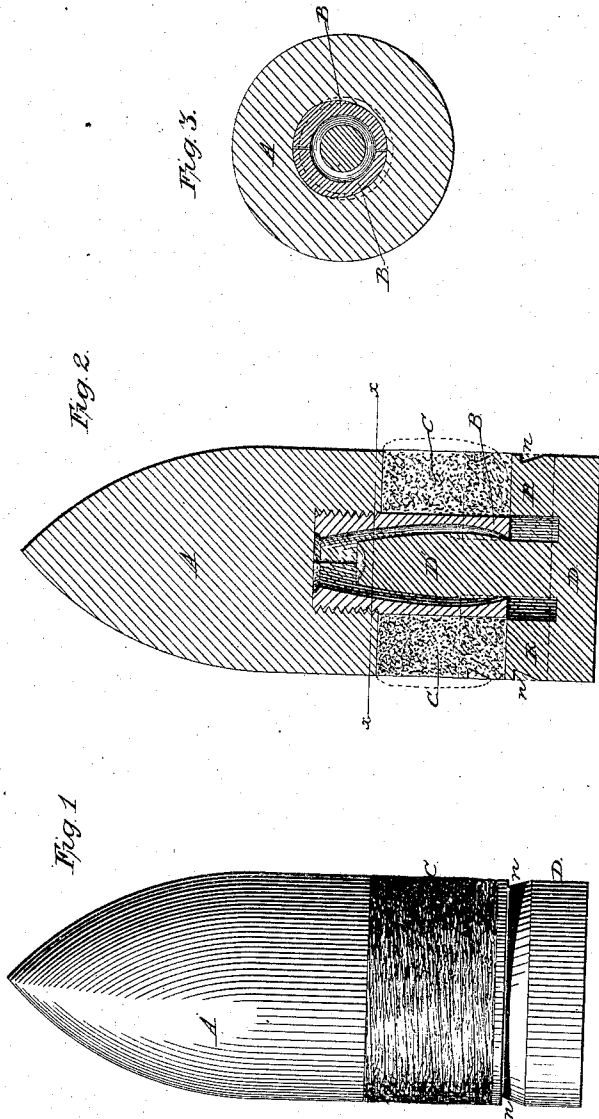


H. H. SIBLEY.  
Projectile.

No. 225,650.

Patented Mar. 16, 1880.



Witnesses:  
Lawrence P. Hollingsworth  
J. H. Stansbury

Inventor.  
H. H. Sibley,  
By his Attorneys,  
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# UNITED STATES PATENT OFFICE.

HENRY H. SIBLEY, OF FREDERICKSBURG, VIRGINIA.

## PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 225,650, dated March 16, 1880.

Application filed September 29, 1879.

*To all whom it may concern:*

Be it known that I, HENRY H. SIBLEY, of Fredericksburg, in the county of Spottsylvania and State of Virginia, have invented certain  
5 new and useful Improvements in Projectiles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the  
10 same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side elevation of my improved projectile complete ready for firing. Fig. 2 is  
15 a central longitudinal section of the same. Fig. 3 is a transverse section on line *x x* of Fig. 2.

The same letter indicates the same part wherever it occurs in the several figures.

20 My invention relates to an improvement in projectiles designed principally for use in projectiles for artillery; and it consists in the combination, with the projectile, of cotton or other fabric that will hold a lubricant, together with  
25 mechanism by which this fabric is pressed into and made to take the riflings of the bore of the gun and fill the bore of the gun, as hereinafter set forth and claimed.

In the drawings, A is the body of my improved projectile before firing. B is the hollow socket, open at both ends and made of two  
30 equal parts, plane on its exterior and concave on its interior, with a screw-tap at one end to fasten it to the solid shot into the screw-tapped recess at the end of the shot.

35 D is the sabot, and D' the bolt. The first is made with a rim, R, the space between the rim and the bolt being equal to the thickness of the socket B.

40 The outer border of the rim corresponds in dimensions to the diameter of the shot. On the outer border a wedge-shaped notch, *n*, is made to catch any of the fabric that may be pressed over the sabot at the discharge.

45 The bolt D' projects from the center of the sabot, and is cylindrical as far as the upper side of the rim of the sabot, so as to move easily within and without the socket. At the point it is made convex and nearly concentric  
50 with the interior of the socket, so as to pre-

vent its coming out any farther than the point named. This bolt is made cap-shaped at its farther end and a very little longer than the socket, so that when it is driven up at the  
55 discharge and impinging against the solid shot the metal of which the bolt is made, being malleable iron, will spread into a small space left at the end of the socket, and thus rivet  
60 the two together and hold the sabot in its new position during the flight of the projectile.

C is the lubricated wadding, which is made of cotton, hemp, or flax, or of any suitable  
65 fibrous material which will hold a lubricant. This wadding is prepared in cylinders open at both ends, the interior corresponding in size to that of the socket, the exterior to the  
70 circumference of the projectile, the whole being equal in length to the space between the projection left on the shot after the socket is screwed into it and the end of the rim of the  
75 sabot when it is adjusted within the sabot.

To adjust the shot for firing, introduce the bolt of the sabot into the two equal parts of  
80 the socket B, slip the wadding over the socket, and screw the whole into the shot.

At the discharge the sabot D will be driven forward, and the wadding C will be compressed  
85 into the bore of the gun and into the grooves by the action of the rim.

The bolt-head, by impinging against the  
90 solid shot, will clinch and hold the sabot to the shot, the spare material of the wadding will be pressed into the wedge-shaped notch *n* on the sabot, and the projectile will take a rotary motion in its flight.

The windage being destroyed, the initial  
95 velocity is increased, the trajectory is flattened, the range and penetration are increased, greater accuracy is attained, and, finally, instead of the bore and the grooves of the gun  
being fouled and obstructed with lodgments, as is the result of the use of most if not all  
100 other projectiles, the bore and grooves are smoothed, polished, and lubricated at each discharge.

Having thus described my projectile, what I claim is—

1. The combination of the solid shot A, the hollow socket B, the lubricated wadding C, the sabot D, and bolt D', all combined and op-

erating substantially as described, whereby the wadding is forced into the grooves and into the bore of the gun by longitudinal pressure.

2. The socket B, provided with a concave interior, substantially as described, in combination with the shot A and the sabot D, whose bolt is convex and nearly concentric with the concavity of the socket, substantially as shown, whereby the sabot before firing is

held firmly in place, and after firing is rigidly secured in its new position.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

HENRY H. SIBLEY.

Witnesses:

H. M. D. MARTIN,  
JNO. T. GOOHICK.