

W. TIBBALS.
METALLIC CARTRIDGE CASE.

No. 87,125.

Patented Feb. 23, 1869.

Fig. 1.

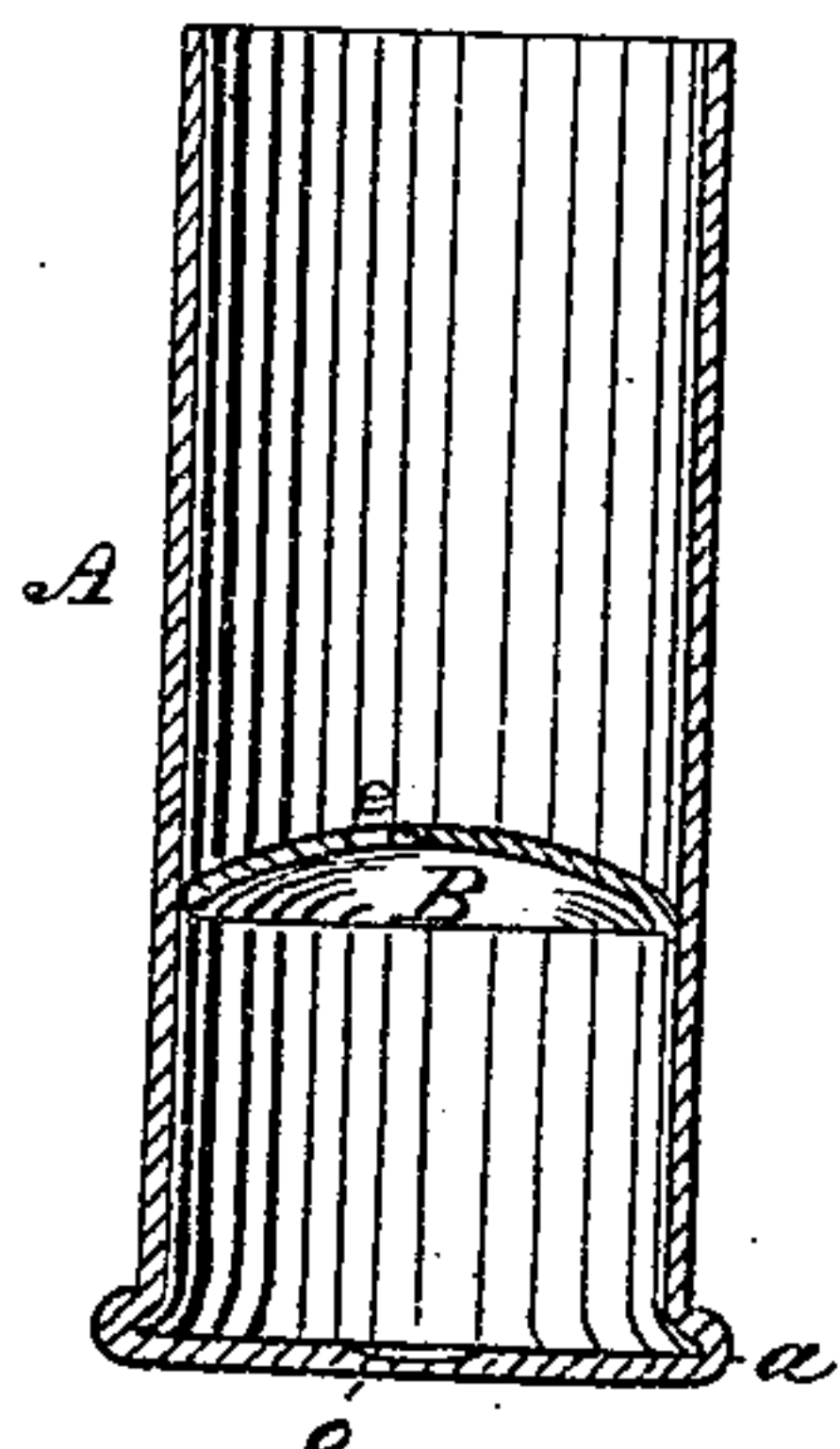


Fig. 2.

