

L. A. MERRIAM.
Cartridge.

No. 214,680.

Patented April 22, 1879.

Fig. 1.

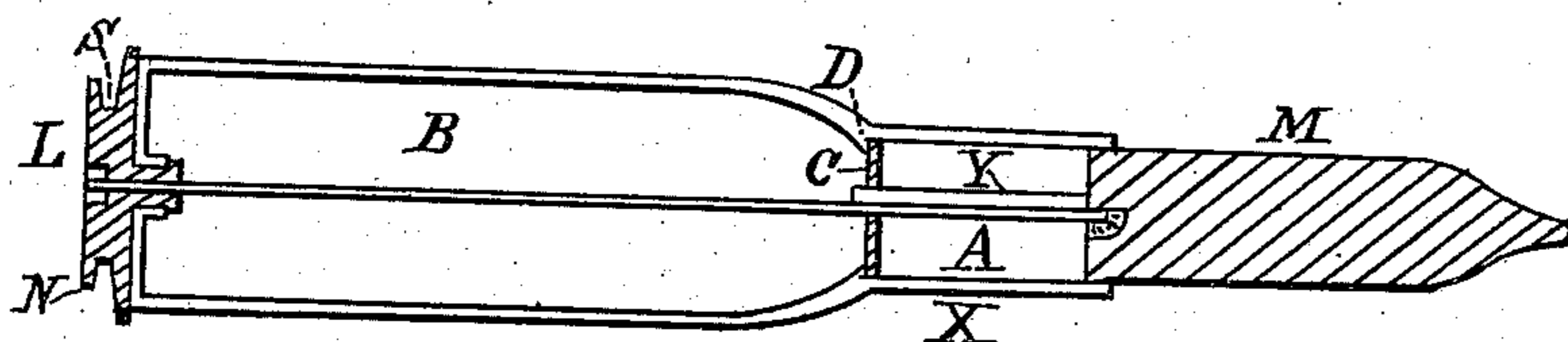


Fig. 2.

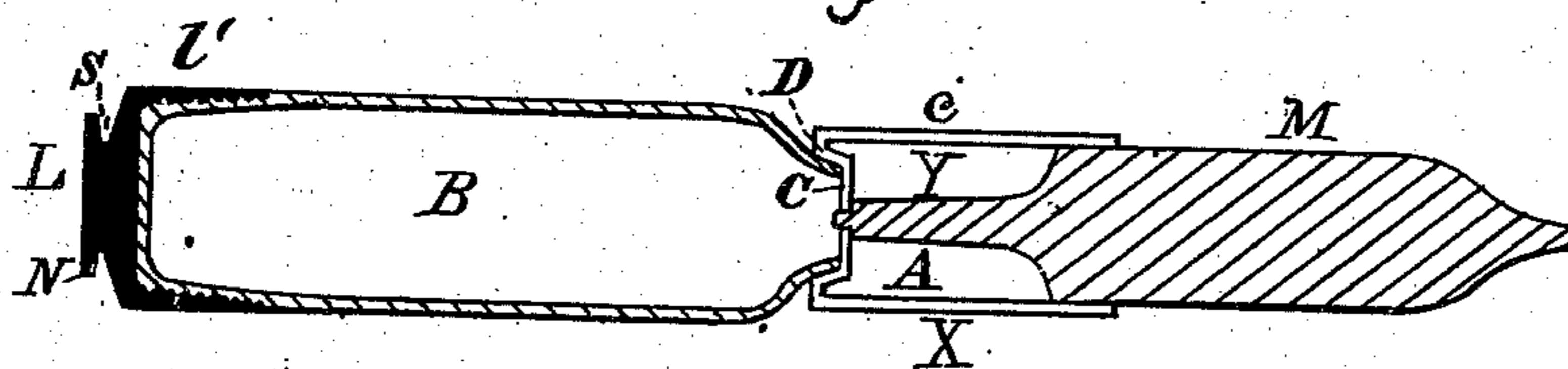


Fig. 3.

