

I. MERRILL.

IMPLEMENTS FOR FIRE-ARMS.

No. 174,634.

Patented March 14, 1876.

Fig. 1.

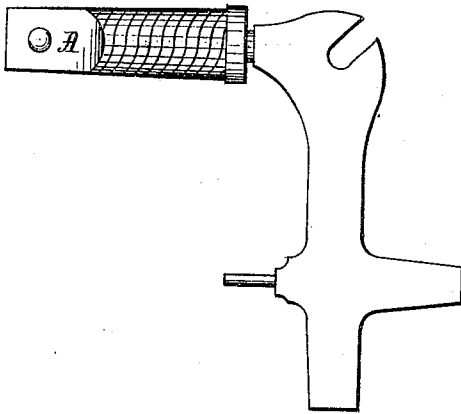


Fig. 2.

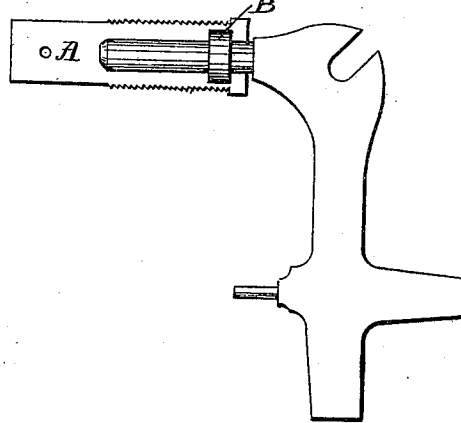


Fig. 5.

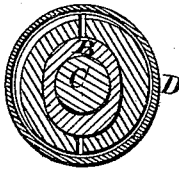


Fig. 4.

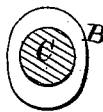


Fig. 6.

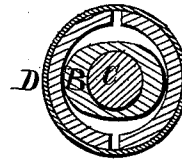
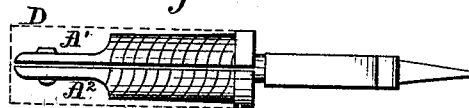


Fig. 3.



Witnesses:

Frankl. Parker.
A. Van Buren.

Inventor:

Ira Merrill
by J. L. G. Rice, Atty-

UNITED STATES PATENT OFFICE.

IRA MERRILL, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN IMPLEMENTS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **174,634**, dated March 14, 1876; application filed July 30, 1875.

To all whom it may concern:

Be it known that I, IRA MERRILL, of Springfield, Massachusetts, have invented an Extractor for Removing Cartridge-Shells, of which the following is a specification:

The object of my invention is to provide an extractor for removing the empty shells of cartridges, when their heads have been blown off, from the barrel of a breech-loading rifle. To illustrate the present state of the art, I will quote from the "Rules for the Management of the Springfield Rifle and Carbine. Ordnance Department, United States Army, 1874." [Paragraph VIII, page 23.] "Should the head of a cartridge come off in the act of firing, the best mode of extracting the shell is to take out a ball from a cartridge and reduce it with a knife, or by rolling, so that it can be inserted into the muzzle of the barrel. Ram the ball hard with the ramrod when the breech-block is closed; this will upset the ball and fill the headless shell. Open the breech-block, and the ball and shell can be easily pushed out with a ramrod."

By my invention all this may be avoided. All that is necessary to do is to open the breech-block, insert the extractor; give the part outside the barrel a quarter turn, and then pull out the extractor, and the empty shell will come out with it.

The extractor consists simply of two expanding-jaws, roughened on their outside by having a thread cut upon them. These jaws are made thin at one end, and are of spring-steel. They are secured together by a rivet. Inside of these jaws is placed a cam, which, when turned around, causes the jaws to expand.

The second part of my invention is the combination, in one implement, of a cartridge-shell extractor, and a screw-driver and wrench.

Figure 1 shows the extractor A, combined with the ordinary screw-drivers, punch, &c.,

now used in the army. Fig. 2 is a sectional view of the same, and shows the cam B on its rod C. Both are made of the same piece of metal as the screw driver, punch, &c. Fig. 3 represents another view of the same, and shows the two expanding-jaws of the extractor A¹ A². The dotted lines D D represent the shell of the empty cartridge. Fig. 4 is a sectional view, showing the cartridge-shell D D and the extractor A inserted into it. Fig. 5 shows the cam turned around so as to cause the two jaws A¹ A² to expand and press against the interior of the cartridge-shell D D.

The drawings so fully illustrate the invention that further description seems unnecessary, the substance of the invention being an extractor having roughened sides to grasp the interior of an empty cartridge-shell. This may be done in many ways besides the one shown. As, for example, an ordinary pair of pinchers, having their outer edges roughened, may be inserted into the empty shell, and then opened so that the roughened surfaces will take firm hold of the interior of the shell, and then it can be removed; or a tapering screw may be made so as to be inserted into the shell, and thus remove it. But, in practice, an extractor made like the one shown in the drawing has proved to be the best.

I claim as my invention—

1. An extractor for removing the empty shells of cartridges, having the expanding-jaws A¹ A² operated by the cam B, as shown and described.

2. The combination of an extractor having expanding-jaws for removing the empty shells of cartridges, with an ordinary army screw-driver and wrench, substantially as shown and described.

IRA MERRILL.

Witnesses:

M. P. KNOWLTON,
THOS. B. WARREN.