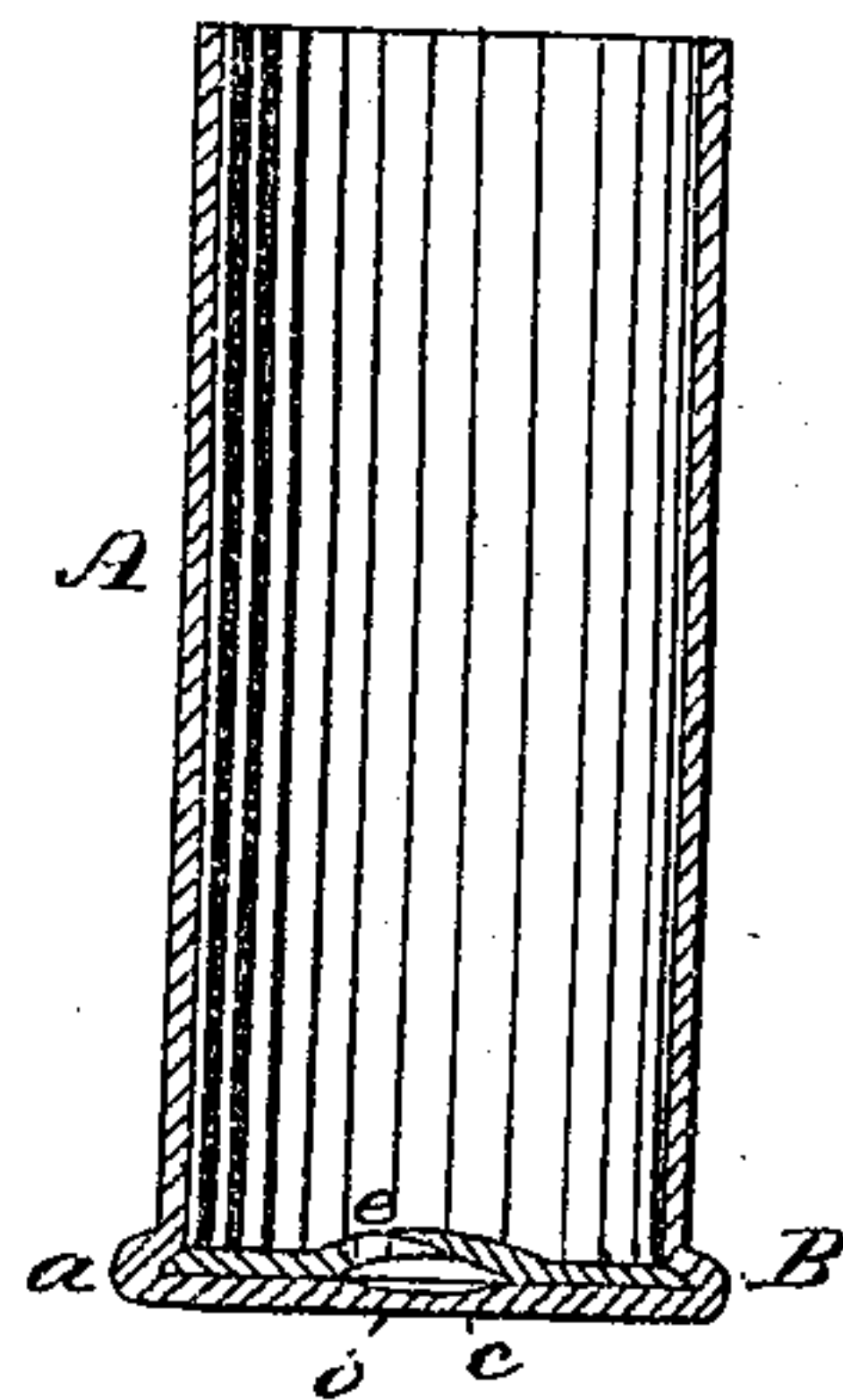
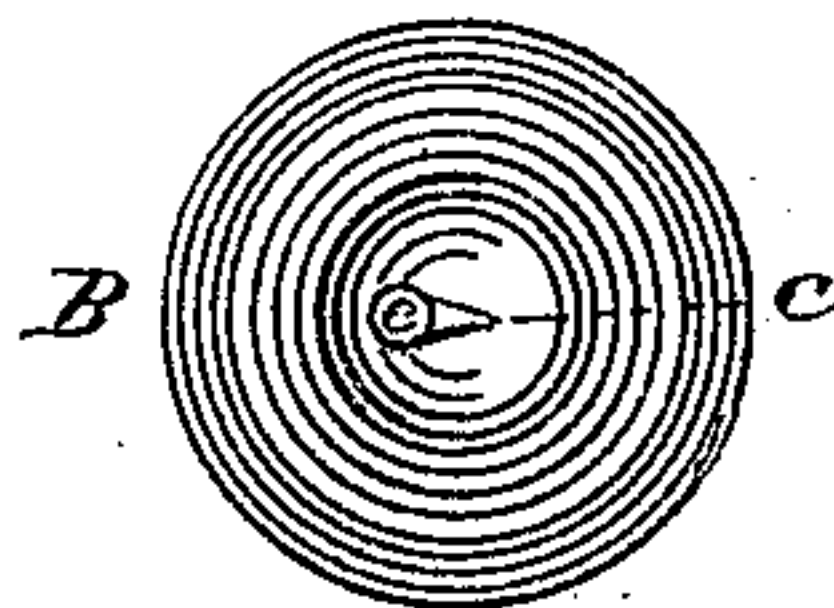


Fig. 3.



