

(No Model.)

H. S. MAXIM.

METHOD OF MAKING CARTRIDGE SHELLS.

No. 387,651.

Patented Aug. 14, 1888.

fig:1.

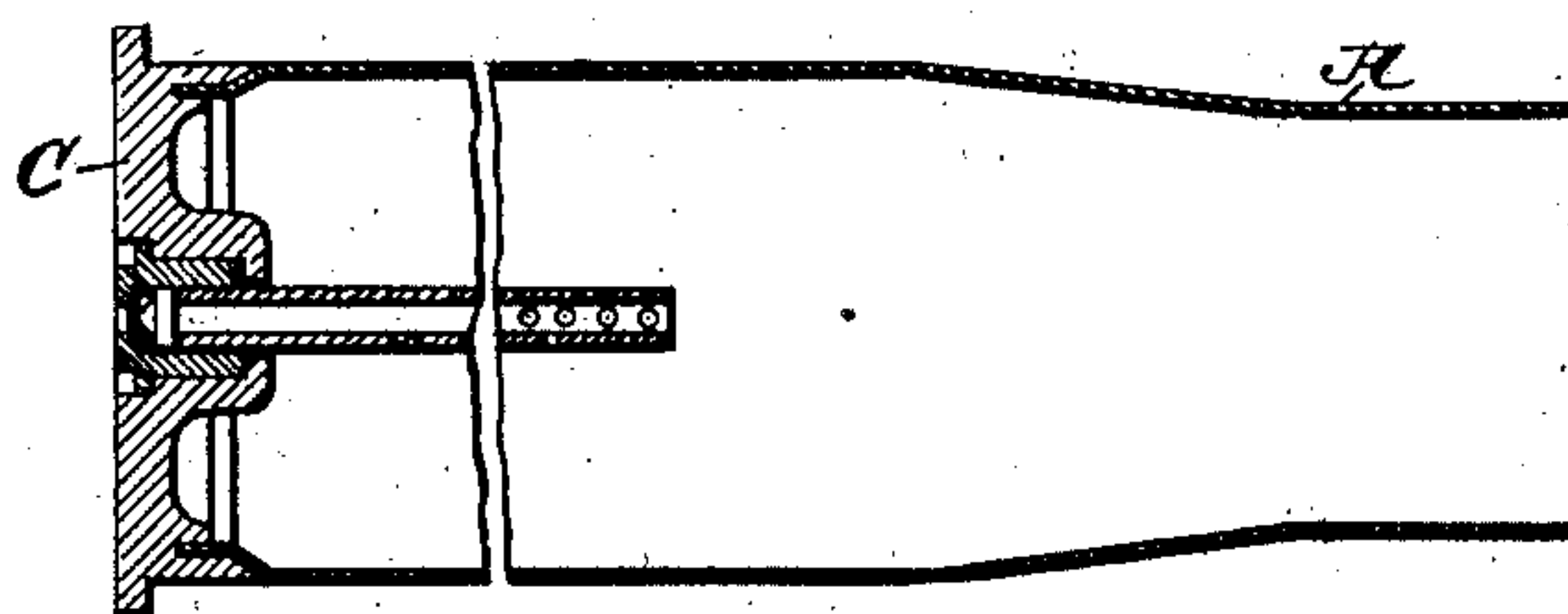


fig:2.

