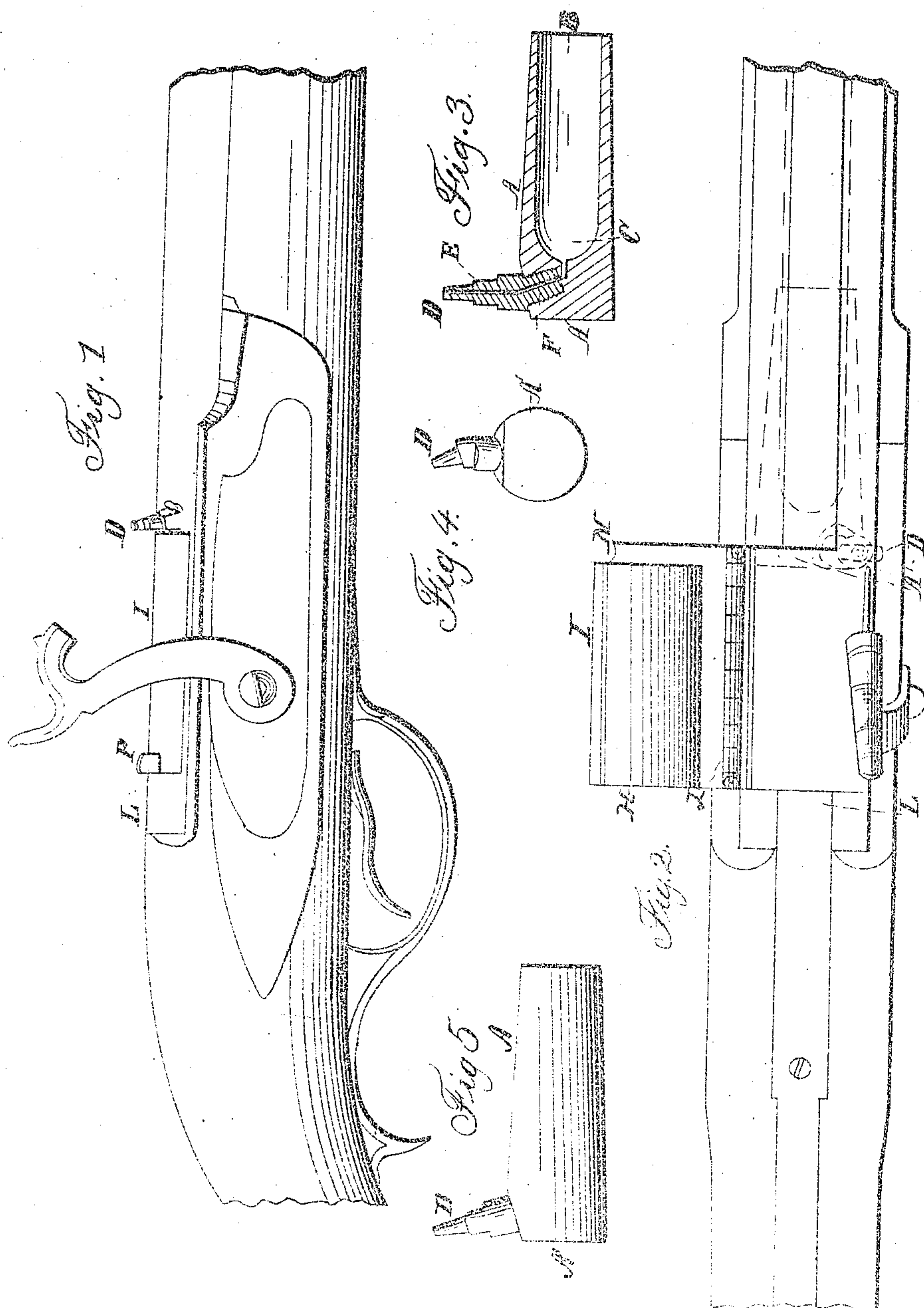


No. 6,139

D. MINESINGER.
Breech-Loading Fire-Arm.

Patented Feb. 27, 1849



UNITED STATES PATENT OFFICE.

DAVID MINESINGER, OF BEAVER, PENNSYLVANIA.

IMPROVED DETACHED METALLIC CARTRIDGE-TUBES, &c., FOR FIRE-ARMS.

Specification forming part of Letters Patent No. 6,139, dated February 27, 1849.

To all whom it may concern:

Be it known that I, DAVID MINESINGER, of Beaver, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Fire-Arms charged at the breech, called "Minesinger's Improved Detached Metallic Cartridge-Chamber Fire-Arm," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation of a portion of a fire-arm containing the improvement, showing a metallic cartridge-tube inserted, the holder and cap shut down, and the hammer cocked. Fig. 2 is a bird's-eye view of the same portion of the fire-arm, showing the hinged cap and holder thrown back for the purpose of removing the discharged metallic cartridge-tube and replacing it with one that is charged, the latter being shown in its proper position in the chamber of the gun. Fig. 3 is a vertical longitudinal section of the metallic cartridge-tube, showing its tapered form, its parabolic end of the chamber for the charge, and the direction of the vent. Fig. 4 is an end elevation of the breech of the metallic cartridge-chamber. Fig. 5 is a side elevation of the same.

