June 29, 1954 S. BRAVERMAN 2,682,224

BULLET

Filed Aug. 12, 1950

FIG. 1

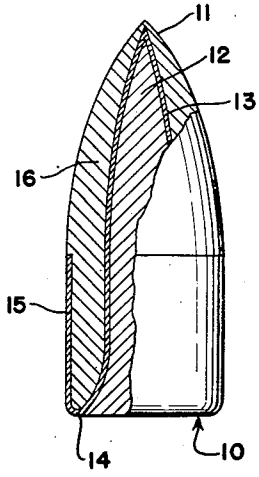


FIG. 2

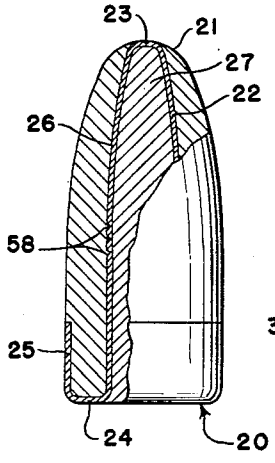


FIG. 3

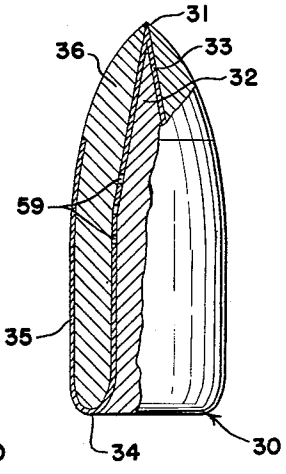


FIG. 4

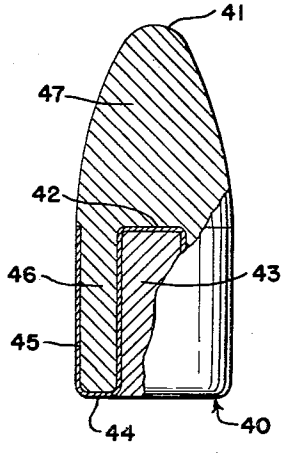
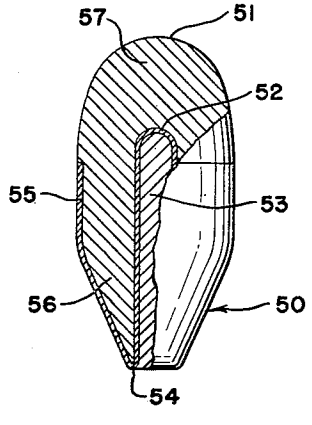


FIG. 5



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BULLET

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7 Claims. (Cl. 102—91)

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This invention relates to bullets for small arms and more particularly to an improved bullet for sporting arms.

In carrying out the invention, I provide a slug of lead or other bulk metal, separated into an inner core and an outer portion by a reinforcing member or jacket of a harder metal, such as steel, nickel, nickel-copper alloys, or the like.

A bullet so constructed has many advantages over the conventional bullet formed of a lead slug. It has better mushrooming qualities over a wider latitude. In the case of a pointed bullet, it is subject to less danger of deformation in magazine weapons.

Such a construction also permits the use of a soft nosed bullet in semi-automatic pistols and still presents no greater danger of jamming than is now encountered with a full patch bullet.

A bullet so constructed can be driven at higher speeds and at the same time, because of its better heat exchange qualities, be subject to less danger of internal fusion. The jacket may be scored to cause the lead to better adhere to it and thus improve the heat exchange qualities of the bullet or it may be provided with openings to permit the lead core and the outer lead portion to unite to each other through the openings.

In the accompanying drawing I have shown the invention applied to several forms of bullet and with the jacket made in various ways. In this showing,

Fig. 1 is an elevation of a bullet partly in section showing the invention applied;

Fig. 2 is a similar view of a flat nosed bullet;

Fig. 3 is a view of a bullet of substantially the same shape as that shown in Fig. 1 showing a slight modification of the construction of the jacket;

Fig. 4 is a similar view of a bullet of the type shown in Fig. 2 showing a different construction of jacket; and

Fig. 5 is a similar view of another form of bullet.

Referring to Fig. 1 of the drawing, the bullet there disclosed is of conventional shape having a base portion 10 to be received in the cartridge case in the usual manner and having a pointed end 11. Instead of constructing the bullet of a single mass of lead, I provide an inner core 12 which may be formed of lead, lead alloys, zinc or other metal used as a filler or bulk. Surrounding this core I provide a jacket 13 which extends from the base to the tip of the bullet as shown and which is formed of nickel, steel, aluminum, copper-nickel alloys or other harder metal. As

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shown, at the base 14 of the jacket, a flange or skirt 15 is extended upwardly and forms a part of the peripheral wall of the bullet or slug. The remainder of the bullet is formed of an outer portion 16 of the same metal as the core 12.