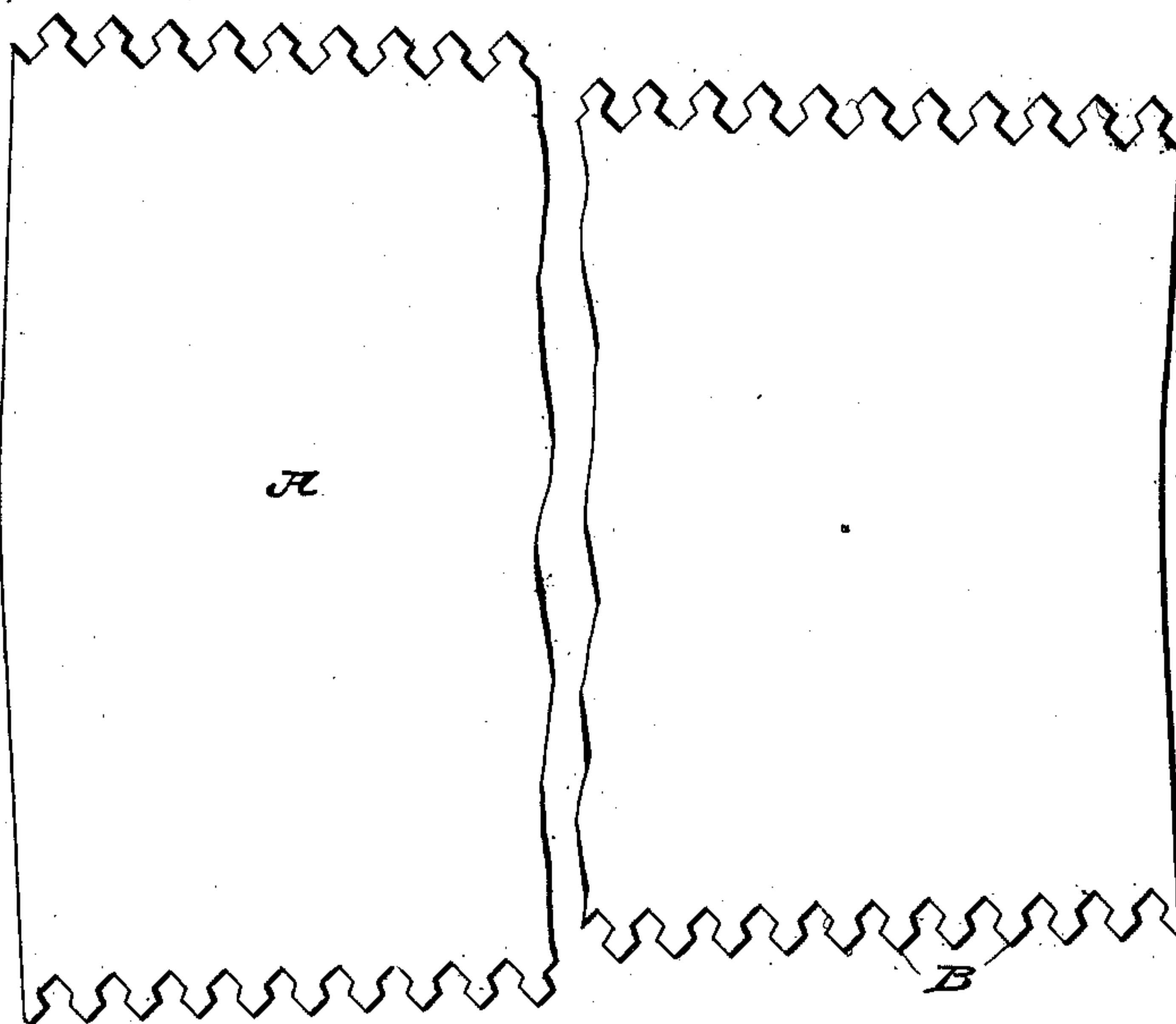
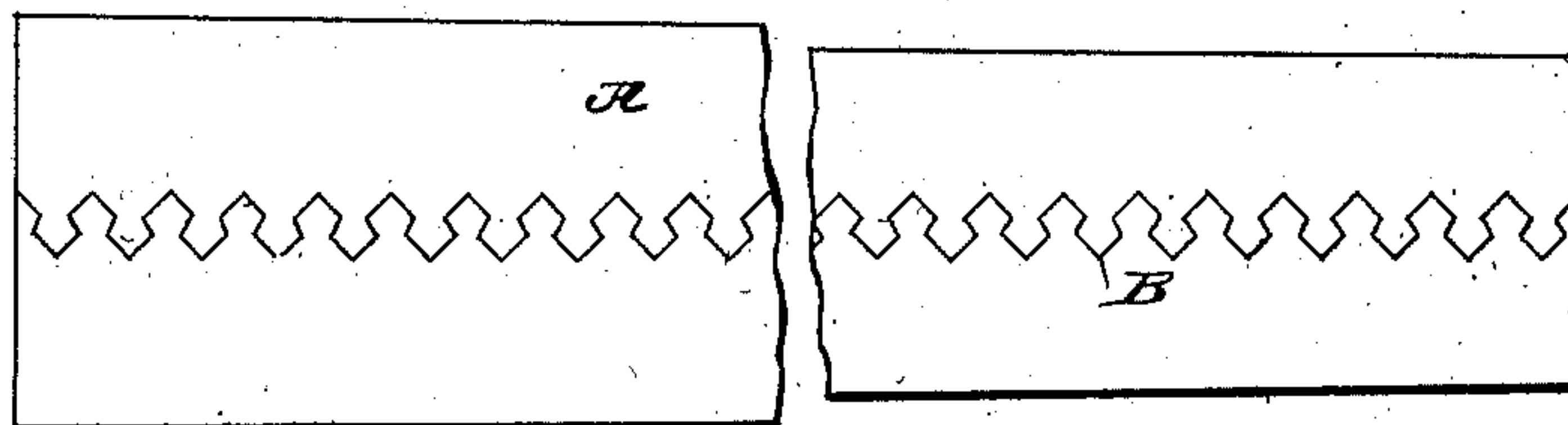


