

E. Allen,
Bullet Mold.
N^o 15,454. Patented July 29, 1856.

Fig. 1.

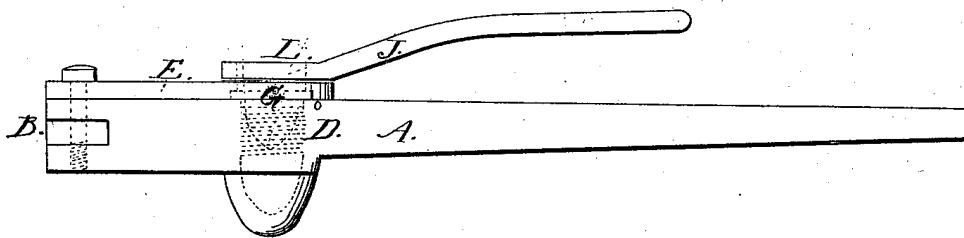


Fig. 2.

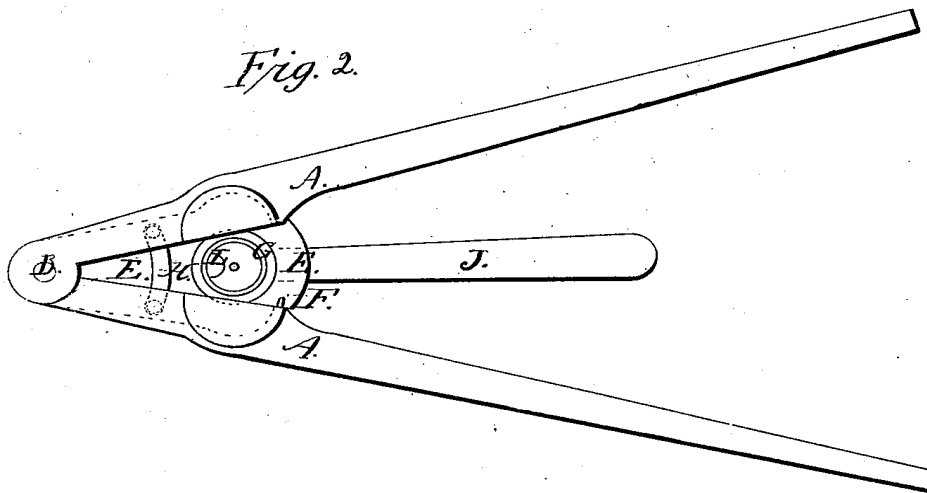
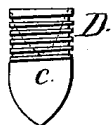


Fig. 3.



UNITED STATES PATENT OFFICE.

ETHAN ALLEN, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN MOLDS FOR HOLLOW PROJECTILES.

Specification forming part of Letters Patent No. 15,454, dated July 29, 1856.

To all whom it may concern:

Be it known that I, ETHAN ALLEN, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in the Construction of Bullet-Molds; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the drawings herewith presented, and to the letters of reference marked thereon, in which drawings—

Figure 1 shows the mold closed. Fig. 2 is a view from below of it open as after discharging the ball. Fig. 3 shows the core or cone and a form of ball; the same letters referring to the same parts in each.

My improvements relate to molds for that class of bullets known as the "Minié ball" and other analogous forms. These heretofore have been cast with the sprue at the point, which, when cut off, left a flat end instead of a point, rendering it necessary to swage or pare it by another operation to make a perfect-pointed ball, and no little inconvenience has arisen from the sticking of the ball in the mold, whereas by my improvements these faults are entirely remedied, making the ball perfect in form and delivering it freely.

To construct my mold, make the two parts A A with a joint at B, and their extremities forming handles in them make the form desired for the outside of the ball C, leaving at D a series of rings forming a screw projecting into the mold. On the top of A A place the piece E, turning on the pin at B, and holding the core G, which is made to turn freely in it. On the under side of E make a groove, H, and put pins in A and A to move in it, the ends of the groove preventing their opening more than wide enough to freely discharge the ball, and the pins hold the piece E over the space between A A when open. The core G for forming the cavity make as shown in Fig. 3, and, putting it through E, fasten it firmly to the handle J, and through it make

the sprue L, opening on one side of it, and sharpen its edges (the openings) next the ball. Between the pieces A A put a pin, F, to keep them true when closed.

The operation is on holding the mold by the handles of A A and filling the mold, then turn the handle J partially or wholly round either way, and it cuts off the sprue smooth and even with the surface of the ball, leaving it perfect in form, the screw form of the rings preventing the ball from turning. Then opening the handles A A, the pins move the piece E with the core over the space, carrying the ball with it free from both sides, allowing it to fall, making a perfect ball ready for following the rings, and it is only necessary to reverse the mold to allow the sprue to fall out or to pick it out, when the mold is ready to close for another, it making no difference in what position the handle J is left, it is always right to pour clear, and cuts equally well from any position. It is evident that the sprue might open on the rim or edge of the ball as well as in the core, and that a series of creases or rings partly round the ball and overlapping each other be used to hold the ball while cutting the sprue, and various other modifications of form and arrangement made without departing from the principles of my invention, as I do not claim any particular form or arrangement of parts; but

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

Cutting off the sprue by means of a cutter working on the curve of the inner surface of the ball, so as to leave the ball smooth and symmetrical, substantially in the manner and for the purposes above set forth and described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ETHAN ALLEN.

Witnesses:

GEORGE F. RICE,
JAS. G. ARNOLD.