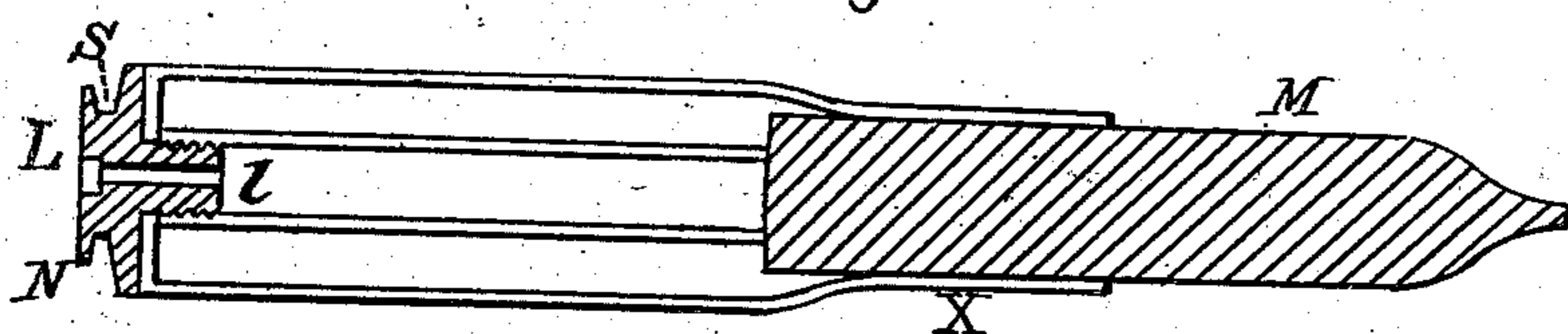


Fig. 4.

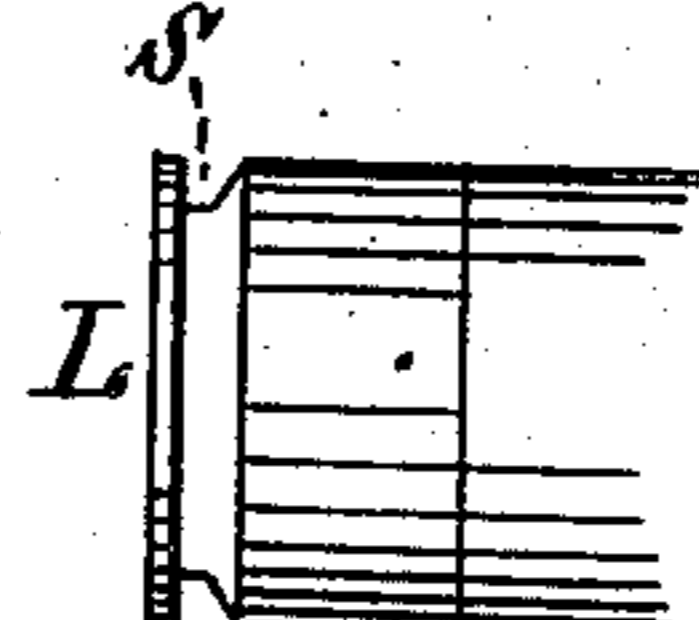
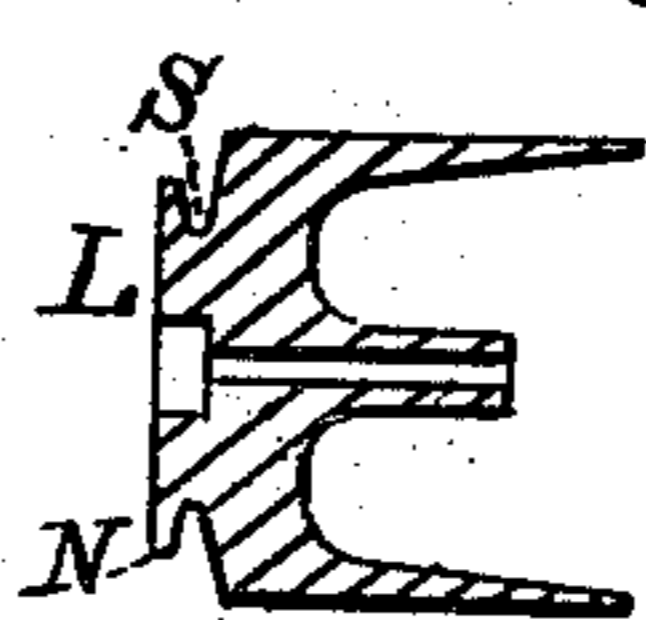
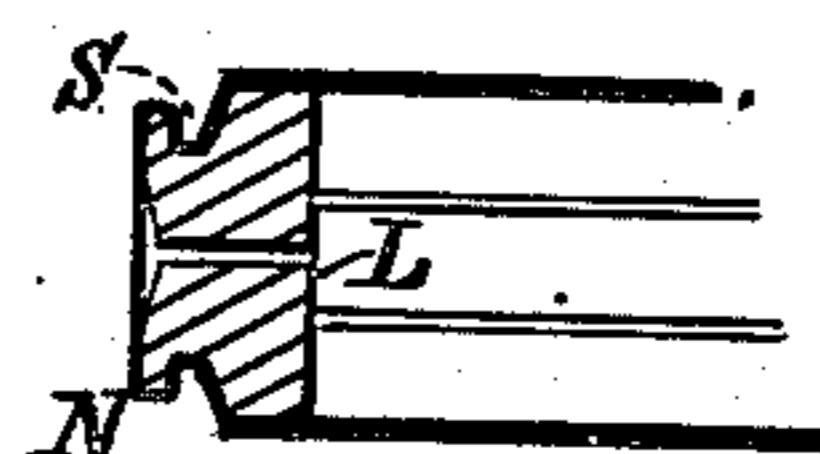
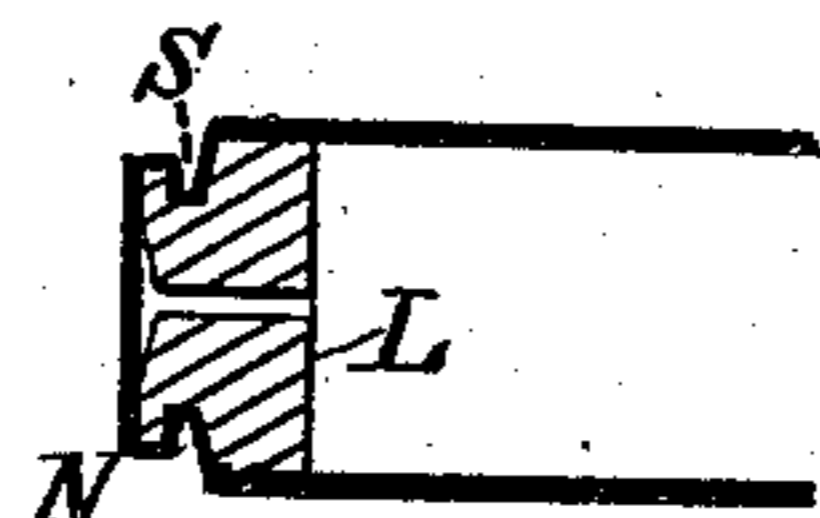


