No. 622,582. Patented Apr. 4, 1899.

R. L. WYATT.

BULLET OR PROJECTILE.

(Application filed Jan. 25, 1899.)

(No Model.)

Fig. 1.

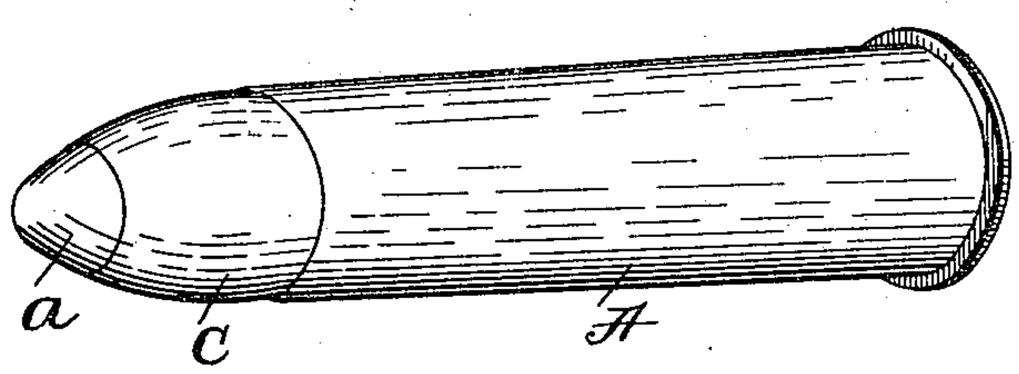


Fig. 2.

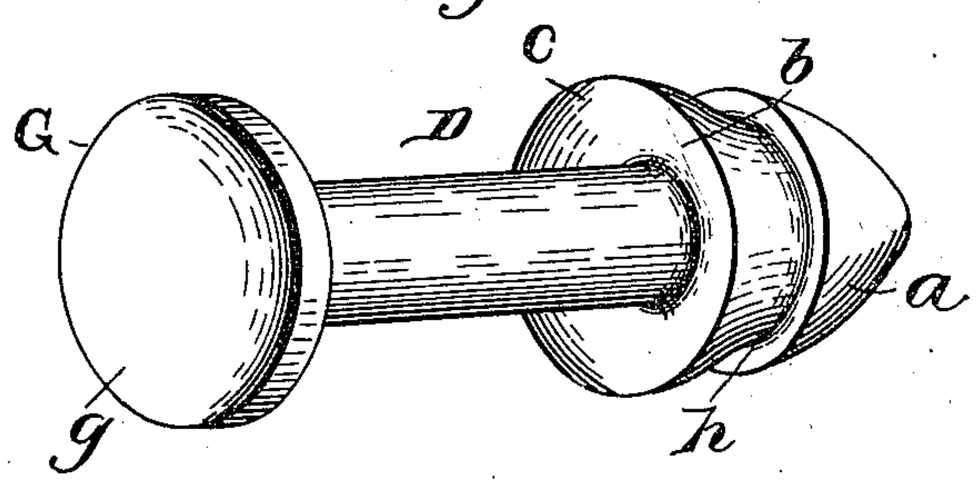


Fig. 3.

