K. V. BARNEKOV.

Breech-Loading Fire-Arm.

No. 104,100. Patented June 14, 1870.

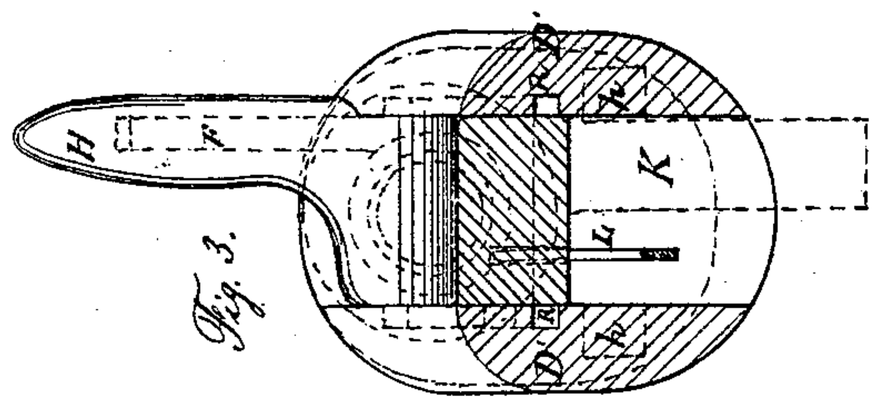

Fig. 3.

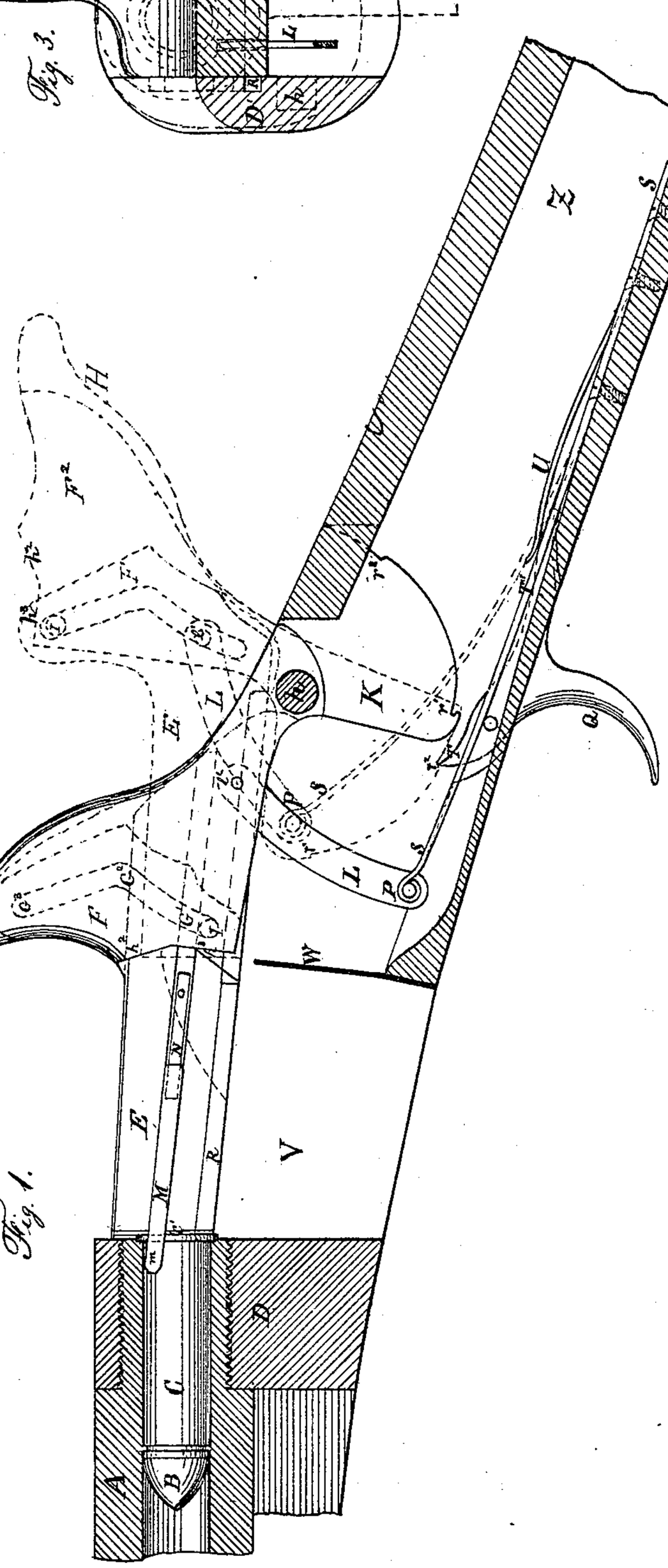

Fig. 1.

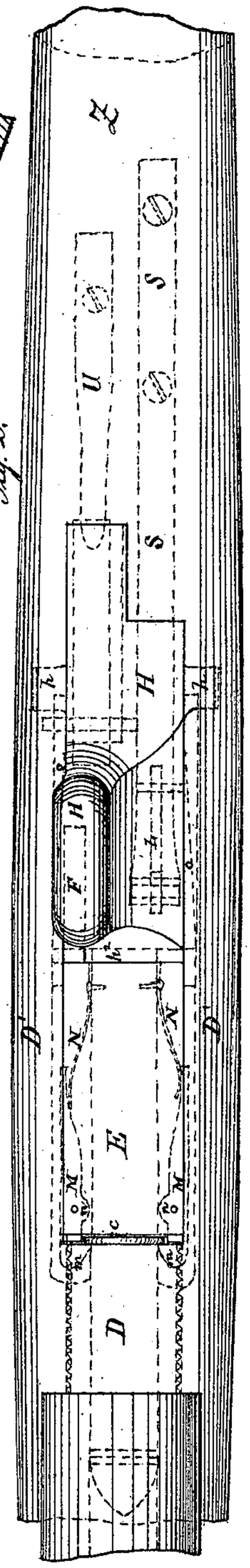

Fig. 2.

