

(No Model.)

W. M. THOMAS.
BULLET.

No. 437,262.

Patented Sept. 30, 1890.

Fig. 1.

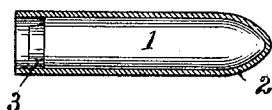


Fig. 2.

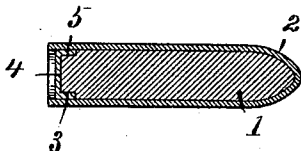
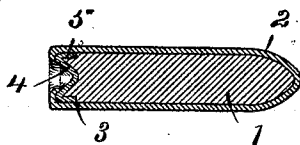


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM M. THOMAS, OF BRIDGEPORT, CONNECTICUT.

BULLET.

SPECIFICATION forming part of Letters Patent No. 437,262, dated September 30, 1890.

Application filed January 17, 1890. Serial No. 337,208. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. THOMAS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Bullets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is adapted to projectiles for all classes of guns, and is especially adapted for use in connection with high explosives where great range and accuracy are desired. It is of course well understood by those familiar with gunnery that the combustion of high-grade explosives in addition to developing enormous pressure generates intense heat, a heat so great, in fact, as to partially melt ordinary lead slugs or bullets, even when the whole slug, except the heel, is covered by a metallic shell, the effect being to foul the gun-barrel more or less, but more especially to make the heel of the bullet ragged, thereby lessening the range and preventing accuracy of results. It is furthermore well understood that high explosives, especially the so-called "nitrated" or "smokeless" powders, are sought for and are being experimented with by all enlightened nations, the object being to secure high velocity and great range and penetrative power. The use of high explosives, and even compressed powder, however, was found to be utterly impossible with ordinary lead bullets on account of upsetting and not infrequently the melting of the bullets. The objection of upsetting was partially overcome by covering the slugs with drawn metallic shells closed at one end, the heel of the slug, however, being left partially or wholly uncovered. This style of bullet was generally satisfactory with both ordinary and compressed powders, but cannot be used successfully with high explosives, as the heat generated by the combustion of the powder is sufficient to melt the lead at the base of the bullet, leaving the heel ragged and destroying accuracy of results. In order to wholly overcome this objection and produce a projectile adapted to

withstand both the heat and pressure of the highest known explosives and, practically, certain to leave a gun-barrel with its original shape wholly unimpaired, I have devised the novel bullet, which I will now describe, referring by numbers to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a section of a shell with a slug therein, the heel of the slug being provided with a shoulder to receive the flange of a cap; Fig. 2, a section of both shell and slug, the cap being in place over the heel of the slug; and Fig. 3 is a section showing the open end of the shell closed in upon the cap.

1 denotes the slug and 2 the shell, the slugs being ordinarily made of lead and the shells of any suitable metal. The heel of the slug is slightly reduced, leaving a shoulder 3, and upon the end of the slug I place a cap 4, having a flange 5, the edge of the flange resting upon the shoulder. After placing the slugs within the shells, the shells are placed in suitable dies, and the slugs with the caps covering the heels are swaged firmly into place. The bullets are finished by closing in the open ends of the shells upon the caps, the heels of the completed bullets being ordinarily left with an indentation, as clearly shown in the drawings, although the shape of the heel of the completed bullet is wholly immaterial so far as my invention is concerned.

Having thus described my invention, I claim—

A bullet consisting of a slug reduced at its base leaving a shoulder, a drawn shell within which the slug is placed and which is slightly longer than the slug, and a cap within the shell covering the reduced portion of the slug and provided with a flange resting upon the shoulder, the bullet being finished by closing in the open end of the shell upon the cap.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM M. THOMAS.

Witnesses:

A. M. WOOSTER,
ARLEY I. MUNSON.