C. A. KING.

Breech-Loading Fire-Arm.

No. 213,760. Patented April 1, 1879.

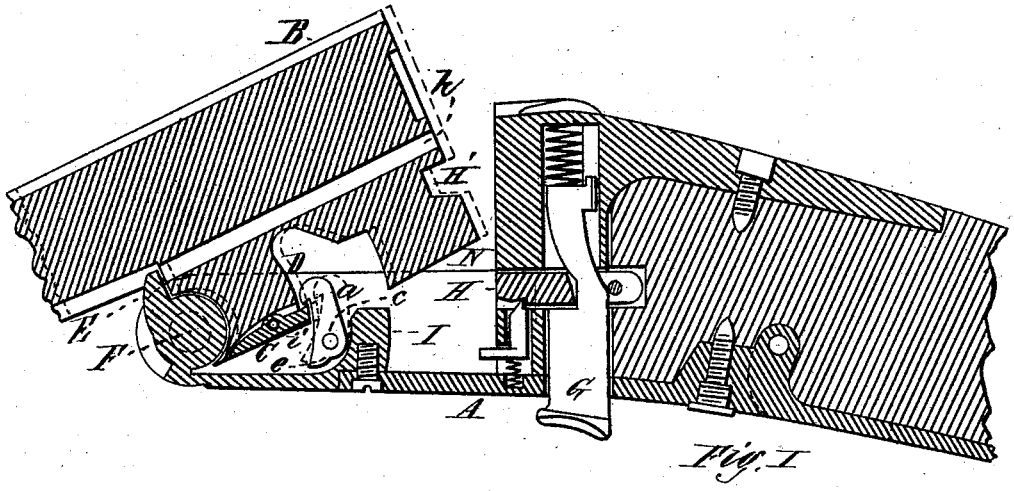

Fig. I

Fig. II

Fig. III

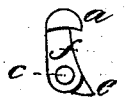

Fig. IV

Witnesses.
C. E. Buckland,
Fred Curtis.

Inventor.
Charles A. King.
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UNITED STATES PATENT OFFICE

CHARLES A. KING, OF MERIDEN, CONNECTICUT.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **213,760**, dated April 1, 1879; application filed September 6, 1878.

To all whom it may concern:

Be it known that I, CHARLES A. KING, of Meriden, in the State of Connecticut, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

My invention relates to that class of breech-loading fire-arms in which the barrel tilts upward at the rear end to expose the chamber for loading and to extract the shells; the object of the invention being to facilitate the separation of the barrel from the frame, and also to relieve the hinge or joint from much of the strain and shock from the dropping of the forward end of the barrels in tilting them.

To this end my invention consists of a latch pivoted in the frame behind the joint, and provided with a short arm below its pivot, against the front side of which a lug on the lower side of the barrel, and in front of the latch, strikes when the rear end of the barrel is forced down into place to throw the upper end of the latch forward into position to catch against the lug when the rear end of the barrel is tilted up. The barrel is detached from the frame by moving the barrel back a little when tilted up, and then immediately moving it forward again; and it also consists of a spring secured in the lug, which strikes against the latch a little before the lug strikes, which operates to give a little elasticity to the blow in tilting the barrel suddenly and assists in relieving the shock, all which will be more fully hereinafter described.

Figure I is a longitudinal vertical section of a portion of a double breech-loading fire-arm having my invention applied thereto. Fig. II is a rear view of the lug on the lower side of the barrels, with the spring-piece secured therein, which first strikes the latch when the barrels are tilted down at the fore end. Fig. III is a front view of the latch, with a friction-piece secured in the side; and Fig. IV is a side view of the latch and a friction-piece secured thereto.

In the drawings, A represents the frame, to which are hung the barrels B at the joint F, and which contains the mechanism for locking the barrels down in place at their rear end. A lug, D, is made on the lower side of the barrels behind the joint F, and on the lower rear side of this lug is a projection, *i*. Just behind this lug is pivoted in the frame at *c* a latch, *a*, having a short arm, *e*, below the pivot *c*; and the forward edge of this latch is of such form that when the barrels are forced down at the rear end the rear end of the projection *i* will strike against the front edge of the short arm *e*, and force the upper end of the latch *a* forward into a position quite near to the rear side of the lug D and over the projection *i*, so that when the bolt H is drawn back and the fore end of the barrels drop suddenly the projection *i*, in passing up, will catch against the upper end of the latch *a*.

To further assist in removing the shock from this sudden tilting of the barrels, I make a space midway the width of the lower part of the lug D and in the projection *i*, and secure therein a piece, C, which, although very firm and rigid, possesses sufficient elasticity to slightly yield when it strikes the upper end of the latch *a*, the rear end of the piece C being made a little higher than the projection *i* to strike the latch first, which lessens the blow against the projection *i*. This piece C is not essential to the successful operation of the latch and projection, however, as they operate perfectly without it.

In order to cause the latch to vibrate on its pivot with the proper friction to remain in any position in which it may be placed, I make a recess in the side of the latch, and place therein a spring, *f*, one part of which bears against the latch and the other part against the frame; or, if more desirable, the latch itself may be made in two portions, except at one end, and be tempered at that end sufficiently to cause the two parts to spring apart against the frame at each side to move with the desired amount of friction; or the latch may be solid, and made to perfectly fill the recess in the frame in the direction of its width and press against its sides.

The operation of my invention is as follows: When the barrels are locked down with the bolt H in the recess H′ of the lug N on the barrels, the rear end of the projection *i* on the

lug D is against the front edge of the short arm *e* of the latch, so that if the rear end of the barrel is released by withdrawing the bolt H the fore end of the barrels drop suddenly, and, the rear ends rising as quickly, the upper side of the projection *i* and piece C secured therein strike against and are held by the catch at the upper end of the latch *a*, thus relieving the parts at the joint of the greater portion of the strain.

To separate the barrels from the frame the fore end is detached from the barrels, and the latter are then moved to the rear into a position shown in dotted lines at the rear end of the barrels in Fig. I, which movement pushes back the upper end of the latch *a*, and the barrels are then carried forward against the joint again, and by tilting their fore end still farther down the lug D is easily unhooked from the joint F.

I am aware that various devices have heretofore been made and used to relieve the joint from the shock in tilting the barrels, as shown in patents to Sneider, December 22, 1868, Dangerfield, September 3, 1872, and Sneider, April 7, 1874, and also in patent to Baker, April 16, 1878, and I do not claim the same; but,

Having described my invention, what I do claim is—

1. A hooked latch, *a*, provided at its lower end with an incline or arm, *e*, pivoted in the frame below the barrels, and combined with a shouldered lug or projection on the latter, by which, when the barrels are in place, the latch is turned into position for engagement with the shoulder on said lug when the breech is open, substantially as described.

2. In a breech-loading fire-arm, the combination of the spring-piece C, the projection *i*, and a catch secured in the frame of the arm, against which said spring-piece and projection strike, substantially as and for the purpose set forth.

CHARLES A. KING.

Witnesses:
L. J. GAINES,
FRED C. BORST.