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KIEL V. BARNEKOV, OF CORNWALL, NEW YORK.

Letters Patent No. 104,100, *dated June* 14, 1870.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, KIEL V. BARNEKOV, of Cornwall, in the county of Orange and State of New York, have invented a new Breech-loading Rifle; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in having simplified the construction and the number of the different pieces necessary to make a breech-loading rifle, and also in having made the construction and connections in such a way that a single movement of the hammer opens the breech, after the gun has been fired, extracts the shell of the former cartridge, and the gun is ready to be fired again, after a new cartridge has been inserted into its place, without another movement of any part of the gun. To explain this better, I refer to the annexed drawings, in which—

Figure 1 is a longitudinal section of the rifle.

Figure 2 is a top view.

Figure 3 represents a cross-section of the gun-lock.

A represents the barrel of the rifle.

C, the new inserted cartridge, with ball B.

D D, the metal frame, to receive the parts of the lock, and of the breech of the gun.

The breech-block E is movable backward and forward in grooves cut into the sides D D, into which fit the projections R R, on each side of the breech-block E. This block has a plate-like projection, F, on its rear end, into which is cut a slot, G^1 G^2 G^3. This projection F lies in a recess cut out in the hammer H to receive it, when in position, as shown in fig. 1, in full lines, and a pin, I, in the lower forward corner of the hammer, goes through the slot at G^1.

The slot G^1 G^2 is shaped concentric with the center *h* of the hammer H, that is, the hammer H can be drawn backward around center *h* without moving the plate F and the breech-block E until the pin I arrives at G^2, when, by moving hammer H more, the pin I pulls back with it the breech-block E until it arrives in a position as shown in dotted lines in fig. 1.

This position is the second stop of the hammer, or its furthest point back.

The breech-block E carries on each side a hook, M M, fastened to the block by pins *n n*.

The forward points *m m* project beyond the face of the block E, so that, when the block E is in its place close behind the cartridge, the hooks *m m* hold firmly the shoulder of the cartridge, and small springs N N keep the hooks close to the same, so that, when the block E is being pulled back by hammer H, the hooks *m m* pull the shell of the cartridge out the rear end of the barrel.

Suitable recesses are cut in the breech of the barrel to admit those hooks *m m*, and also slots are cut in the side pieces D D, to admit the whole hooks M M.

The slots which are cut in the sides D D contract or get shallower toward the rear ends, to press the springs N N together as soon as the shell is nearly extracted, so that the hooks *m m* let the shell drop when it is out the end of the barrel, and the shell drops through the opening V, left in the lower side of the stock for this purpose.

To keep the extracted shell from falling into the gun-lock, the plate W is placed in front of the lock, and well fastened to the sides or to the bottom.

The spring S S gives the power to the hammer, and it is connected to the hammer H by the link L, which link is connected to the hammer by the pin *l'*, and to the spring S by the pin P.

The trigger Q is held against the flange K of the hammer H by the spring U pressing on the arm T, the arm T resting in r^2 when hammer is in the second rest, and in r^1 when in first rest.

As soon as the cartridge is in its place, and the gun is not to be discharged right off, the hammer can be placed in first rest. This first rest r^1 is so arranged that the hammer H pushes the breech-block E forward to within about one-eighth of one inch of the flange of the cartridge C, so that the pin I does go from G^3 nearly to the corner G^2. In this position the gun is perfectly safe from any premature discharge, and the hooks *m m* do not yet take hold of the cartridge C; but if the gun is to be discharged, pull the hammer H back again to the second rest, take aim, and pull the trigger Q; the hammer will then, by the power of spring S S, move forward; the pin I pushes the breech-block E close to the cartridge C without striking it, when the pin I, (arrived at the corner G^2,) and the hammer H, will finish its way; the pin I, following the concentric curve G^2 G^1, will strike with its face h^2 on the corresponding face of the breech-block E, and at the same time with its face h^3 on the corresponding face of the block, and execute a quick and powerful blow on the center of the cartridge by means of the front face of the breech-block E, where a somewhat elevated point, *c*, hits the center of the cartridge and explodes it.

The back pressure of the exploding powder through the breech-block is taken up by the square face h^3 of the hammer, and carried over to the center pin *h* of the hammer, which must be strong enough to stand the blow; but the pressure is never strong enough to push open the breech, which could here be done only by pushing back the hammer by means of the breech-block E.

The operation with this gun is so simple, only one movement of the hammer being required to open the breech to remove the old shell and make ready to

fire, that even the most inexperienced men can understand the action immediately; besides, there are so few pieces in this gun, that it is the simplest gun of all in use.

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

The breech-loading fire-arm, consisting of barrel A, breech-block E, with flange F and slot G^1 G^2 G^3, extractor M M, hammer H, with lap K and pin I, link L, and spring S S, trigger Q and spring U, and side pieces D D, all combined and constructed as shown in the drawings, and as specified.

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Witnesses:

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