(No Model.)

G. V. FOSBERY & H. PIEPER.

METALLIC PATCH FOR BULLETS.

No. 291,891. Patented Jan. 15, 1884.

FIG. 1.

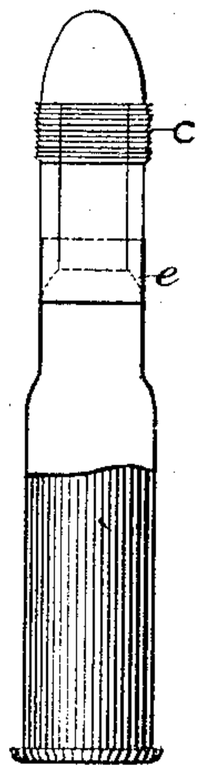


FIG. 4.

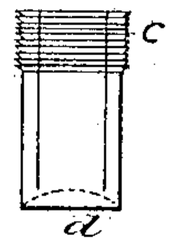


FIG. 5.

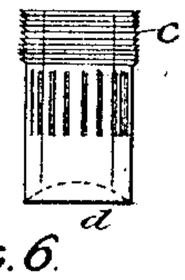


FIG. 3.

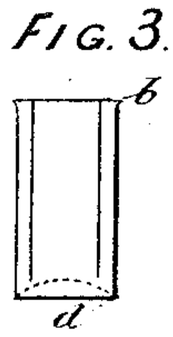


FIG. 6.

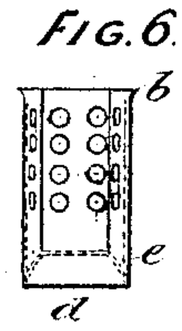
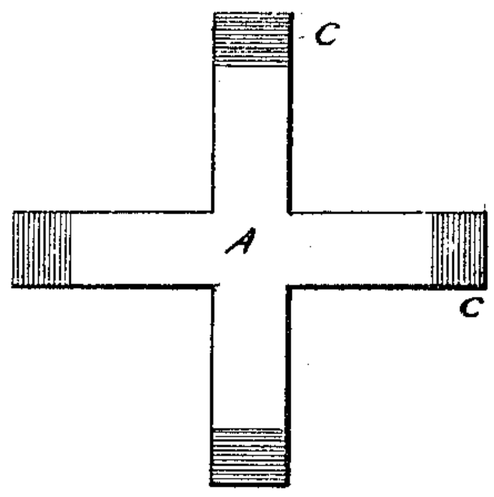


FIG. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE VINCENT FOSBERY AND HENRY PIEPER, OF LIEGE, BELGIUM.

METALLIC PATCH FOR BULLETS.

SPECIFICATION forming part of Letters Patent No. 291,891, dated January 15, 1884.

Application filed May 31, 1883. (No model.)

To all whom it may concern:

Be it known that we, GEORGE VINCENT FOSBERY and HENRY PIEPER, of Liége, Belgium, have invented a new and useful Improvement in Envelopes for the Projectiles of Small-Arms, of which the following is a specification.

This invention relates to envelopes for the projectiles of rifled small-arms.

It consists in substituting for the paper envelope now in use an envelope of sheet metal (preferably brass) of the same thickness as the paper, and constructed or shaped, as hereinafter described.

In the following description reference will be had to the accompanying drawings, which illustrate the invention, and of which—

Figure 1 is a partial section through a cartridge-shell, while Fig. 2 shows a piece of sheet metal from which the envelope may be made, and Fig. 3 such envelope. Fig. 4 is a side view of an envelope provided at the open end with circular teeth or horizontal ridges; Fig. 5, an envelope provided with horizontal and with vertical indentations, and Fig. 6 an envelope having a perforated circumference.

The sheet serving as raw material for the envelope is cut into the form of a cross or other convenient shape, with edges straight or inclined at any convenient angle. (See A, Fig. 2.) It is then formed in a die into a cylinder closed at one end, and of such a size that it allows the bullet to enter the envelope and the envelope to enter the cartridge. (See Fig. 3.) We curve this envelope slightly outward at its upper edge, *b*, and prefer to provide the part projecting beyond the cartridge with circular teeth or ridges *c c*, or with a screw-thread. These teeth may have a depth equal to that of the grooving of the rifle. The indentations or intervals between the teeth may be filled with a lubricant—preferably a mixture of vaseline and paraffine. The sides of the envelope may also be perforated, as shown in Fig. 6, and the holes filled with the same lubricant. A paper lining may also be inserted between the envelope and the projectile, Fig. 6, or only a part of the envelope may be covered with paper. The lower part of the envelope, which enters the cartridge, may be grooved or toothed vertically to give better adherence to the bullet. The bottom *d* of the envelope may be flat, convex, or concave. By pressing the metal inward round the lower edge, *e*, a gas-check may be formed. (See Fig. 1.) When the projectile leaves the muzzle of the rifle, the envelope will be separated from the projectile, because the upper surface or edge of the envelope is inclined outward, and the metal possesses some elasticity.

In order to render the drawings more intelligible, the thickness of the sheet metal, the depth of the indentations, and the enlargement of the upper edge are exaggerated.

In using these envelopes we intend to attain the following advantages: First, the employment of a shallower rifling in the gun-barrel than that at present in use, and to obtain at the same time a better hold on the rifling, so as to enable very hard metal to be used for the bullets—for instance, steel; second, a more perfect clearing of the barrel and rifling at each shot fired; third, a better lubrication of the barrel; fourth, the use of a projectile harder and less liable to deformation; fifth, a supplemental and efficient gas-check.

It is evident that the details of construction may differ from those represented by the drawings without departing from our invention.

What we claim is—

1. A metallic envelope for projectiles of rifled small-arms, the sides of which envelope are formed by sections with their upper edges inclined outward, for the purpose of detaching the envelope from the projectile when the latter leaves the muzzle of the rifle, substantially as described.

2. A metallic envelope for projectiles of rifled small-arms, open at the front end, and provided with circumferential ridges or teeth of sufficient diameter to project into the grooves of the rifle while the projectile passes through the bore, substantially as and for the purposes described.

3. A metallic envelope for projectiles of rifled small-arms, open at the front end, and provided with circumferential ridges or teeth the interstices between which are filled with lubricant, and which are made of sufficient diameter to project into the grooves of the rifle, substantially as and for the purposes described.

4. A metallic envelope for projectiles of

rifled small-arms, open at the front end, and having the front edge turned outward, while the bottom of the envelope is dished, substantially as and for the purposes described.

5. A metallic envelope for projectiles of rifled small-arms, open at the front end, the front edge being turned outward, while the bottom is dished, and the sides are provided with circumferential ridges or teeth of sufficient diameter to project into the grooves of the rifle, substantially as and for the purposes described.

6. A metallic envelope for projectiles of rifled small-arms, open at the front end, and provided near its open end with projecting circumferential ridges or teeth and near its base with indentations, substantially as and for the purposes described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

GEORGE VINCENT FOSBERY.
H. PIEPER.

Witnesses:
AGNES HESSELS,
JULES HAMAL.