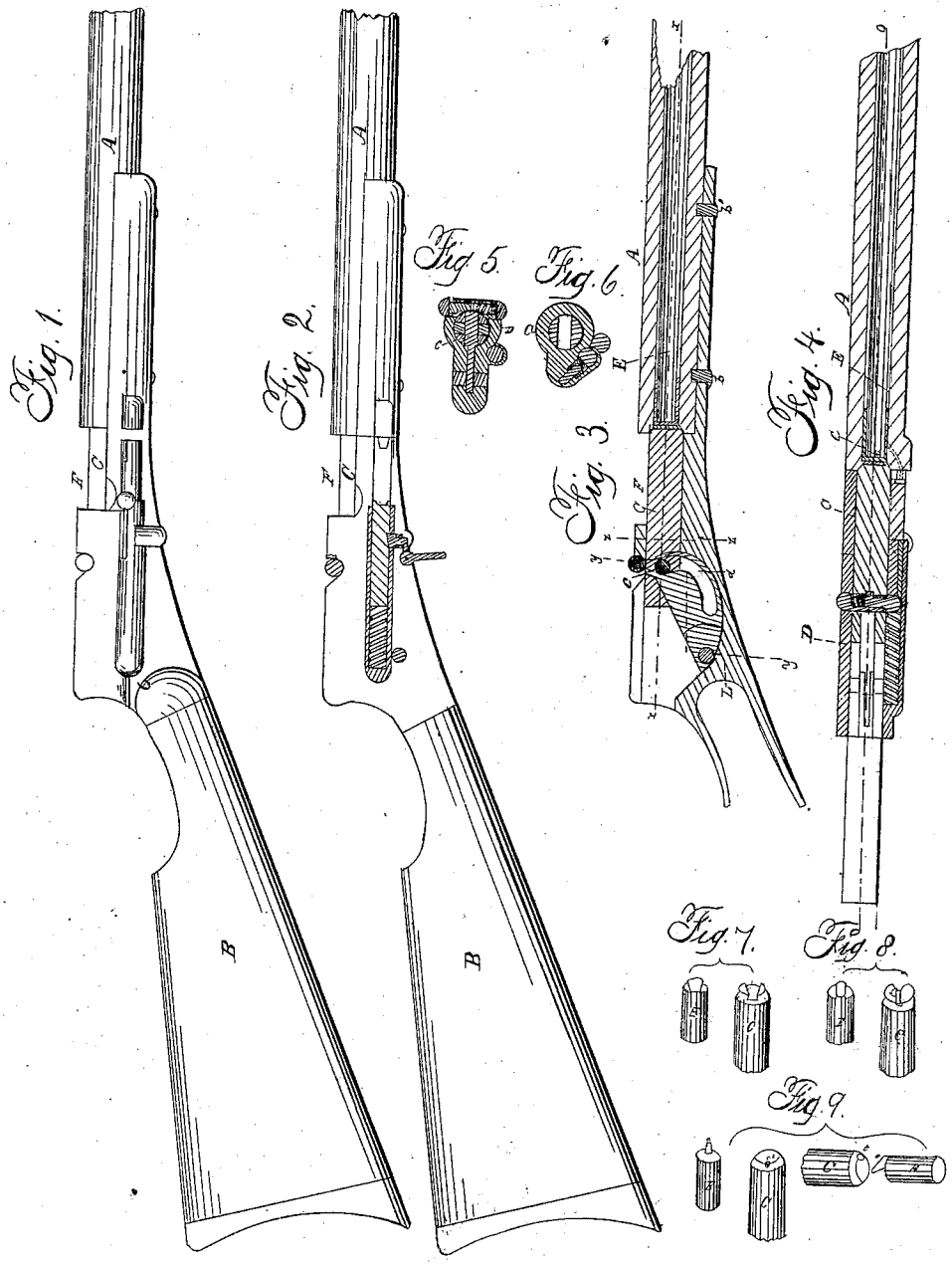
J. V. MEIGS.

Breech-Loading Fire-Arm.

No 36,721. Patented Oct. 21, 1862.



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JOSIAH V. MEIGS, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **36,721**, dated October 21, 1862.

