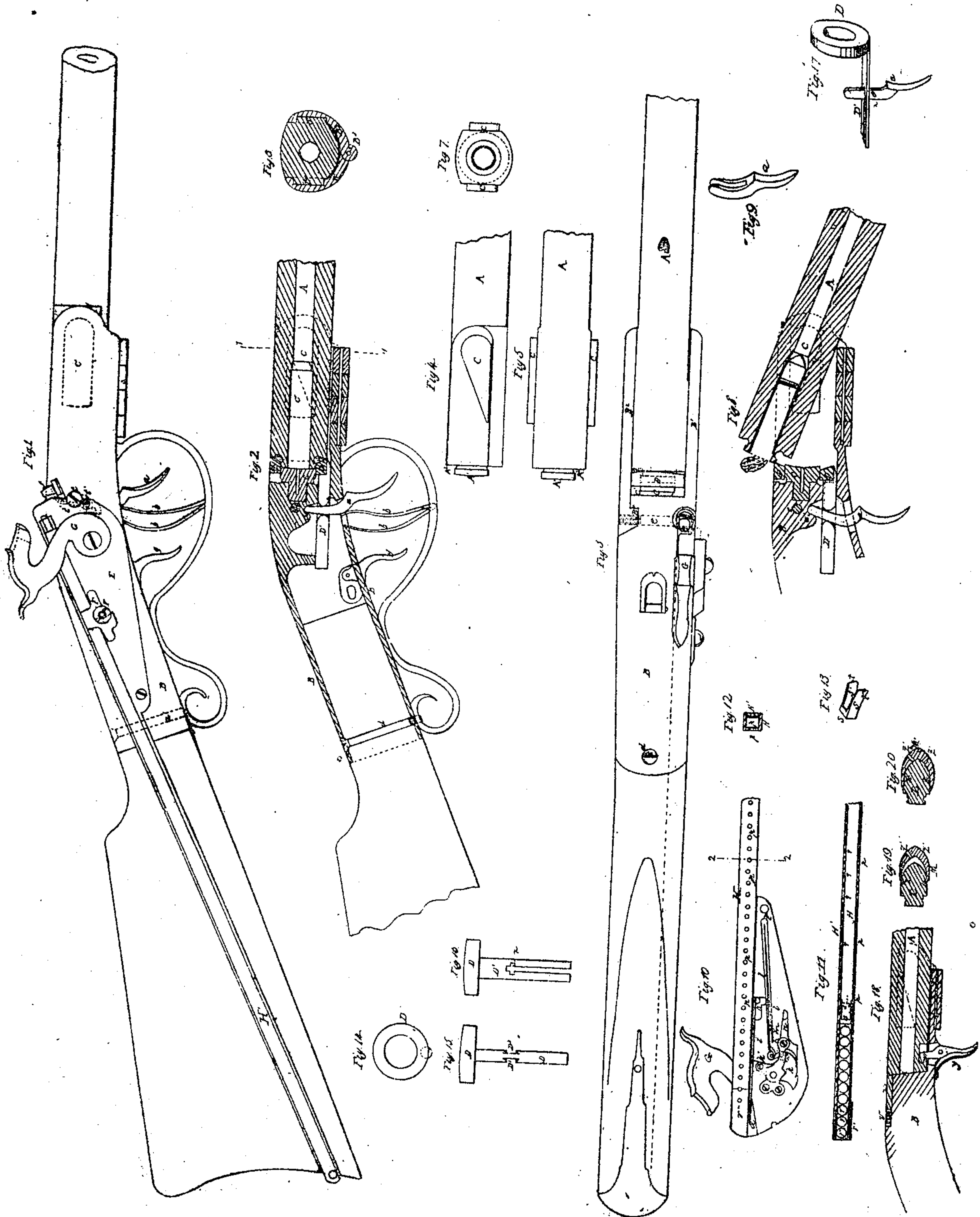


J. C. Day,
Breech Loader.

No 13,941

Patented Dec 18, 1855



UNITED STATES PATENT OFFICE.

JOS. C. DAY, OF HACKETTSTOWN, NEW JERSEY.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 13,941, dated December 18, 1855.

