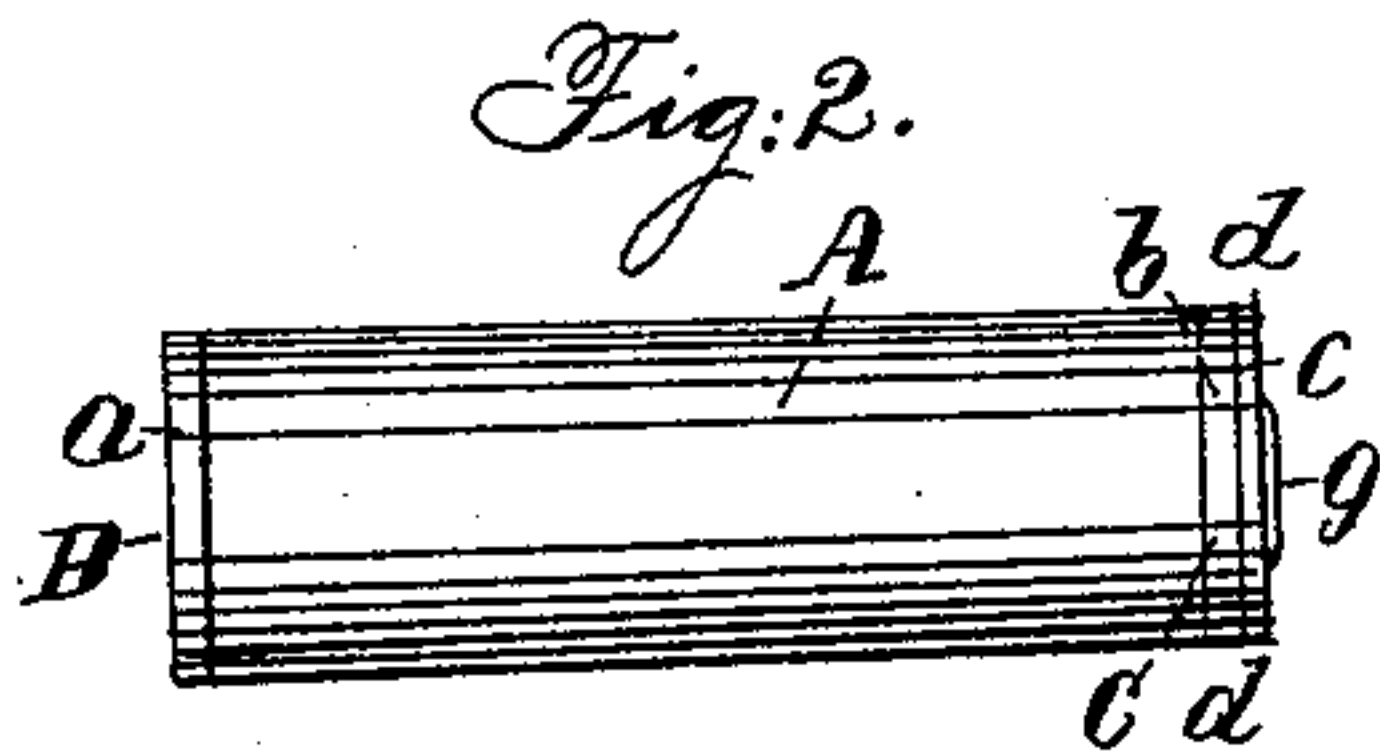


Cartridge.

Patented Nov. 26, 1861.



Inventor,

R. White
by Mum & Co
attys

UNITED STATES PATENT OFFICE.

ROLLIN WHITE, OF DAVENPORT, IOWA.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 33,805, dated November 26, 1861.

To all whom it may concern:

Be it known that I, ROLLIN WHITE, of Davenport, in the county of Scott and State of Iowa, have invented a new and useful Improvement in Cartridges for Revolvers and other Fire-Arms in which the Load is Introduced at the Chamber or Breech; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central longitudinal section of a cartridge constructed according to my invention. Fig. 2 is a longitudinal outside view of the same, and Fig. 3 is a central section of the percussion cap or pellet detached from the cartridge.

Similar letters of reference indicate corresponding parts in the several figures.

This invention is applicable to revolvers and other fire-arms in which a joint is formed between the chamber and the barrel or portion of the barrel in front of the chamber, for the introduction of cartridges at the breech. It consists in the construction of the case of the cartridge of two or more pieces of metal movable longitudinally in relation to each other, so that when the charge is fired one portion may be driven by the force of the explosion forward against the barrel or fixed portion thereof, and the other portion backward against the breech to prevent the escape of the gas; and it further consists in a certain construction of the cap or pellet containing the percussion-priming, and fitting the same to a metallic cartridge-case, whereby it is made to act as a valve to close the vent of the said case by the force of the explosion of the charge, and whereby it is supported in such a manner against the blow of the hammer as to insure its explosion.