Fig. 5.



Witnesses :

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H. A. Daniels

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UNITED STATES PATENT OFFICE.

LINCOLN A. MERRIAM, OF NEW YORK, N. Y.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 214,680, dated April 22, 1879; application filed January 2, 1879.

To all whom it may concern:

Be it known that I, LINCOLN A. MERRIAM, of the city, county, and State of New York, have invented new and useful Improvements in Cartridges, of which the following is a specification.

The object of my invention is to construct a more safe, efficient, and serviceable cartridge than is now in use.

Figure 1 is a sectional view of a cartridge having an auxiliary powder-chamber at the rear of the initial chamber, and having a base provided with a re-enforce, L, grooved at S, and having the flange N. Fig. 2 shows a modification of the cartridge having the powder-chambers A and B and the re-enforce L. Figs. 3, 4, and 5 show various ways in which the re-enforce L may be attached to the base of the cartridge.

I strengthen the shell of a cartridge with a re-enforce, L, of steel or other metal sufficiently hard to retain its shape, and attach it to the base of the shell by a stem, l, threaded to enter a female screw made in the base of the shell, or into a nut within the cartridge. This nut may be elongated into a tube reaching to, or near to, the base of the shot.

The stem may have other inequality than a uniform thread, and be attached to the shell by compression, or in other suitable manner. The re-enforce may also be made with an annular flange, l', forming a cup-shaped receptacle, into which the base of the cartridge may be soldered, compressed, or secured in any other manner; or it may be placed within the shell of the cartridge. It may be cast, drawn, swaged, or otherwise constructed, and have an annular groove, S, sunk to receive the hook of the extractor, and so as to separate the bearing that sustains the percussion of the explosion from the flange N, by which the shell is extracted from the barrel. This flange does not extend beyond the body of the shell. The re-enforce may also have a fulminate-recess communicating through a vent with the explosive in the cartridge.

To lessen the strain upon the piece and the severity of the recoil, I construct a cartridge with an auxiliary powder-chamber, B, in the

rear of and separated by the diaphragm C, Fig. 1, or C c, Fig. 2, from the initial chamber A, which, corresponding to the ordinary powder-chamber of a cartridge, is first exploded in any of the known ways, and communicates its fire to the auxiliary chamber B through some fuse-opening elongated for that purpose, or forced open by the percussion, or opened in the diaphragm C by the withdrawal of the stem Y of the shot M as it moves forward in the bore of the gun.

There may be more than one auxiliary chamber, exploded one after the other in a similar or suitable manner.

The shoulders D on the shell of the cartridge are for supports to the diaphragm C.

If in constructing my cartridge I unite different metals (as iron or steel) with brass or copper, endangering their decomposition or the deterioration of the charge from chemical or galvanic action, I coat the part composed of iron or steel with copper or other suitable material by some well-known mechanical galvanic or chemical process.

What I claim is—

1. A cartridge having a reduced neck, X, and internal shoulders D at the rear of said neck, in combination with a separating-disk to divide the charges in said cartridge, as set forth.

2. A cartridge-shell provided with internal shoulders to support the diaphragm C, as and for the purposes set forth.

3. The shot M, with the stem Y, in combination with the diaphragm C, constructed and operating in the manner and for the purposes set forth.

4. A cartridge composed of a shell or body of metal, wholly or partially inclosing its rear end, and a base-piece having an annular groove, S, and a flange, N, that does not extend beyond the body of the shell, the re-enforce and body being connected together, as shown and described.

LINCOLN A. MERRIAM.

Witnesses:

B. ZEVELY,
W. E. WILLIAMS.