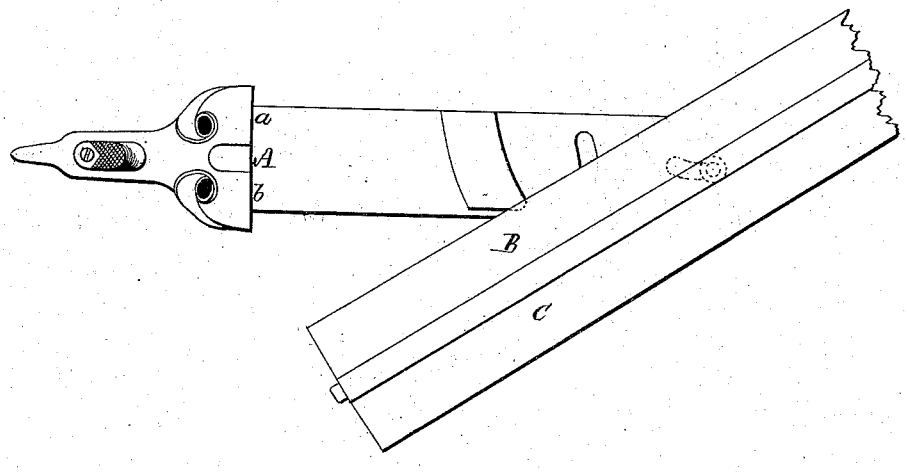
G. H. FOX.

Breech-Loading Fire-Arms.

No. 198,973. Patented Jan. 8, 1878.



Witnesses.
Edwd. K. Andrews.
Louis A. Curtis.

Inventor.
Geo. H. Fox.
H. Curtis. Atty.

UNITED STATES PATENT OFFICE

GEORGE H. FOX, OF BOSTON, MASSACHUSETTS

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **198,973**, dated January 8, 1878; application filed October 30, 1877.

To all whom it may concern:

Be it known that I, GEORGE H. FOX, of Boston, in the county of Suffolk, State of Massachusetts, have invented new and useful Improvements in Double-Barreled Breech-Loading Guns, of which the following is a specification:

My present invention relates to the recoil-seat of the breech-plate or stock of the gun, which receives and resists the force of the explosion of the charge.

Heretofore (with one exception, so far as my knowledge extends) the recoil-seat of double-barreled breech-loading guns has been a flat plane common to the two barrels, and, as the axes of the barrels converge at the muzzles, it is evident that the rear ends do not present a square bearing to the face of the breech-seat, and the heads of the cartridge-shells do not bear fair upon it. In fact, the discrepancy, in many instances, is sufficient to force the shell out of shape and crack the heads, and in some instances blow off the latter, and is the cause of other evils.

In carrying out my invention I form the breech-face of two faces, each of which is at right angles to the axis of the barrel to which it is presented, the result being that the head of of the cartridge-shell bears fair upon the recoil-seat. By this form and presentation of the recoil-seat with respect to each barrel a perfect fit of the rim of the head of the cartridge-shell in the annular groove or rabbet of the chamber of the barrel is at all times insured; and for this reason the cartridge-shell retains intact its original shape after long usage.

The drawing accompanying this specification represents a plan of a double-barreled breech-loading shot-gun embodying my improvement, the barrels being turned to one side to better illustrate the form of the breech.

The breech or recoil-seat of the gun is shown in such drawing at A, and the two barrels at B and C, respectively.

As before stated, the recoil-seat or face A of the breech has practically two faces, *a* and *b*, which converge at a very slight obtuse angle, or to such a degree that each shall be at right angles to the axis of the barrel opposite it, the purposes and effects of such a construction being as before stated.

The barrels B and C move to open and close the breech by a horizontal or sidewise vibration from a point of vibration or oscillation which is outside of the outline of the barrels or stock. The said barrels, instead of being guided in these movements by an actual pivot located at such point, are really guided and controlled by pins or studs working in grooves struck from a center which is outside of the boundary of the gun, and which may be termed an "imaginary center."

I do not, however, confine myself to any given method of pivoting or operating the barrels, as the results of my construction or form of the breech will be the same with any manner of hinging or pivoting the barrels.

I am aware that it has been customary prior to the origin of my invention to counterbore a recess in the breech-seat opposite each barrel to receive the head of the cartridge-shell, the bottom of this recess only being at right angles to the axis of the adjacent barrel. By this system, however, the rim of the head of the cartridge-shell rests in part at one side in the rabbet of the cartridge-chamber of the barrel, and in part in the recess alluded to, and the barrel, in moving to open and close the breech, necessarily moves back and forth longitudinally and horizontally of the barrels.

Objectionable results follow the use of the recesses, and they soon become filled with dirt, and the barrels will not come up to place, and the gun is in an unsafe condition.

In my gun a smooth unbroken breech-surface is opposed to each barrel, upon which dirt cannot collect. The rim of each cartridge-head also fits perfectly in the rabbet of the cartridge-chamber of the barrels, and in general the construction is infinitely more workmanlike and superior than with sunken recesses.

I claim—

In double-barreled breech-loading guns, a breech-seat composed of two flat planes, each of which is at right angles in all directions to the axis of the adjacent barrel, substantially as and for purposes stated.

GEO. H. FOX.

Witnesses:

F. CURTIS,

L. A. CURTIS.