To enable others to construct cartridges according to my invention, I will proceed to describe it with reference to the drawings.

The case of the cartridge represented is made of three separate pieces, A, B, and C. The principal piece, A, is a light cylindrical tube, of brass or copper, of a length about equal to the movable chamber or chambers of the fire-arm in which it is to be used, and of a caliber slightly larger than that of the fixed barrel of the arm, the movable chamber or

chambers of which should be of a caliber so much larger than the barrel as to permit the said tube to be inserted easily within it, the whole of the case being intended to remain in the chamber after the discharge. The pieces B and C are made of short pieces of very thin tubing, having such external diameter as to enable them to fit snugly within the tube A, the said pieces being inserted into the tube A from opposite ends, the front piece, B, having at its front end an external collar, *a*, and the back piece, C, having firmly secured to it a base-piece, *b c d*, on which is formed a flange, *d*, the thickness of the collar *a* and flange *d* being such that when they fit close up to the ends of A the whole length of the case will be about equal to the length of the movable chamber or chambers of the arm. The said chamber or chambers may be capable of opening at the rear, that the cartridge may be inserted thereat, as in the rotating cylinder described and claimed in my Letters Patent No. 12,648; or the chamber or chambers may be constructed to load in front. The tubes B are short enough to enable the ball D to be received within the tube A, between the inner ends of the said tubes B and C; and the interior of the front tube B is very slightly larger than the bore of the barrel or stationary portion of the barrel, in order that the ball, after passing through the said tube B, may slug in the grooves of the barrel.

A vent, *e*, is made in the center of the base-piece *b c*, and this vent is so countersunk in the rear as to form a shoulder, *i*, and cavity, *f*, of dovetail form—that is to say, larger in front, for the reception of the percussion cap or pellet *g*; and in order to facilitate the construction of this cavity the base-piece *b c* is made of two pieces of sheet metal soldered together, the inner piece *b* being the thickest, and the vent *e* being made in the front piece *b* and the larger cavity in the rear piece *c*. The cap or pellet is made like that known as Sharp's priming, as represented, or of other construction in which the priming is inclosed between two pieces of metal, and these two pieces, *h l*, Fig. 3, are made of concavo-convex form, to present a convex form toward the rear and a concave form toward the front.

The explosion of the charge of powder *j* in the cartridge is effected by the hammer strik-

ing the pellet or cap *g*, where it is supported by the shoulder *i*, and so causing the explosion of the priming, the fire from which is conveyed through the vent *e* to the charge *j*. As the ball is driven forward through the tube B, in which it slugs, it drives the said tube forward against the rear end of the fixed barrel or fixed portion of the barrel, and so causes the front end of the said tube to close the joint between the said barrel and the front of the chamber, and at the same time the pressure of the gas evolved by the explosion forces the tube C back against the breech of the arm, and so causes the joint between the rear of the chamber and the breech to be closed tightly, while the pressure of the gas upon the pellet drives it back against the edges of the vent after the manner of a valve, and thus makes it close the vent most effectually.

The same results may be obtained in two different ways by making the cartridge-case of two pieces only, viz: First, by attaching the base of the cartridge permanently to the tube A, and so dispensing with the tube C, but using the tube B; and, second, by making the ball fit tightly enough in the tube A to carry it forward against the rear end of the fixed barrel or other fixed portion of the barrel, and so dispensing with the tube B, but

using the tube C. In either of these cases one portion of the cartridge-case will be driven forward against the fixed barrel or fixed portion of the barrel, and the other portion against the breech.

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

1. The construction of the case of a cartridge of two or more pieces of metal, movable longitudinally, relatively to each other, substantially as and for the purpose herein specified.

2. So constructing the cap or pellet *g*, containing the percussion-priming, and applying the same to the base of the cartridge, that it will be caused to operate as a valve to close the vent thereof by the force of the explosion of the charge.

3. Fitting the percussion cap or pellet *g* to a shoulder, *i*, formed around the vent in the base of the cartridge-case, substantially as herein described, for the purpose of a firm bearing to support the said cap or pellet against the blow of the hammer, and so insuring the explosion of the priming.

ROLLIN WHITE.

Witnesses:

M. M. LIVINGSTON,
JAMES LAIRD.