

W. TIBBALS.

Cartridge.

No. 51,243.

Patented Nov. 28, 1865.

Fig. 1.

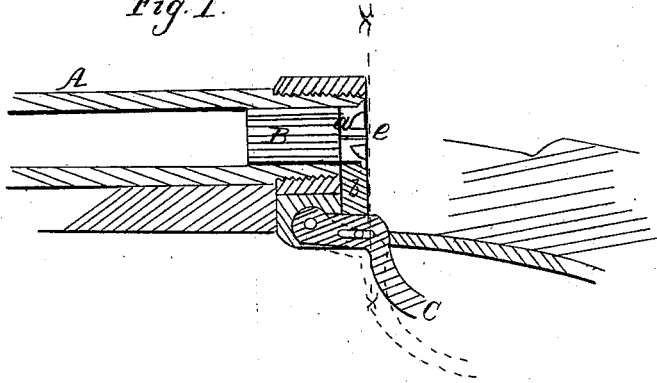
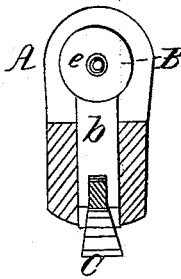


Fig. 3.



Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE

WILLIAM TIBBALS, OF SOUTH COVENTRY, CONNECTICUT.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 51,243, dated November 28, 1865.

To all whom it may concern :

Be it known that I, WILLIAM TIBBALS, of South Coventry, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Fire-Arms; 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.

Figure 1 is a longitudinal section, and Fig. 2 a transverse section taken on the line *xx* of Fig. 1. Fig. 3 is a view of the cartridge shown separately, with the anvil attached.

Similar letters refer to like parts in the various figures.

The nature of my invention consists in so constructing an arm as to hold a loose anvil tightly in the cartridge-shell, while the same is being fired.

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

In using copper cartridges, the case is usually thrown away after being once used. My invention has for its object the using of the same shell repeatedly, and thus reducing the expense of furnishing the ammunition. In order to accomplish this object, I take the shell B, constructed in the usual manner, and cut or punch a small hole in the center of its base, as shown in Fig. 3. I then provide an anvil, *a*, consisting of a solid piece of metal recessed on its rear face so as to leave a nipple, *e*, at its center, having its end flush with the face thereof, as shown clearly in Fig. 3 and in section in Fig. 1. This anvil is then placed in the shell B, bringing the end of the nipple opposite the hole in the base of the shell, when the latter is charged with powder and shot or ball, as the case may be, and a cap is placed on the nipple; or, the cap may be placed on the nipple before the anvil is put into the shell. The cartridge thus prepared is then inserted in the bore at the breech in the same manner as an ordinary metallic cartridge.

It is obvious that if the cap be now struck by the hammer, the anvil, not being secured or held in any manner, would yield to the blow of the hammer, and that the cap would not be certain to be exploded. To remedy this difficulty, I provide the movable piece or clamp *b*, which is so arranged in the breech of the gun that it can be pressed by the lever C against the side of the shell B, where the

anvil *a* is located, with sufficient force to hold the anvil firmly in place while it receives the blow of the hammer. When the charge has been fired, the clamp is loosened by depressing the lever, and the shell can then be withdrawn and recharged, and in this manner the shell can be used a great number of times.

It will be understood that the breech will be closed by any suitable means, to withstand the force of the charge, and that any style of breech-loading device may be used for that purpose—my device being intended only to hold the anvil in the shell.

It is obvious that in those guns which have their barrels stationary, as here shown, the clamping device must be movable, but that in guns having the barrel movable the clamping device may be made stationary. It is also obvious that the clamping device need not be constructed in all cases as here shown, this being intended simply as one method of illustrating the idea, but that any mechanical equivalent of this device may be substituted and made to answer the same purpose, it only being necessary to bring sufficient pressure upon the anvil to hold it in place while being struck by the hammer or a sliding bolt, in case the latter be used.

It is further obvious that by these means shells that have been used as ordinary fixed ammunition, known as the copper cartridge, may be used in this way by simply making a hole of proper size in their base and inserting the anvil *a*, as already described. And thus, by having one of these anvils, a person is enabled to preserve the old shells, which are now thrown away as useless, and use them over and over again with loose ammunition, and thus a great saving in ammunition is effected.

Where the primed copper cartridge is used, it frequently happens, especially in the remote districts, that the supply becomes exhausted and the arm is thereby rendered useless, but by my invention this difficulty is entirely removed.

Having thus fully described my invention, what I claim is—

Securing a loose anvil in the cartridge-shell, when placed in the gun-barrel, by means of pressure applied thereto, substantially as described.

WILLIAM TIBBALS.

Witnesses:

BRIGHAM PAYNE,
ROBT. J. WHITE.