fig:3.



WITNESSES:

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HIRAM STEVENS MAXIM, OF LONDON, ENGLAND.

METHOD OF MAKING CARTRIDGE-SHELLS.

SPECIFICATION forming part of Letters Patent No. 387,651, dated August 14, 1888.

Application filed October 11, 1887. Serial No. 252,079. (No model.) Patented in England October 2, 1886, No. 12,561, and October 22, 1886, No. 13,534.

To all whom it may concern:

Be it known that I, HIRAM STEVENS MAXIM, a citizen of the United States, residing at London, England, have invented certain new and useful Improvements in the Manufacture of Metallic Cartridge Cases, (for which I have obtained patents in Great Britain, No. 12,561, dated October 2, 1886, and No. 13,534, dated October 22, 1886,) of which the following is a specification.

My invention relates to a novel method of manufacturing cartridge-cases, whereby I am enabled to advantageously make the tubular parts thereof from a plate or sheet of steel or other hard and tough metal.

In the accompanying drawings I have shown a cartridge-case in the various stages of its manufacture by my method.

Figure 1 is a longitudinal cross-section of a completed shell. Fig. 2 is a plan of a blank cut or stamped from a sheet of steel for the manufacture of the tubular part of the cartridge. Fig. 3 is a side elevation illustrating the second step or stage in the manufacture of the cartridge.

In making a cartridge-case according to my said invention I take a plate or sheet of steel or other metal of the required thickness and preferably of such dimensions that a considerable number of cartridge-cases can be made therefrom. I cut or stamp from this plate a piece, A, of the required length, and of substantially the shape shown in Fig. 2, having teeth or serrations B at its edges, which are to be subsequently united. Each piece or blank thus produced is bent into the form of a slightly-conical tube, as shown in Fig. 3, its toothed or serrated edges being interlocked or dovetailed together and then hammered and brazed. The tube thus formed is then finished and the exact shape or configuration imparted thereto by placing it in a hardened-steel chamber and rolling it by means of a hardened steel

roll applied to the interior of the said tube. The said tube is then firmly secured in any well-known or suitable manner in a groove in a metal head or base, C, of suitable construction. The whole of the cartridge-case is then galvanized or coated with zinc or other metal, both externally and internally.

By these improvements I am enabled to make very strong cartridge-cases. Moreover, by making the aforesaid steel chamber in which the cartridge is finished of the same internal dimensions and shape or configuration as the chamber of the gun in which the cartridges are to be used, I insure an accurate fit of the said cartridges in the chamber of the gun.

The teeth or serrations in the piece B may be of any other convenient form.

What I claim is—

1. The improvement in the method or process of manufacturing cartridge-cases, which consists in first forming from sheet metal a blank with serrated edges, then bending the same and interlocking the serrated edges to form a tube, and then shaping or finishing said tube by inserting it in a chamber of hard metal of the required shape or configuration and rolling it from the interior, as herein set forth.

2. The method or process of making cartridge-cases which consists in punching or stamping from sheet-steel or similar metal a blank with serrated edges, bending the blank into tubular shape and interlocking the serrations, and then welding the serrated edges together and uniting a head or base to the tube, as set forth.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HIRAM STEVENS MAXIM.

Witnesses:

DAVID YOUNG,
WALTER MORRIS.