Similar letters in the several figures refer to corresponding parts.

The nature of my invention and improvement consists in making the external surface of my metallic cartridge-tube of the form of a frustum of a cone and the internal surface cylindrical, which causes the muzzle to be thinner than the breech, so that when the piece is discharged the heat from the explosion of the charge will expand the muzzle instantaneously on account of its thinness and cause it to close the joint between the metallic cartridge-tube and the chamber of the gun-barrel, into which it is inserted, and thus prevent any part of the explosion escaping at the breech, except that which issues from the vent, and also preventing the same degree of recoil as in the use of the cylindrical metallic cartridge-chamber, the points of friction being in annular circles from the muzzle of the tube to the breech against the interior surface of the chamber of the gun into which the cartridge is inserted, which chamber is made of corresponding shape and size to that of the external surface of the cartridge-tube; also, in making the bore of the metallic cartridge-tube next the breech the

shape of a parabola; likewise in giving the vent an angular direction from the nipple to the center of the parabolic end of the chamber for the charge; also, in the employment of a hinged holder for holding the metallic cartridge-tube firmly in the chamber of the gun-barrel with the muzzle close against the shoulder formed in the chamber of the barrel and preventing any recoil of the cartridge-tube at the discharge of the piece, the hinges by which it is connected to the barrel allowing of its easy and ready insertion and removal during the operation of changing the tube in firing the gun in quick succession being in the most convenient position on the gun and always in readiness for operation.

The fire-arms to which my improvements are added are made in the usual manner, except in the formation of the chambers for the reception of the metallic cartridge-tube and the hinged holder.

A represents the metallic cartridge-tube, made externally in the form of a frustum of a cone and internally that of a cylinder, B, with a parabolic end, C, having a nipple, D, for the reception of the percussion-cap, resembling that which is ordinarily used in percussion fire-arms, pierced with a vent, E, in the usual manner, from which is extended an angular vent, F, such as that which is represented at F in Fig. 3, extended into the apex of the parabolic end of the bore of the tube for the purpose of igniting the charge at the center of its posterior end. The chamber for the reception of the tube A is made in the bore of the barrel of the fire-arm, and is of the size and shape of the external figure of the tube, as represented by dotted lines in Fig. 2. The bore of the tube and barrel are the same diameter. Their axes are coincident or on a right line.

The holder H, for holding the metallic cartridge-tube A firmly in the chamber and against the shoulders during the discharge of the load, is composed of a cylindrical block of metal about the length and diameter of the tube, made fast to a cap, I, which is hinged to the barrel in the manner represented in Fig. 2 by the hinge J, so that when it is raised and thrown back it will be out of the way of the insertion of the tube; and when shut down to its proper position, as represented in Fig. 1, the said cylindrical block H will fit between the breech L of the gun and the breech A' of

the tube, so as to effectually prevent any recoil of the tube at the discharge of the piece, and so that the cap I shall be coincident with the top of the barrel, being made of a corresponding size and form, and also serve as a cap to effectually exclude all rain or water from the joints and not obstruct the line of sight in taking aim, as is shown in Fig. 1, in which the top of the cap is represented to be on a line with the top of the barrel. A notch, N, is cut from the corner of the cap, to allow it to fit close around the nipple D when shut down tight. A projection, P, is formed on the side of the cap, by which it is opened and closed readily.

The manner of using this fire-arm will be discovered from what has been stated above; but, in order to make its use more clear, I will state further that the user, having provided himself with a number of tubes, all made, as above described, of uniform size and shape, and charged and capped and put into a cartouch-box or other convenient holder, and, desiring to fire a number of rounds in quick succession, he commences by throwing back the cap I and holding-block from its chamber, and inserting a tube and again shutting down the cap and holder and discharging the piece. He again draws back the cock, throws back the cap and holder, removes the discharged tube, inserts a loaded tube, shuts down the holder and cap, and again discharges the piece, requiring only a few seconds for each discharge, the metallic cartridge-tube being so constructed in form and so proportioned in quantity or volume of metal (the form of construction and proportion being presented in the drawings) as to produce a progressive annular expansion by

reason of the heat evolved in the explosion of the charge, thereby creating the necessary adhesion or friction between the said metallic cartridge-tube and the chamber of the gun, necessary and indispensable to retain the same fixed and immovable, thus preventing recoil and escape of charge from any of the joints, &c. The said form and proportion are also so combined and adapted that in process of cooling or contracting of the metal the said metallic cartridge-tube may be withdrawn from its chamber with ease, to be replaced by another, &c.

I am aware that fire-arms have been constructed to load at the breech by means of separate metallic tubes containing the charges taken from a cartouch-box or other place, and therefore I do not claim this principle of construction; but, never having seen or heard of any metallic cartridge-tube or hinged cap and holder that were made and arranged and operated in the manner and for the purpose that mine are, therefore,

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

The hinged holder H and cap I, in combination with the frustum-of-a-cone metallic cartridge-tube, A, constructed, arranged, and operated in the manner and for the purpose above set forth.

In testimony whereof I have hereunto signed my name, before two subscribing witnesses, this 29th day of May, A. D. 1848.

DAVID MINESINGER.

Witnesses:

WM. P. ELLIOT,
L. WASHINGTON, Sr.