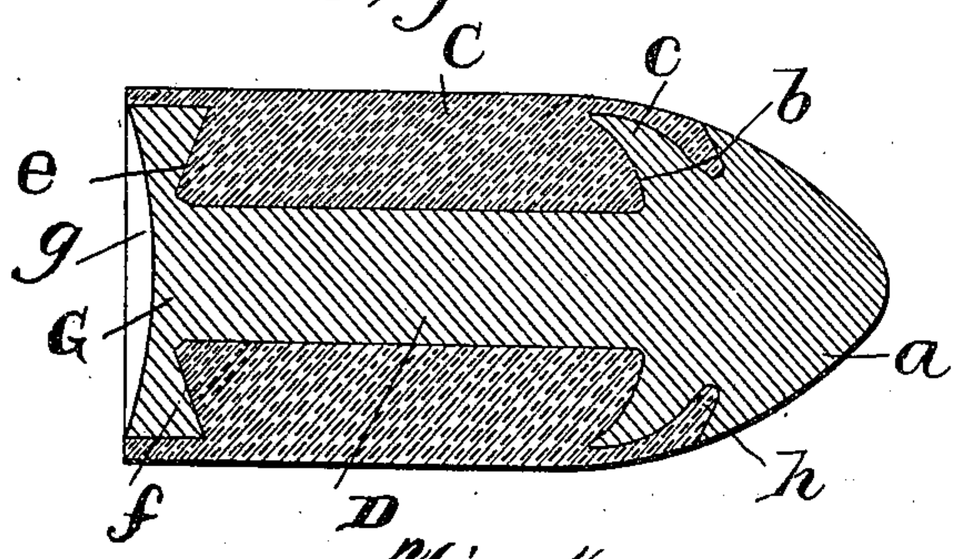
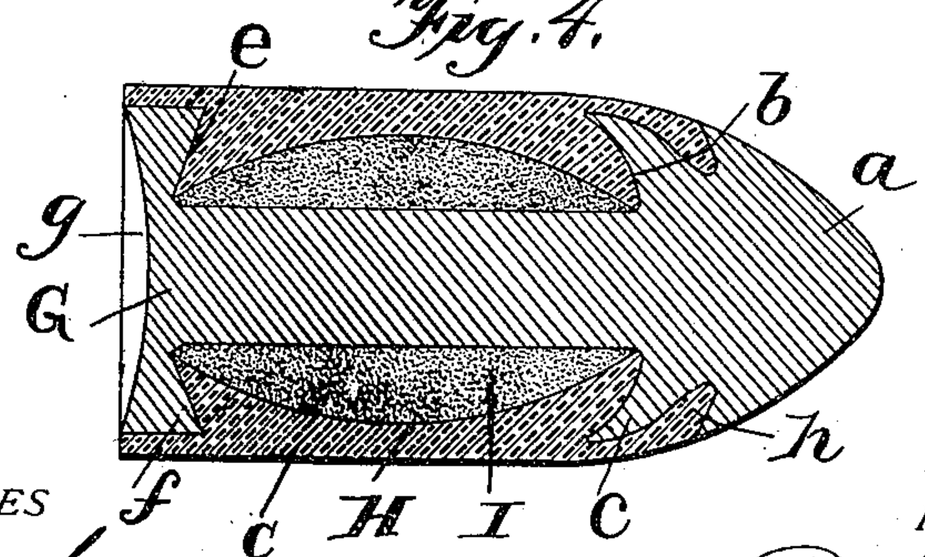


Fig. 4.



WITNESSES

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ROBERT L. WYATT, OF WILSON, NORTH CAROLINA.

BULLET OR PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 622,582, dated April 4, 1899.

Application filed January 25, 1899. Serial No. 703,374. (No model.)

To all whom it may concern:

Be it known that I, ROBERT L. WYATT, a citizen of the United States, residing at Wilson, in the county of Wilson and State of North Carolina, have invented new and useful Improvements in Bullets or Projectiles, of which the following is a specification.

My invention relates to improvements in bullets or projectiles, and pertains to a bullet or projectile provided with a central hard core and point and a relatively soft surrounding shell, all of which will be fully described hereinafter and particularly pointed out in the claims.

The object of my invention is to provide a bullet or projectile with a central longitudinally-extending stem projecting therethrough, the front end of the stem being pointed and provided with an annular groove or grooves and the rear end of the stem having a head with an annular groove, a surrounding shell being of a relatively soft metal and projecting beyond the head and rear end of the stem, whereby a soft shell of metal is provided for engagement with the bore of the gun, and yet a bullet or projectile provided which has longitudinal strength for piercing metal or other hard substances without "mushrooming."

By providing a bullet or projectile with a longitudinal stem for standing the end thrust in piercing hard substances with a surrounding shell of relatively soft metal, such as lead or copper, a bullet or projectile is furnished which will not wear and cut the bore of the gun as does a hard-metal-covered bullet, as will be readily understood, thus making the gun much longer lived and at the same time providing a bullet or projectile which is capable of withstanding all of the end thrust necessary for piercing hard substances.

In the accompanying drawings, Figure 1 is a front end perspective view of a bullet, showing it connected with a shell embodying my invention. Fig. 2 is a perspective view of the stem with the surrounding soft-metal shell removed. Fig. 3 is a longitudinal central sectional view of the bullet or projectile detached from the shell. Fig. 4 is a longitudinal sectional view of my bullet or projectile constructed for containing an explosive material.