To all whom it may concern:

Be it known that I, JOSIAH V. MEIGS, of Washington city, in the District of Columbia, have invented certain new and useful Improvements in Breech-Loading Fire-Arms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a view in elevation of one side of a breech-loading gun embracing my improvements. Fig. 2 represents a similar view of the same in outline, the lock being shown on section. Fig. 3 represents a vertical longitudinal section through the same at the line *o o* of Fig. 4. Fig. 4 represents a horizontal longitudinal section through the same at the line *x x* of Fig. 3. Fig. 5 represents a vertical transverse section through the same at the line *y y* of Fig. 3. Fig. 6 represents a similar section at the line *z z* of Fig. 3.

My invention relates to that class of breech-loading fire-arms in which a piston breech-plug, moving in the same plane as the bore of the piece, is employed.

It is the object of one part of my invention to provide a simple and efficacious means for traversing the breech pin or plug back and forth in its socket in the line of the barrel, in order to open and close the breech; and to this end the first branch of my improvement consists in imparting the proper movements to the breech-plug by means of a pin or projection upon it, which traverses in a slot in a link pivoted at one end, so as to be capable of moving freely around its pivot, the curvature of the slot being such that the motion of the link round its pivot traverses the plug to permit the insertion or withdrawal of the cartridge-case, and when the breech is closed to hold it firmly locked, as hereinafter described.

In the accompanying drawings, which represent a convenient arrangement of parts for carrying out the objects of my invention, a barrel, A, is shown as connected with a suitable stock, B. In Fig. 3 the barrel and stock are represented as united by two screws, *b*, which pass through the stock and into the barrel; but they may be united in any of the usual and well-known modes. A plunger or piston, C, which forms the breech pin or plug, slides freely back and forth in a slot and channel, *c*, in the stock, which forms a prolongation of the bore of the barrel, and, if desired, may constitute a part thereof. The rear end of the barrel is tightly closed by the pin or plug when pushed forward upon the cartridge-case. The breech-pin is actuated by means of a link, D, which is pivoted at one end to the stock, and provided with a curved slot, *d*, in which a pin, *e'*, on the side of the breech-pin traverses. The curvature of the slot is such that when the breech-plug is thrown forward to close the bore of the breech, as shown in Figs. 3 and 4, it serves to lock the plug in place, and prevents its being thrown back by the discharge of the piece, for by the form of the cam-slot in the link it presents the most direct line of resistance at the least angle to be obtained by a link which has to vibrate through so large an arc as is necessary to traverse the plug the distance required, for when the link is thrown back the plug is retracted and leaves the breech open, that the empty case may be removed and a full cartridge inserted.

I propose to employ a metallic cartridge-case in preparing my ammunition. In the use of such cartridges in breech-loading fire-arms, much inconvenience has arisen from the difficulty experienced in withdrawing the cartridge-case after the explosion of the charge, as the gases then evolved or the heat they generate expand the case and cause it to stick in the chamber of the gun. This difficulty I avoid by connecting the breech-pin and cartridge-case together, so that the forward movement of the piston to close the breech forces the cartridge into the chamber, while the withdrawal of the piston to open the breech necessarily brings the case with it. In Fig. 7 this connection is represented as formed by means of a dovetailed groove, c^2, cut in the face of the breech-plug C, into which groove a corresponding tenon or projection, *e*, formed upon the face of the cartridge fits. Fig. 8 shows a similar arrangement, but with the form of the groove and tenon somewhat modified.

Fig. 9 represents still another modification of my invention. In this instance the connection is formed by means of a pin, projection, or tang, *e*, on one side of the base of the cartridge-case, said tang fitting into a corresponding cavity in one side of the face of the breech-plug. The channel through which fire is communicated to the charge may enter the car-

tridge either at the base or at the side, the latter method being the one shown in the drawings.

The operation of the gun is as follows: Fig. 3 represents the parts in the attitude they assume when the gun is ready to be discharged. To withdraw the cartridge, the link D is drawn back by turning it upon its pivot, which retracts the piston C and cartridge-case E, until the latter is beneath the opening F in the stock, when the case may readily be removed by the finger and a new cartridge inserted. The manner in which the breech-plug and cartridge-case are constructed and connected secures the cartridge-case firmly in its place, and at the same time permits it to be readily withdrawn and replaced, thus securing a certain, secure, and rapid repetition of discharges.

I do not claim, broadly, under this patent either a reciprocating breech-plug or operating a vertically-sliding breech by a slotted cam; neither do I claim a stationary breech having pins on its face to embrace the flange of a cartridge; nor a piston having jaws into which the cartridge-case is driven by the explosion; but,

Having thus fully described my improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the reciprocating piston or breech-plug C with the pivoted slotted link D, when constructed and arranged substantially as described, for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

JOE V. MEIGS.

Witnesses:

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