

No. 621,697.

Patented Mar. 21, 1899.

G. H. NEWELL.

PROJECTILE.

(Application filed July 25, 1898.)

(No Model.)

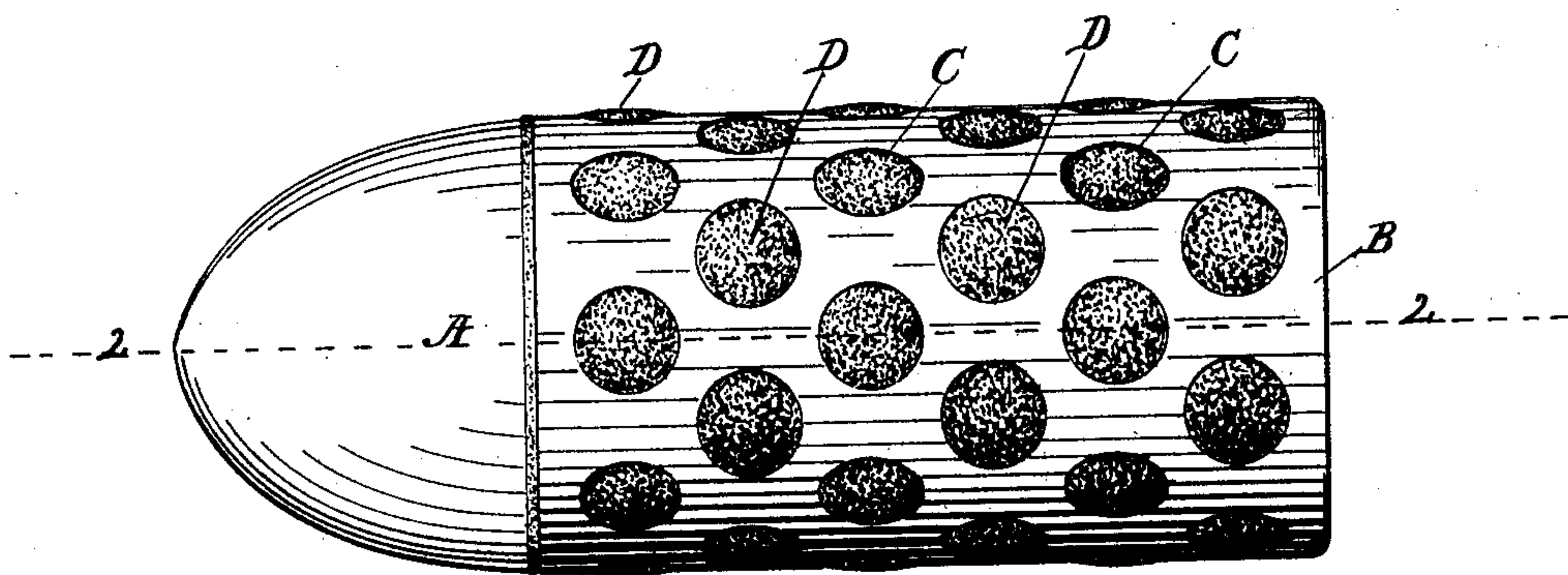


Fig. 1.