Referring now to the drawings, A indicates the shell, which may be of the usual form and construction and in the end of which my bullet or projectile will be secured in any desired manner.

My present invention consists in providing the soft-metal shell C, of lead, copper, or other soft metal, with a central and longitudinally-extending steel or hard-metal stem D. The forward end of this stem is formed into a piercing-point *a* of any desired external shape, according to the use of the bullet or projectile. The inner face of this point or head *a* is recessed forwardly, as shown at *b*, to form an annular groove in the inner face thereof and the rearwardly-projecting arrow-head-shaped flange *c*.

This hard-metal stem, formed of steel or similar material, projects entirely through the soft-metal shell and is provided with a head G of a diameter smaller than the diameter of the surrounding soft-metal shell, as illustrated, and the rear face of this head or projection G is preferably concaved inwardly, as shown at *g*, as is usual in bullets or projectiles to cause the concentration of the force of the explosive placed in the shell, which makes the bullet's flight more accurate, as is well understood by those skilled in the art. The inner face of this rear head G of the stem is provided with an inwardly-extending annular recess *e*, forming an approximately arrow-head-shaped inwardly-projecting annular flange *f*.

The object of having the stem project entirely through the soft-metal shell and providing the rear head G of the stem with the annular groove *e* and the inner face of the head or point *a* with an oppositely-projecting annular cavity *b* is to prevent any possibility of the soft-metal shell spreading at either end and therefore separating from the hard-steel stem, and thus mushrooming when a hard substance is struck thereby.

From this description it will be seen that I provide the bullet or projectile with a stem of a size sufficient to stand all the end thrust to which the bullet or projectile will be subjected, while at the same time I have a surrounding soft-metal shell projecting beyond the front and rear heads of the stem, so that

the soft-metal shell is in contact with the bore of the gun, for the purpose hereinbefore explained.

To prevent the front edge or end of the soft-metal shell from spreading in the passage of the bullet or projectile through a hard substance, I provide the head or point *a* with a forward auxiliary annular recess *h*, which overlaps the inner recess *c* thereof and into which the soft-metal shell has its front end to project and is inserted and protected thereby. From this it will be seen that the point *a* is provided with a forward and a rearward annular flange, both of which receive the soft-metal shell, the forward annular flange reaching over the soft-metal shell and therefore opening the way for the passage of the soft-metal shell in piercing a hard substance, such as armor-plate or hard wood. This construction of the point or head prevents the front end of the soft-metal shell from having a tendency to spread outward, as would otherwise be the case if the front edge of the soft-metal shell was not protected by the overlying rearwardly-extending front flange *h*.

From the above description it will be seen that I have provided a bullet or projectile for use in small or large firearms which is strengthened by the longitudinally-extending steel or hard-metal stem for piercing purposes, while a soft-metal surrounding shell is provided for contact with the inner bore of the gun to prevent wear thereon, and a projectile or bullet is provided which is thought to be superior to a solid-steel bullet or projectile in that it is cheaper to construct and is heavy.

As shown in Fig. 4, I show my bullet or projectile constructed with a space H between the stem thereof and the outer shell for containing an explosive material I of any desired chemicals or explosives, such as large projectiles are provided with.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An improved bullet or projectile comprising an outer soft-metal shell, a stem extending therethrough from end to end, the stem having a head with a forwardly-projecting recess and the rear end having a head with a rearwardly-extending recess, the soft-metal shell filling the space between the said heads and inclosing the rear head and projecting beyond the rear end of the front head to prevent the soft metal from mushrooming and to provide a soft-metal surrounding shell for contact with the bore of the gun, substantially as described.

2. A bullet or projectile having a longitudinally-extending stem, a surrounding soft-metal shell, the stem having a front head provided with a forwardly-projecting recess on its inner face, and a forwardly-projecting recess on its periphery forming a rearwardly-projecting flange, the soft-metal shell projecting into the said recesses, whereby the hard-metal flange forms a protection therefor, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ROBERT L. WYATT.

Witnesses:
A. M. BUNN,
A. S. PATTISON.