Fig. 4.



Witnesses,
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his attys.

United States Patent Office.

WILLIAM TIBBALS, OF HARTFORD, CONNECTICUT.

Letters Patent No. 87,125, dated February 23, 1869.

IMPROVEMENT IN METALLIC CARTRIDGE CASES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM TIBBALS, now of Hartford, in the county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Metallic Cartridge-Cases; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention relates to an improved method of constructing metallic cartridge-cases; and consists in a novel method of securing the anvil within the case, or shell.

Figure 1 is a longitudinal central section of a cartridge-case, showing the anvil in the act of being inserted;

Figure 2 is a similar view, showing the anvil secured in place, ready for use;

Figure 3 is a transverse section of the anvil before being inserted; and

Figure 4, a face view of the anvil, from the under side, as it appears after it is secured in the case.

Heretofore it has been customary to locate the fulminate, in this class of cartridges, in the flange of the case or shell. Attempts have also been made to construct a cartridge having the fulminate at the centre; but, as in such efforts the anvil consisted either of a mass of paper compressed, and occupying a considerable space, and necessitating the use of a pin or other device for igniting it, as in the Lefacheux cartridges, or of a solid block of metal, dropped into the case, and secured therein by indentations made in the sides of the case, above the edge of the anvil, the result has been that such efforts have failed to produce an efficient and cheap cartridge-case, suited to the wants of the community.

To overcome these difficulties, and produce a central-fire cartridge, in a cheap and expeditious manner, is the object of my present invention, and to do this, I proceed as follows:

I first construct the case A of sheet-metal, with the flange *a* formed thereon in the usual manner, which, being well known to those skilled in the art, need not be herein specifically described.

I then strike out of sheet-metal, by means of suitable dies or punch, a disk, B, which, when flat, is of a diameter equal to the internal diameter of the head of the case A.

This disk has a hole, *e*, formed in it, a little to one side of the centre, as shown in the various figures, and on its under face a small groove or indentation, *c*, is formed, this groove extending from the hole *e* to the centre of the disk, as shown more clearly in fig. 4.

The disk B is then pressed into a concave form, as represented in figs. 1 and 3, by which operation its

diameter is reduced sufficiently to permit it to enter readily within the case A, as represented in fig. 1.

It is then pressed down, by a suitable punch, upon the base or head of the case A, whereby it is flattened out over nearly all its surface, its diameter being thereby increased to its original size, and its edge, all around, being, at the same time, forced out into the cavity within the flange *a* of the shell, as shown in fig. 2, whereby it is firmly secured in place.

In order to form a cavity for the reception of the fulminate, the head or base of the case A may be cut away, or slightly indented, on its inner face, as represented at *o*, of figs. 1 and 2, by which means the metal of the shell will be rendered thinner at that point, and a less forcible blow be required to ignite the fulminate.

If preferred, however, this may be omitted, and the cavity for the reception of the fulminate be formed by leaving a small portion of the disk, or anvil B, at its centre, concave, as represented in figs. 2 and 4; this being effected by using a punch for flattening out the disk, that shall have a central cavity on its face, of the required size and form, so that, while operating to spread the disk and force its edge into the cavity of the flange, the central portion shall be left in a concave form, as shown in figs. 2 and 4.

By the use of proper dies, well known to the workers of sheet-metals, the disk B may be cut out, and have the hole *e* and groove *c*, with its convex form, all produced at one single operation, and thus the disks, or anvils, can be produced in a very expeditious and cheap manner; and by the peculiar manner of securing it in the case A, I am enabled to produce a very superior cartridge-case, using a much lighter and cheaper anvil than heretofore, and avoiding entirely the danger or liability of the anvil's becoming loosened from the case, and driven out into the bore of the gun, by the blow of the hammer, or firing-pin, and dispensing with all pins, caps, and other fixtures heretofore used for igniting the charge.

I am aware that cartridges have been made in which a disk was placed loosely in the shell, as in the patent of Smith and Wesson, August 8, 1854; and I am also aware that a disk has been used for packing or holding the fulminate in the flange or rim, as in the cartridge patented to Smith and Wesson, April 17, 1860, and also in the rejected application of C. Sharps, filed January 28, 1860, and therefore I do not claim such; but having fully described my invention,

What I claim, is—

A metallic cartridge-case, consisting of the shell A, having the perforated disk-anvil B secured therein, as herein described, for the purpose of producing a central-fire cartridge, substantially as set forth.

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Witnesses:

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