To all whom it may concern:

Be it known that I, JOSEPH C. DAY, of Hackettstown, in the county of Warren and State of New Jersey, have invented certain new and useful Improvements in Fire-Arms; and I do hereby declare that the following is a full and clear description thereof, reference being had to the annexed drawings, in which—

Figure 1 is a side view of the gun; Fig. 2, a longitudinal section through stock and barrel; Fig. 3, a plan view; Fig. 4, a side view of the rear portion of the barrel; Fig. 5, a plan view of the same; Fig. 6, a transverse section in line 1 1 of Fig. 2; Fig. 7, an end view of the rear end of the barrel; Fig. 8, a longitudinal section through the gun, showing the barrel in position to receive the charge; Fig. 9, a perspective view of the trigger *a*, working the loose collar D; Fig. 10, an elevation of the lock, the hammer being at full-cock; Fig. 11, a longitudinal section of the cap-feeding tube; Fig. 12, a transverse section of the same; Fig. 13, a perspective view of the follower *s*; Fig. 14, an end view of the loose collar D; Fig. 15, a top view of the same; Fig. 16, a modified form of the shank of the loose collar D; Fig. 17, a perspective view of this modified form with the trigger *a* inserted; Fig. 18, a modified way of locking the barrel; Fig. 19, a section of a ball before the explosion of the powder has affected it; Fig. 20, a section of the same after the explosion.

My invention relates, first, to a manner of arranging the two side pieces between which the barrel is hung different from that described in my former Letters Patent; second, to a different construction of the sliding collar which holds the barrel in its position when the gun is to be discharged.

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

I hang the barrel A, in the same manner as described in my Letters Patent, between two side pieces, B' and B². B' is cast together with a malleable cast-iron case, B, which forms the neck of the stock; and B² is jointed to B' by hinge B³. The side piece B² is provided with a projection B⁴ at its rear end, which is made to fit closely in a corresponding recess in case B. A screw, *c*, fastens it firmly to this

case. By this arrangement I am enabled to remove the barrel with the least loss of time by unscrewing screw *c* and turning over side piece B².

The sliding collar D, which serves to fix the rear end of the barrel to the breech C and to close the joint, instead of providing it with two knobs, as specified in my former Letters Patent, I arrange with a stem, D, and a trigger, *a*, which straddles in the shape of a fork over this stem and catches in the two notches D³ D⁴. A spring, *b*, is placed so as to press against this trigger *a*, whose fulcrum is in a cavity, *a'*, of the case B, and forces thereby the sliding collar D up to the rear end of the barrel. The stationary breech C, upon which collar D rides, is made round, and the face of it in the shape of an arc, as specified in my former Letters Patent; but there is a groove, C', turned out of its surface, which leaves only a narrow cylindrical place at the edge of the breech C for the sliding collar D to ride upon. The projecting piece A' of the rear end of the barrel A is made similar to this breech. It is left cylindrical for a short distance at its edge, and provided with a groove, A². These grooves C' and A², I make for the purpose of providing a place where the fouling may collect, and to decrease the surface upon which the sliding collar D moves, thereby lessening the friction and securing a free and easy motion of the sliding collar. The face of this collar is made on the same sweep as the rear end of the barrel A, and its outer edge sharp, so as to present a cutting-edge to the rear of the barrel A. If, then, the cartridge is inserted in the chamber A² and barrel forced back to the position shown in Figs. 1 and 2, the edge of the collar will cut off the rear end of the cartridge, and thereby open a passage into the powder, which operation is clearly shown in Fig. 8.

A modified plan of locking the barrel is shown in Fig. 18. The barrel A is hung between the sides in the same manner; but the rear end of the barrel, instead of being in the shape of an arc, is made straight, not square with the sides, but somewhat inclined, and the face of the breech of a corresponding inclination; or it may be made of circular form similar to the first arrangement, so that both form a tight joint when the barrel is brought

down. The inclination of the joint must be of such an angle that the lower corners of the barrel in being raised would clear the breech, but not larger. A knife, *u*, inserted into a recess in the top of the breech with a spring, *v*, behind it would perform the shearing operation to remove the rear end of the cartridge. A trigger, *W*, of hook-like shape, catches in a notch at the lower side of the barrel and holds the barrel locked.

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

1. Connecting the two side pieces, *B'* and *B''*, between which the barrel is hung, by a

hinge, *B³*, and locking them by the projection *B⁴*, and a corresponding recess, substantially as set forth.

2. Making the face of the sliding collar *D* of the shape of an arc, with a cutting-edge, so as to act in combination with the rear end of the barrel as shears for the purpose of removing the rear end of the cartridge, as described.

3. The groove *C'* and *A²* in the breech and the rear end of the barrel, for the purpose set forth.

JOSEPH C. DAY.

Witnesses:

JAMES N. KNIGHT,
WILSON HAVEN.