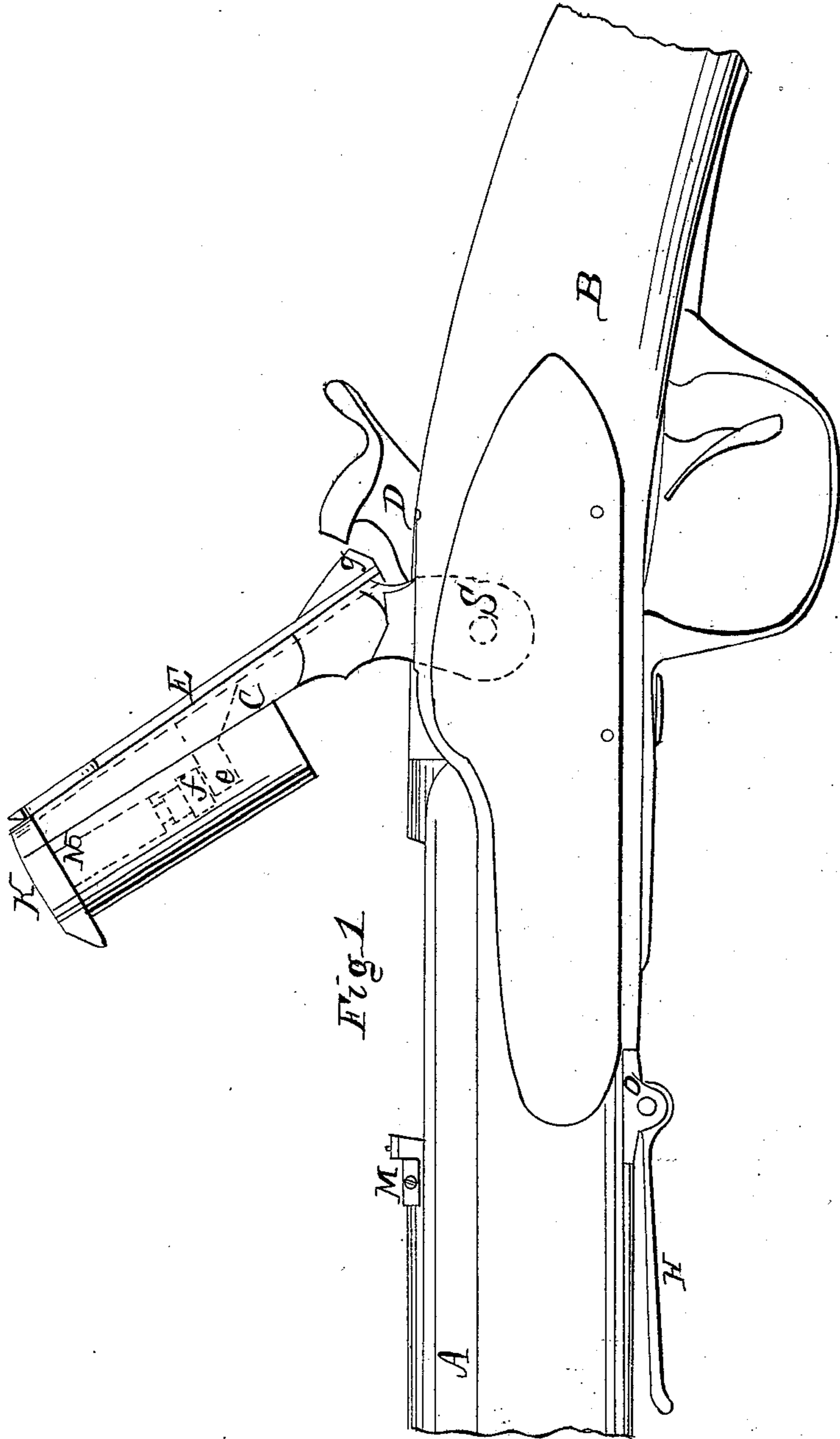


G. W. MORSE.
Breech-Loading Fire-Arm.

No. 20,503.

Patented June 8, 1858.



UNITED STATES PATENT OFFICE.