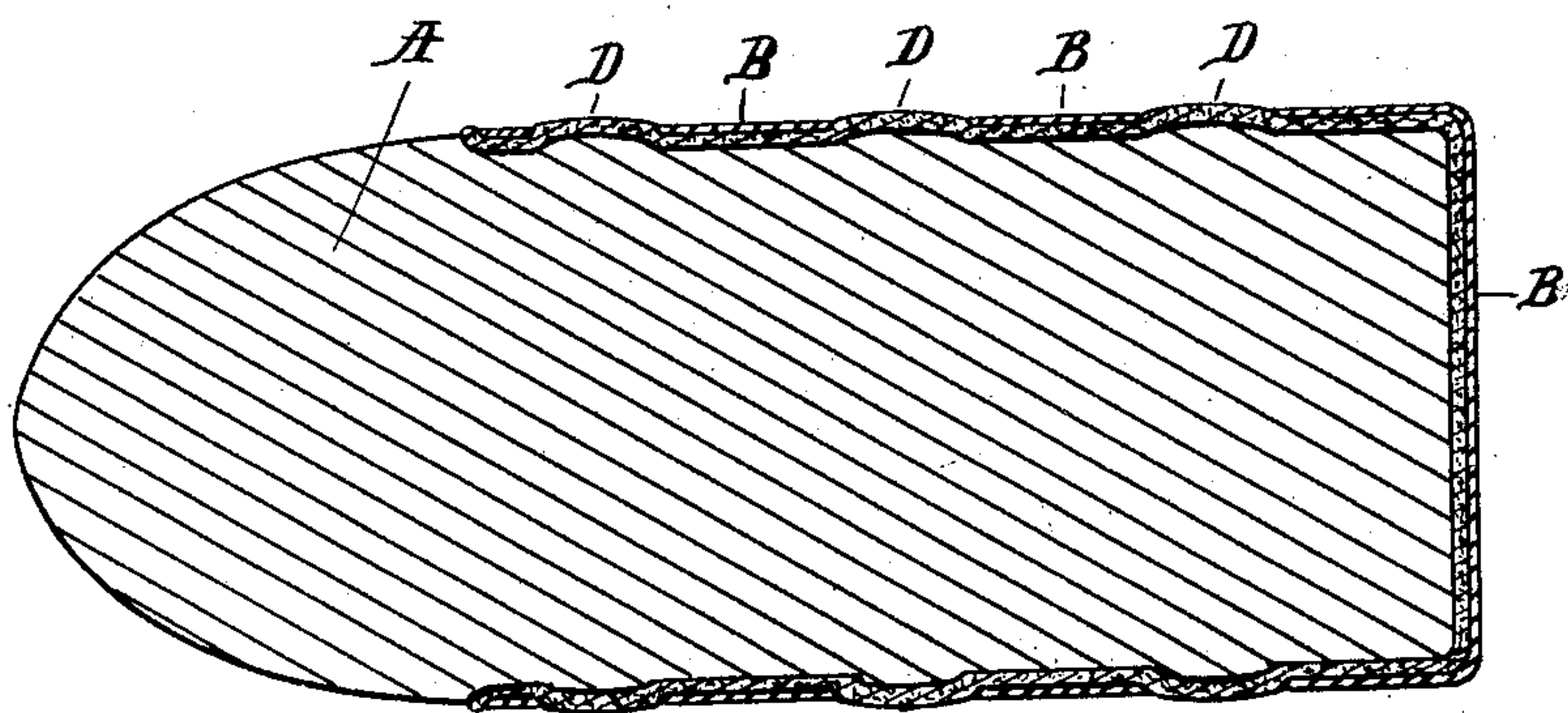


Fig. 2.

WITNESSES:

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GEORGE H. NEWELL, OF GRAND RAPIDS, MICHIGAN.

PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 621,697, dated March 21, 1899.

Application filed July 25, 1898. Serial No. 686,778. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. NEWELL, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Projectiles; 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 relates to improvements in projectiles, and more particularly to projectiles for small-arms and made of lead or other soft metal and provided with a jacket of steel, copper, or other suitable metal to hold the lead in shape and adapt the projectile to high explosives and rapid-twist guns; and its object is, primarily, to provide the same with means for lubricating and cleaning the gun, whereby the friction, heating, fouling, and wear on the gun are overcome, and to provide the device with certain new and useful features, hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a projectile embodying my invention drawn to an enlarged scale, and Fig. 2 a longitudinal section of the same on the line 2 2 of Fig. 1.

Like letters refer to like parts in both figures.

A represents the body of the projectile, which is of lead or other suitable soft metal.
B is a jacket of steel, copper, or other suitable metal, sufficiently yielding to conform to the grooves of the gun-barrel and strong enough to hold the lead from unduly expanding in the gun and also from flattening out upon contact with the target. This jacket may be formed to cover either end of the projectile and to leave the other end open, that shown covering the rear of the projectile and open at the front end. My invention consists in providing said jacket with numerous openings C and interposing between the lead projectile proper and said jacket a suitable patch D. Said openings may be of any suitable shape, number, and arrangement, round openings being preferred, and arranged to traverse all parts of the interior of the gun-barrel, and of such number as to leave sufficient strength to the jacket to hold the lead

and at the same time make it more yielding than a solid jacket to more easily conform to the grooves and lands of the gun. The patch D is of cloth, soft leather, or any other suitable yielding and porous material and is saturated with any suitable lubricant and placed between the lead body A of the projectile and the jacket B and the lead body swaged or pressed into the jacket, expanding into the openings in the jacket and causing the patch to protrude through said openings sufficiently to come in close contact with the interior of the gun-barrel. This patch is firmly held in place by the jacket and goes with the projectile, it also serving to lubricate the target and aid in penetration of the same. The described patch and jacket can also be advantageously applied to hard and unyielding projectiles of larger size. The jacket resting upon the yielding patch readily conforms to the rifling of the gun-barrel, and the patch projects through the openings sufficiently to lubricate and clean the barrel.

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

1. In a projectile the combination of a soft-metal body, a jacket of harder and stronger metal surrounding the same and having openings at intervals, and a patch between the body and jacket, substantially as described.

2. In a projectile a jacket of strong and yielding material to hold the body in shape, and having a series of openings, a soft-metal body pressed into said jacket and extending laterally into said openings, a patch of yielding and porous material between said body and jacket, and protruding through said openings, substantially as described.

3. In combination with a projectile, a metallic jacket adapted to yield and conform to the lands and grooves of a rifled gun, and also having a series of openings, and a patch of yielding and porous material between the projectile and jacket and secured to the projectile by said jacket, substantially as described.

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

GEORGE H. NEWELL.

Witnesses:

L. V. MOULTON,
PALMER A. JONES.