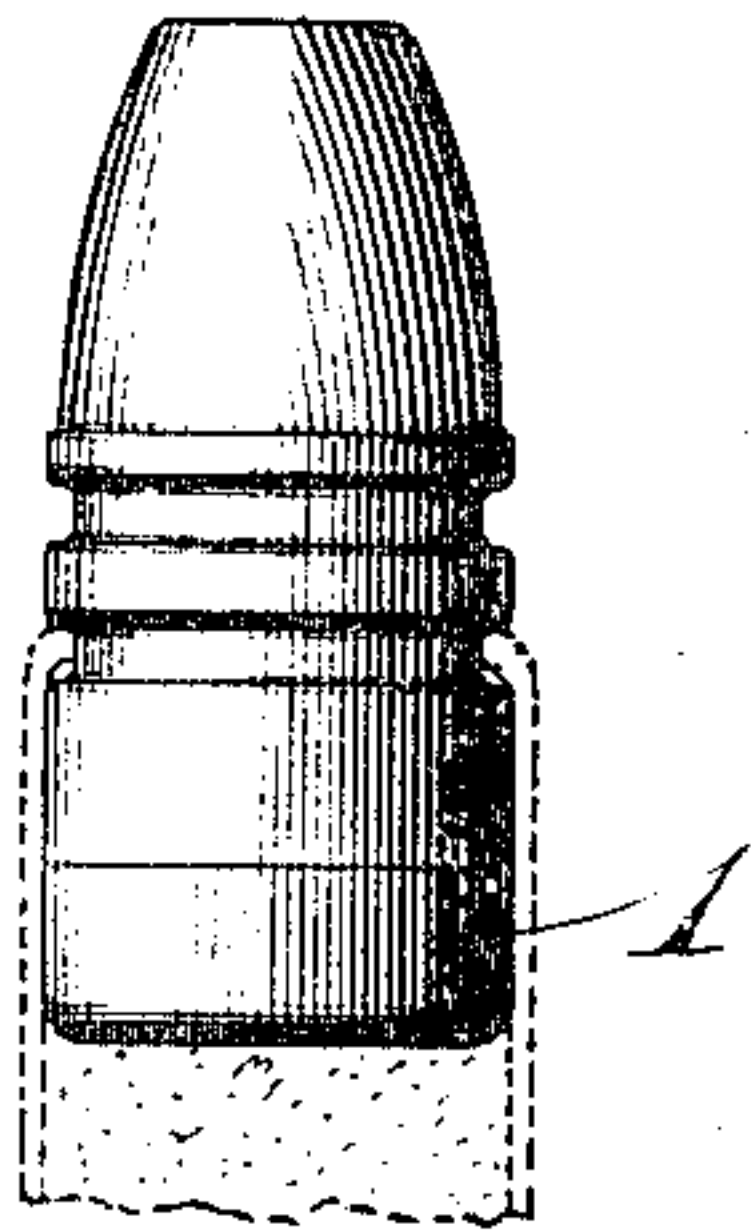


S. G. WRAY.  
BULLET.  
APPLICATION FILED DEC. 27, 1910.

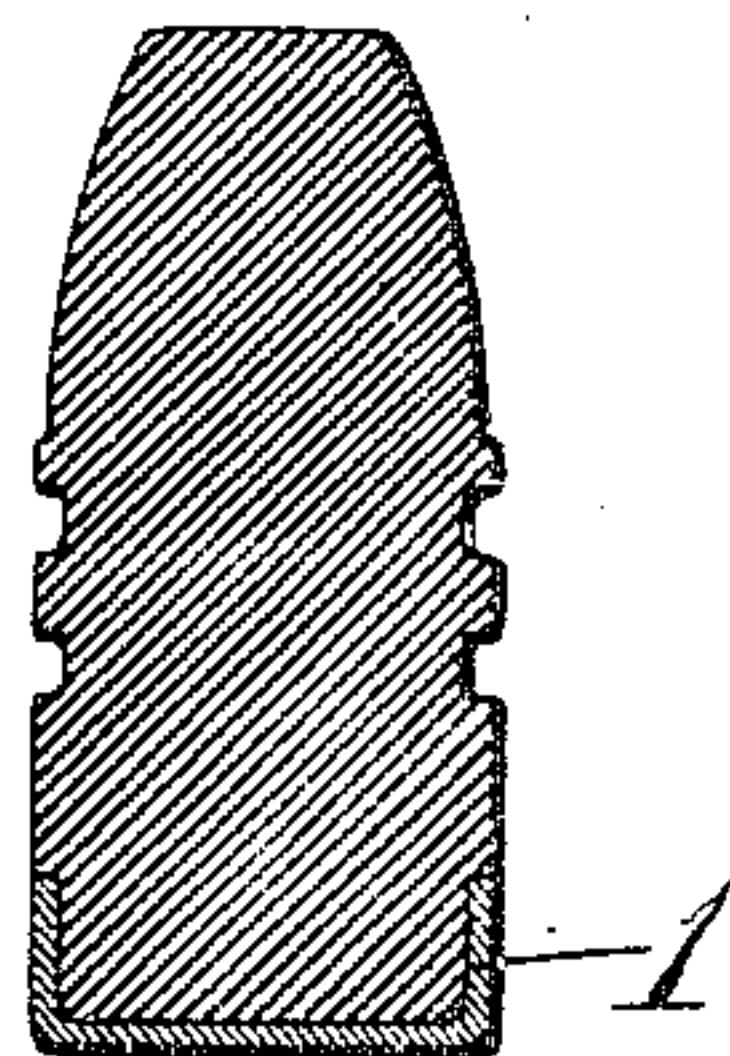
996,820.

Patented July 4, 1911.

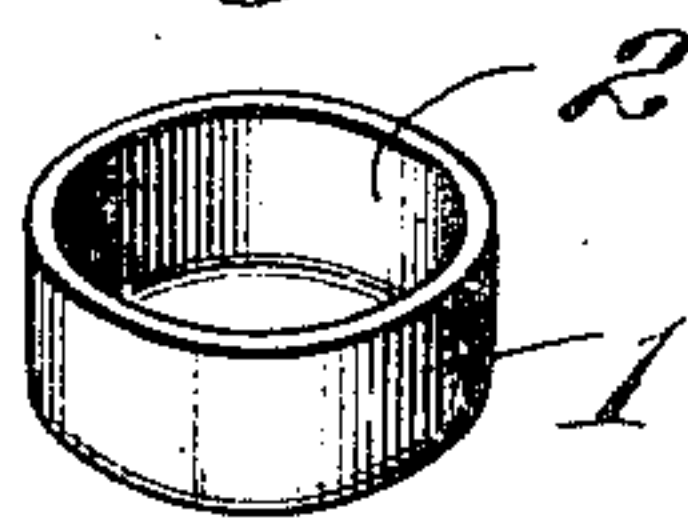
*Fig. 1.*



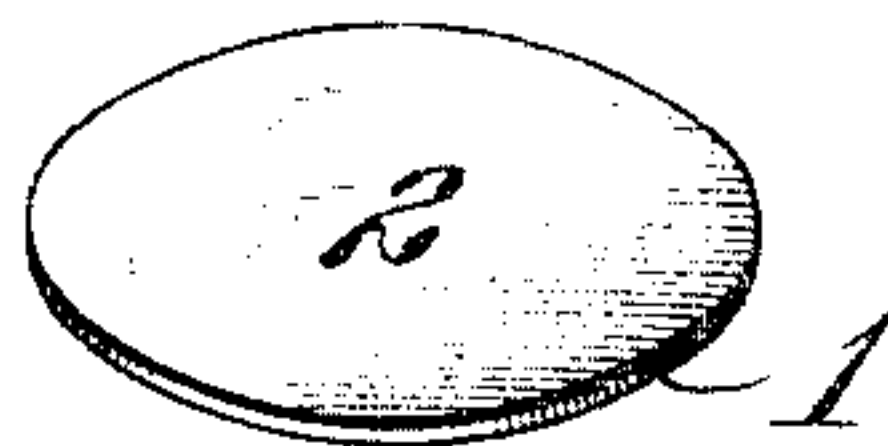
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Attest:  
Wm. H. Cott.  
Clerk

Inventor:  
Silas G. Wray.  
by Rippy & Kugland  
Attys.



# UNITED STATES PATENT OFFICE.

SILAS G. WRAY, OF GRAND JUNCTION, COLORADO.

## BULLET.

996,820.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed December 27, 1910. Serial No. 599,342.

*To all whom it may concern:*

Be it known that I, SILAS G. WRAY, a citizen of the United States, residing at Grand Junction, Colorado, have invented a new and useful Bullet, of which the following is a specification.