GEO. W. MORSE, OF BATON ROUGE, LOUISIANA.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 20,503, dated June 8, 1858.

To all whom it may concern:

Be it known that I, GEORGE W. MORSE, of Baton Rouge, Louisiana, have invented a new and useful improvement in the art of altering the common muzzle-loading fire-arm into an improved breech-loading fire-arm; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to that class of fire-arms which are loaded at the breech, and which are adapted to the use of a metallic cartridge-case; and it consists in combining and arranging a percussion-rod in a movable breech-piece with a sliding bolt, so that the lock in the act of firing shall both lock the breech-piece and fire the charge.

It also consists in the construction and use of the globular surface on the front end of the movable breech-piece, in combination with the cylindrical cartridge-case, for the purpose of more effectually preventing the escape of gas at the joint.

It also consists in the construction and use of the lever, substantially as described, for the purpose of retracting the cartridge-case from the barrel.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Having taken a common muzzle-loading fire-arm and cut out a portion of the upper part of the barrel, just in advance of the breech-pin, as shown in the drawings, I construct the breech-piece as follows: The breech-piece is made with a round orifice therein, to contain the percussion-rod, for firing the cartridge, and consists of at least three essential parts. First is the body-piece C, containing an orifice for the reception of the percussion-rod; then a cap-piece with a globular surface next to the cartridge when inserted in the barrel, (shown at K in the drawings.) This cap-piece has a cylinder extending to the rear, which contains the percussion-rod, as represented in the drawings, and is secured in the body-piece by the pin N. And last is the slide-piece E, which receives the blow from the hammer of the gun, is forced forward thereby, and the front end, passing under the band-piece M, locks the breech-piece in place, while the hammer-piece

of the slide *e* comes in contact with the head of the percussion-rod *f*, and forcing it forward fires the charge.

When the slide-piece is constructed as shown in the drawings the hammer-piece *e* works in a slot cut in the upper part of the orifice of the body-piece, and the projection or anvil-piece *g* receives the blow from the hammer; but it is evident other modifications of the slide-piece might be made without departing from the principle of my invention. For instance, I have used a slide-piece in the form of an arc of a circle, working in a corresponding groove in the body-piece of the breech, one end of which received the blow of the hammer when the other imparted the shock to the head of the percussion-rod and fired the charge, while the breech-piece was locked simultaneously by the same movement of the lock; but of all the modifications of my invention I prefer that shown in the drawings, and have therefore more particularly described the same.

It will be observed that the front end of the breech-piece, which is inserted in the barrel where cut in front of the breech-pin has a globular surface, all the points in each being equally distant from the center of motion. The advantages of this form of surface are as follows: It closes the cylindrical cavity in the head of the cartridge-case as perfectly as it could be done with a plane joint; it enables me to use the cartridge-case having a metallic head with a small orifice through which the fire is communicated; and the wad is forced out against the sides of the case, and thus with greater certainty prevents the escape of gas.

I am aware that both hinged and sliding breech-pieces have been used in breech-loading guns; but I am not aware that they have ever been made with globular surfaces on the ends, as described, and arranged and combined with the rear end of the barrel of the common muzzle-loading fire-arm, so as to enable one to use the metallic cartridge-case with or without the percussion-cap, in the manner described.

H *o l* is a crank-lever for disengaging the cartridge-case from the rear of the barrel. It is represented in the drawings so as to be operated by hand, but it is evident that with slight modifications it might be operated automatically by mechanism connecting it either with the breech-piece or with hammer.

Having thus described my invention, I claim—

1. The percussion-rod in a movable breech-piece, in combination with the sliding bolt, when so arranged that the lock in the act of firing shall both make fast the breech-piece and fire the charge.

2. The construction and use of the globular surface on the front end of the movable breech-piece, in combination with the end of the cy-

lindrical cartridge-case, for the purpose of more effectually preventing the escape of gas at the joint.

3. The construction and use of the lever, when arranged substantially as described, for the purpose of retracting the cartridge-case.

GEO. W. MORSE.

Witnesses:

A. HERBERT,
EDM. F. BROWN.