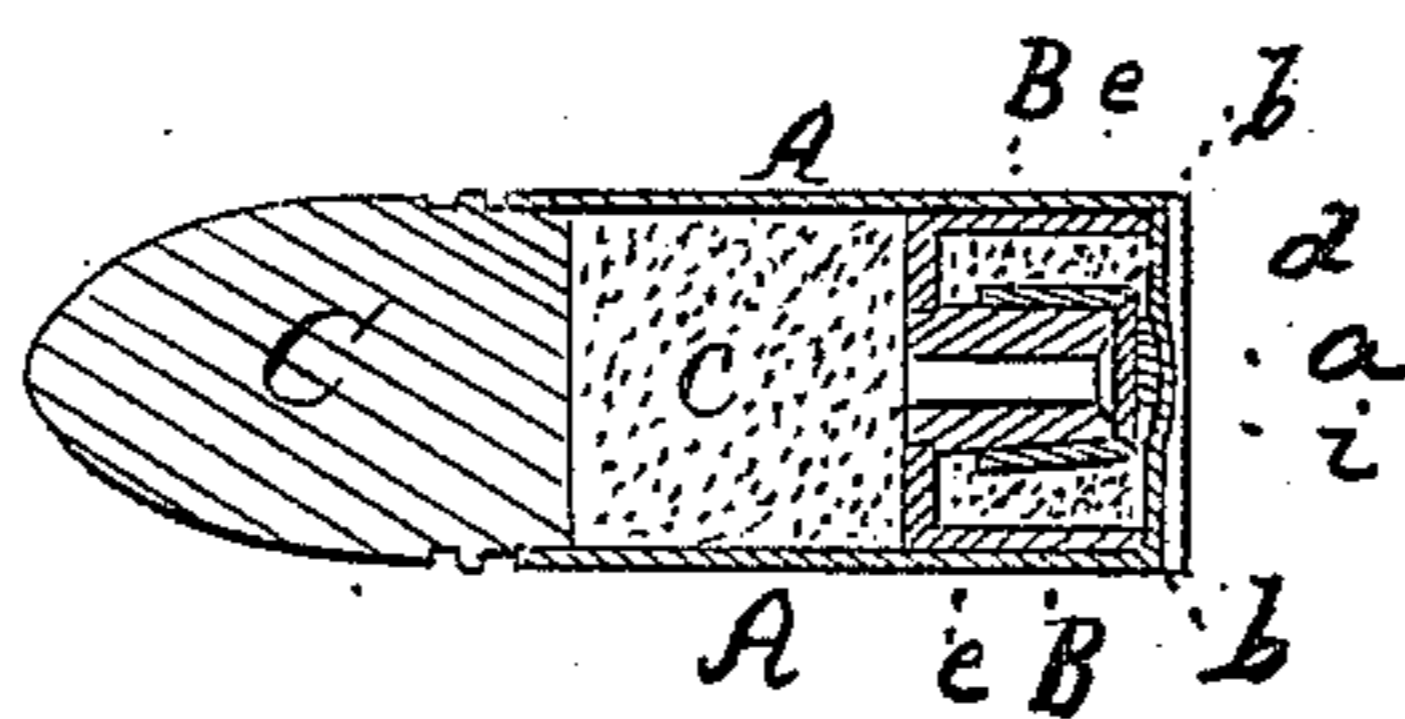


G. CONOVER.  
Cartridge.

No. 41,684.

Patented Feb. 23, 1864.



Witnesses:

*Thos H Douglas*  
*Geo W Reed*

Inventor:

*Geo Conover*

# UNITED STATES PATENT OFFICE.

GEORGE CONOVER, OF MIDDLETOWN, CONNECTICUT.

## IMPROVEMENT IN FIXED AMMUNITION FOR FIRE-ARMS.

*Specification forming part of Letters Patent No. 41,684, dated February 23, 1864.*

*To all whom it may concern :*

Be it known that I, GEORGE CONOVER, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Fixed Ammunition for Fire-Arms and Ordnance; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, said drawing representing a central longitudinal section of a fixed-ammunition cartridge constructed according to my invention.

My invention relates to the use, in fixed-ammunition cartridges for loading in front of the chamber or chambers of or at the muzzle of a fire-arm, of a second charge of gunpowder, for the purpose of expelling the case or shell of the cartridge through the barrel, and out at the muzzle of the fire-arm in which the cartridge is used; and it consists in a novel mode of applying and igniting such second charge.

A is the shell, consisting of a cylinder of copper or other material, open at both ends. The external diameter of this shell should be slightly smaller than that of the bullet, that it may pass freely through the bore of the barrel. The bullet C is secured in the front end of the said shell by pressing the front edge of the latter into the lead all around, or in any other suitable manner. B is a short chamber, of copper or other suitable material, made with its rear end open and with its front end closed, except that the latter end has tightly secured in its center a nipple, *a*, in which is a vent. This chamber is of a size to fit tightly into the rear end of the shell A, but has its rear edge turned slightly outward, as shown at *b b*, to form a shoulder to abut against the rear end of the shell and prevent the said chamber from entering too far thereinto. The space within the shell A, between the bullet and the front end of the chamber B, must be of sufficient capacity to contain the charge, *c*, of gunpowder by which the bullet is impelled, such charge being put into the shell before the chamber B and after the bullet. *d* is a thin disk, of copper or other metal, fitted into the rear end of the chamber B, and secured in place by burring the rear edge of the said chamber over it or by soldering. This disk rests against a percussion-cap,

*i*, which is placed on the nipple *a* before the said disk is put in, the nipple being just long enough to enable the cap to form a bearing for the said disk. The annular space *e*, left within the chamber around the percussion-cap and nipple, contains the second charge of gunpowder, by which the expulsion of the cartridge-shell A from the fire-arm is effected. This charge is, of course, put into the chamber before the disk *d*. This charge may be ignited either by a pointed hammer striking through a hole in the rear of the chamber of the fire-arm or by a hammer striking on a sliding pin working through an opening in the breech or rear of the chamber, the said hole or opening being opposite to the center of the disk, and therefore opposite to the percussion-cap and nipple. The blow of the hammer explodes the fulminate in the percussion-cap, the fire from which ignites the charge *c*, and so expels the bullet from the shell A, and drives it through and out of the barrel of the fire-arm. A portion of the fire also passes from the vent *a*, and under the cap to the charge in *e*, and this charge, acting against the front end of the chamber B and against the disk *d*, presses back the said disk, and holds it against the breech or rear of the chamber of the fire-arm, and drives forward the chamber B and the shell, and expels them through the barrel and out at the muzzle of the fire-arm, the shell being carried forward with the chamber B by means of the shoulder around the rear end of the latter, which abuts against the rear end of the shell. The disk *d* remains in the chamber, but, being of much smaller diameter, will drop out when the fire-arm is held muzzle downward.

This cartridge may be used in revolvers which load in front of the cylinder, in breech-loading fire-arms which load in front of the chambers, or in muzzle-loading fire-arms.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the shell A, of the chamber B, disk *d*, nipple *a*, and percussion-cap *i*, substantially as and for the purpose herein specified.

Witnesses: GEO. CONOVER.

THOS. J. DOUGLAS,

GEO. W. REED.