel, and serves, also, to bear on the slightly-notched under side of the button, so as to retain it in position by its pressure when the lower end locks into the recess of the lug, as shown in Fig. 1. The button can thus not play loose and detach the fore-stock from the barrel, but needs some force for being released from the spring-stop and turned into transverse position to the recessed lug G, so that the lower end may pass out of the recess, and thereby the fore-stock be detached from the barrels in convenient manner, being readily locked thereto again by reinserting the shank end of the button and turning the button into longitudinal position over the spring-stop, the shank end engaging the recessed lug so as to be firmly locked thereto, while the button is retained by the pressure of the spring-stop.

By detaching the fore-stock the breech-piece and barrel may be separated, and thereby the three pieces taken apart and reconnected without the use of tools or screws, so as to facilitate the handling, packing, and repairing of the shot-gun in convenient and simple manner.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the hinged barrel having recessed lugs with the detachable breech-piece having sliding and spring-acted lock-bolt, operated by a crank-shaft and lever, and with an auxiliary bolt that locks the barrel above the extractor, and is worked jointly with the main lock-bolt, substantially as and for the purpose set forth.

2. The breech-piece B, having rounded-off end, loose cross-pin *d*, and projecting center lug d^2, in combination with the barrel A, having lugs A′, of which the front lug is recessed to fit on the cross-pin, and with the concaved and recessed end of the detachable fore-stock C to form a compound pivot for the barrel while admitting the disconnection of barrel, fire-stock, and breech-piece, substantially as specified.

3. The combination of the following elements: the breech-piece B, having rounded-off end, loose cross-pin, and projecting center lug, the hinged barrel A, having front lug A′ fitted to pivot-pin, sliding extractor F, and sliding wedge-piece and pin d^3 d^4, and the detachable fore-stock C, having concaved and recessed retaining end to produce swinging of barrel and working of extractor, substantially as set forth.

4. The combination of the barrel A, having recessed lug G, with the detachable fore-stock C, having a button, G′, with locking shank end entering recessed lug G, the button being retained by a binding spring-stop device, *f*, so as to admit of rigid connection of barrel and fore-stock, and the convenient detaching, substantially as specified.

VICTOR BOVY.

Witnesses:
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ALEX. F. ROBERTS.