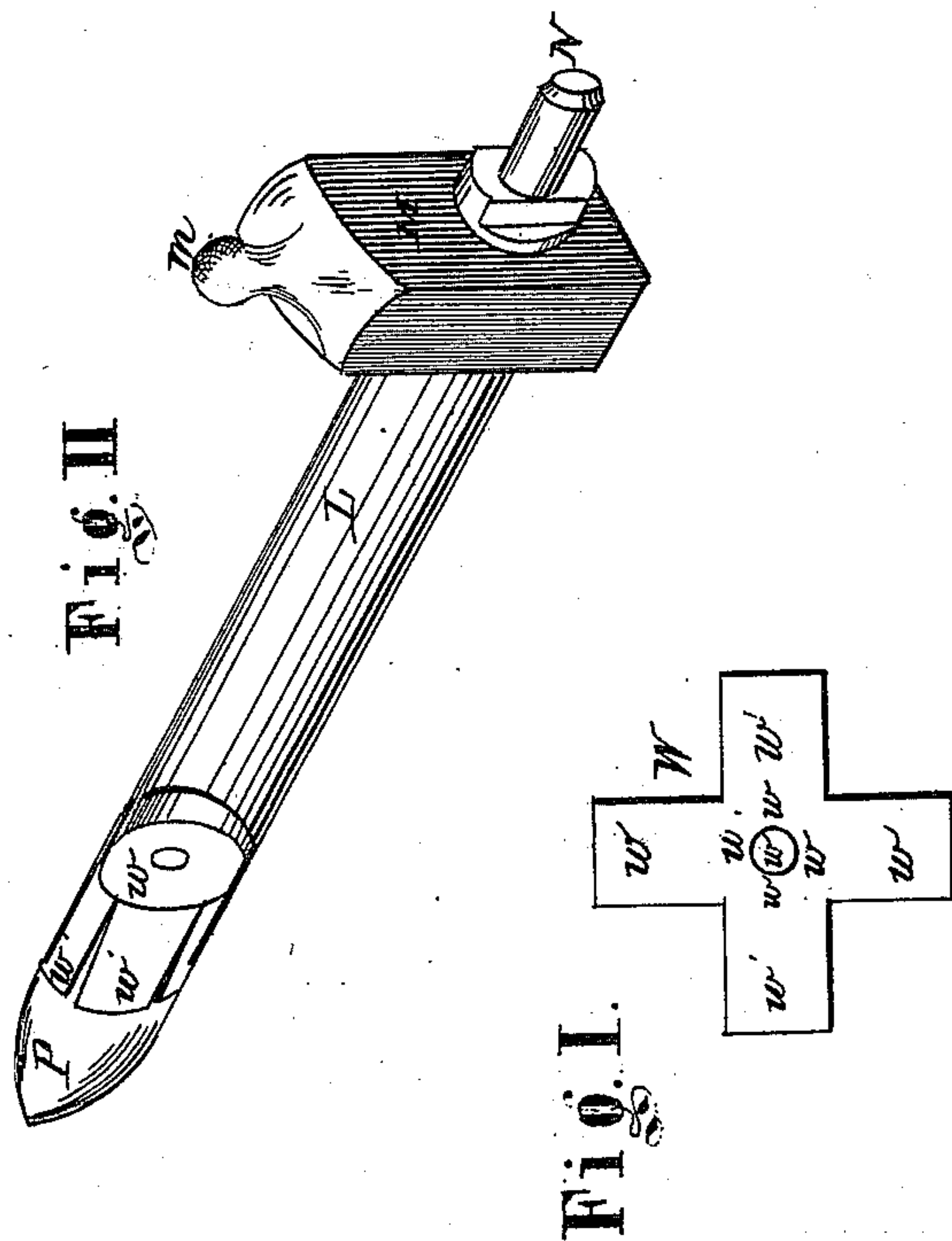


O. D. LULL.
Cartridge.

No. 40,761.

Patented Dec. 1, 1863.



Witnesses,
Charles Smith
J. H. Hallin

O. D. Lull
By *[Signature]*
[Signature]

UNITED STATES PATENT OFFICE.

ORRIN D. LULL, OF WATKINS, NEW YORK.

IMPROVEMENT IN PATCHING MINIE BULLETS.

Specification forming part of Letters Patent No. 40,761, dated December 1, 1863.

To all whom it may concern:

Be it known that I, ORRIN D. LULL, of Watkins, in the county of Schuyler, and State of New York, have invented a certain new and useful Improvement in Cartridges for Fire-Arms; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan illustrating the form of the wrapper or patch previous to use. Fig. 2 is a perspective view of the complete cartridge with the ball and wrapper in position, a part of the metal case or shell being broken away to expose the interior.

Similar letters of reference indicate corresponding parts in the two figures.

The present invention is chiefly intended as an improvement in cartridges for use with breech-loading fire-arms. The leading feature of novelty consists in the use of a patch of peculiar form, adapted to wrap around the ball without wrinkling, doubling, or lapping, and otherwise constructed and applied so as to prevent the wrapper from stripping off in passing the junction between the end of the cartridge-case and the bore of the piece, as hereinafter explained.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

The cylindrical cartridge-case L, base-plate M, handle *m*, and nipple N, may be constructed as described in Letters Patent granted to me on the 16th day of June, 1863, or in any other suitable manner.

P represents a conical ball, to the base of which is applied a wrapper, W, of cloth, skin, or other suitable material, and of peculiar form, to close the windage, lubricate the ball, and prevent leading of the grooves. The form of the wrapper W previous to use is shown in Fig. 1. It consists essentially of a central

part, *w*, of diameter about equal to the shot, and four, or other suitable number of leaves, *w*¹, the sum of whose width equals the circumference of the shot. *w*² represents an aperture in the center of the wrapper, the purpose of which is to afford the gases free access to the cavity of a Minie ball.

Operation: The wrapper is first properly lubricated and then applied to the ball, with the central part *w* against the base. The leaves *w*¹ are then folded forward so as to completely envelop and surround the largest part of the ball, as shown in Fig. 2, without overlapping. The ball, thus covered, is then inserted in the front of the cartridge-case, the latter having been previously supplied with powder. When the piece is discharged a slight escape of gas around the ball causes the wrapper to adhere closely thereto, and this, together with the avoidance of projections on the said wrapper, prevents it catching or stripping against the bore of the gun and causes it to be carried regularly forward upon and around the ball, so that the latter is lubricated during its entire passage through the bore, lessens the friction of the ball on the barrel, prevents lead separating from the ball and clinging to the grooves, and wipes out the bore at every shot, thereby rendering the shooting more steady, accurate, and powerful, as well as enabling the gun to be used longer without cleaning.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

The use, in a cartridge-case, of any suitable form of a patch or wrapper, W, constructed with a central aperture, *w*², and a number of leaves, *w*¹ *w*¹ *w*¹, adapted for wrapping around the base of the ball without wrinkling, doubling, or lapping, all as hereinbefore described, and for the objects specified.

ORRIN D. LULL.

Witnesses:

JOHN HOLLETT,
SAMUEL W. CASS.