This invention relates to bullets, and its object is to produce a lead bullet having a patch inclosing a relatively small portion of the rear end, whereby the lead will be prevented from being stripped by the rifling, said patch being in a rigid or firm connection with the lead body of the bullet, so as to require the bullet to follow the rifling and to prevent stripping of the lead, and thereby afford a higher velocity and a flatter trajectory effecting a longer range.

The all-lead bullet, for hunting purposes, is superior to any other that has been devised, because, being soft it spreads or flattens by contact with the flesh of the animal, producing a fatal effect; and, because, also, the friction or contact of the lead with the rifles is not so great as that of harder metal, of which the jackets or patches are made, thereby permitting greater velocity and longer range.

My present invention comprises a lead bullet and a jacket or patch embracing, and firmly secured to a small portion of one end of the bullet so that the advantages of the all-lead bullet are retained, the small patch, rigidly secured to the bullet, as stated, requiring the bullet to follow the rifling and preventing the stripping of the lead.

There are other objects and advantages to be attained by my improved bullet, all of which will be apparent from the following description, reference being made to the accompanying drawings in which I have illustrated one embodiment of the invention, and in which—

Figure 1 is a side elevation of a complete bullet constructed in accordance with my invention, detached from the cartridge. Fig. 2 is a longitudinal sectional view of the bullet showing the patch embracing a relatively small portion of one end thereof. Fig. 3 is a perspective view of the patch. Fig. 4 is a perspective view of the disk from which the patch is formed. Fig. 5 is an enlarged sectional view of the disk, illustrating conventionally the two elements or materials composing this preferred form of patch.

The patches 1 are preferably formed of

copper plates, said plates having on one side thereof tin or other efficient soldering material 2. These plates are stamped or cut into the form of disks, as shown in Fig. 4, and said disks are then shaped into ferrule-like patches or jackets of the proper size to embrace the ends of the bullets on which they are to be used. The tinned or solder-carrying sides of the copper disks are inside the jackets or patches, and constitute the means for effecting the rigid union between the bullets and the patches. After the patches have been thus formed with their tinned or solder-carrying sides inward, the molten lead is poured into a mold containing the patches, and the molten lead entering the patches and contacting with the tin or solder therein effects a strong soldered union between the patch and the lead body of the bullet so formed. This union is practically as strong as the structure of the lead bullet itself. The diameter of the patch and the body of the bullet above the patch are the same, so that the lead will be prevented from being stripped when engaged by the rifles, on being ejected by high-pressure explosives. The body of the bullet being of soft lead, it spreads on contact with the flesh of the game thus having a much more immediately fatal or disabling effect than would the leaden bullet largely incased in harder metal, commonly known as the soft nose bullet, and used in all medium or large caliber sporting rifles where high pressure explosive is used. The distinguishing feature of my invention is the soldering bond by which the patch is secured to the soft metal bullet, thus enabling the least possible use of the harder metal which is necessary in order to compel the bullet to follow the rifling without stripping; which is doubly desirable in this, to-wit: First, it affords less friction, thus securing higher velocity, flatter trajectory, longer range and greater energy or striking force. Second, it more readily spreads on contact with the flesh of game, thus affording more deadly effect and consequent greater certainty of securing the game instead of allowing it to escape, after being wounded, only to languish or die.

From the foregoing, it will be seen that I have produced a bullet which is more efficient for hunting or sporting purposes than those generally in use, and that I am enabled to attain the useful result by the



strong and inseparable union between the patch and the bullet, which union is effected during the molding of the bullet.

I am aware that there may be modifications and alterations in the construction and arrangement described without departing from the principle and spirit of my invention. I am also aware that there may be other means of effecting the firm and rigid union between the patch and the bullet, and I do not restrict myself to the specific features described, and

What I claim and desire to secure by Letters Patent of the United States is—

1. A bullet comprising a lead body, a hard metal patch embracing a part of said lead body, and a fusible adherent element

between said body and said patch binding said body and patch together, substantially as specified.

2. A bullet comprising a lead body, a copper patch embracing a relatively small part of said lead body, and a fusible adherent metallic element between said copper patch and said lead body binding said patch and body together, substantially as specified.

In witness whereof, I have signed this specification in the presence of two subscribing witnesses.

SILAS G. WRAY.

Witnesses:

JAMES M. CAMERON,  
GEORGE BULLOCK.