Fig. 2 shows the invention applied to a bullet of a different shape comprising a base portion 20 and a flat nose 21. The body portion of the jacket is indicated at 22 and is flattened at its tip, as indicated at 23 to conform to the shape of the bullet. At the base portion 24 of the jacket, I provide a skirt 25 which extends a less distance than the skirt 15 of the form shown in Fig. 1. The remaining portion of the bullet is completed by an outer portion 26 of the same metal as the core 27.

In the form of the invention shown in Fig. 3 of the drawing the bullet comprises a base portion 30 and a pointed tip 31. Core 32 is arranged in the jacket 33 which, as shown, is pointed at its outer end. The base 34 of the jacket is provided with a skirt or flange 35 extending toward the tip a greater distance than either the skirt 15 or 25 of the other two forms of the invention. The remainder of the bullet is formed by an outer portion 36 received within the skirt of the same metal as the core.

Fig. 4 of the drawing shows a bullet of substantially the same shape as shown in Fig. 2 and consists of a base portion 40 having a flat nose 41. In this form of the invention, the jacket 42 terminates adjacent the top of the base portion and does not extend into the tapered portion of the bullet. Core 43 of lead, lead alloys, zinc or other bulk metal, is arranged within the jacket. From the base 44 of the jacket, the skirt or flange 45 extends upwardly substantially flush with the top of the jacket. The space between the jacket and the skirt is filled with metal 46 of the same type as the metal of the core and the tapered tip 47 of the bullet is also formed of this same mass of metal.

In the form of the invention shown in Fig. 5 of the drawing, the base 50 of the bullet is tapered and it is provided with a round tip 51. Jacket 52 extends upwardly from the base to a point adjacent the beginning of the rounded tip. A core 53 of bulk metal is placed within the jacket. From the bottom 54 of the jacket a skirt of flange 55 extends upwardly shaped to the contour of the bullet. The space between the jacket and the flange is filled with bulk metal, as indicated at 56, and this bulk metal is shaped to form the nose or tip of the bullet as indicated at 57.

In any of the forms of the invention, the sur-

faces of the jacket may be provided with a coating of a suitable heat insulating material. The surfaces of the jacket may also be scored, as indicated at **58** in Fig. 2 of the drawing, to improve the adherence between the two metals of which the bullet is formed. The surface of the jacket may also be provided with a plurality of spaced perforations **59** as shown in Fig. 3 of the drawing to permit the core and the outer portion of bulk metal to fuse to each other. This increases the strength of the bullet and gives better head dissipation.

I claim:

1. A bullet comprising an inner core of bulk metal, a jacket surrounding the core and spaced from the outer wall of the bullet, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and a second portion of bulk metal filling the space between the exterior of the jacket and the skirt and forming the remainder of the bullet.

2. A bullet comprising an inner core of bulk metal, a jacket surrounding the core and spaced from the outer wall of the bullet, the jacket extending from the base of the bullet toward the tip, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and a second portion of bulk metal filling the space between the exterior of the jacket and the skirt and extending beyond the skirt to the nose of the bullet.

3. A bullet comprising an inner core of lead, a jacket surrounding the core and spaced from the outer wall of the bullet, the jacket being formed of a metal of the group consisting of nickel, steel, aluminum and nickel-copper alloys, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and a second portion of lead filling the space between the exterior of the jacket and the skirt and forming the remainder of the bullet.

4. A bullet comprising an inner lead core, a jacket surrounding the core and spaced from the outer wall of the bullet, the jacket extending to the base of the bullet, the jacket being formed of a metal from the group consisting of nickel, steel, aluminum and nickel-copper alloys, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and a second portion of lead between the exterior of the jacket and the skirt and extending beyond the skirt to the nose of the bullet.

5. A flat nosed bullet comprising a core of bulk metal, a jacket having a flattened tip surrounding the core and spaced from the outer wall of the bullet and extending to the base of the bullet, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and an outer portion of bulk metal between the exterior of the jacket and the skirt and extending beyond the edge of the skirt to the nose of the bullet.

6. A pointed nosed bullet comprising an inner core of bulk metal, a jacket surrounding the core having a pointed tip and spaced from the outer wall of the bullet, the jacket being spaced from the outer wall of the bullet and extending to the base, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and a second portion of bulk metal filling the space between the exterior of the jacket and the skirt and forming the remainder of the bullet.

7. A bullet comprising a lower cylindrical portion and an upper rounded portion, an inner core of bulk metal in the cylindrical portion of the bullet, a jacket of harder metal surrounding the core and spaced from the outer wall of the bullet and extending to the base, an integral skirt extending from the base of the jacket and forming a portion of the outer wall of the bullet, and a second portion of bulk metal between the skirt and the jacket and extending beyond the skirt and the jacket to form the rounded portion of the bullet.

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