

B. B. HOTCHKISS.

Projectile.

No. 47,725.

Patented May 16, 1865.

Fig. 1

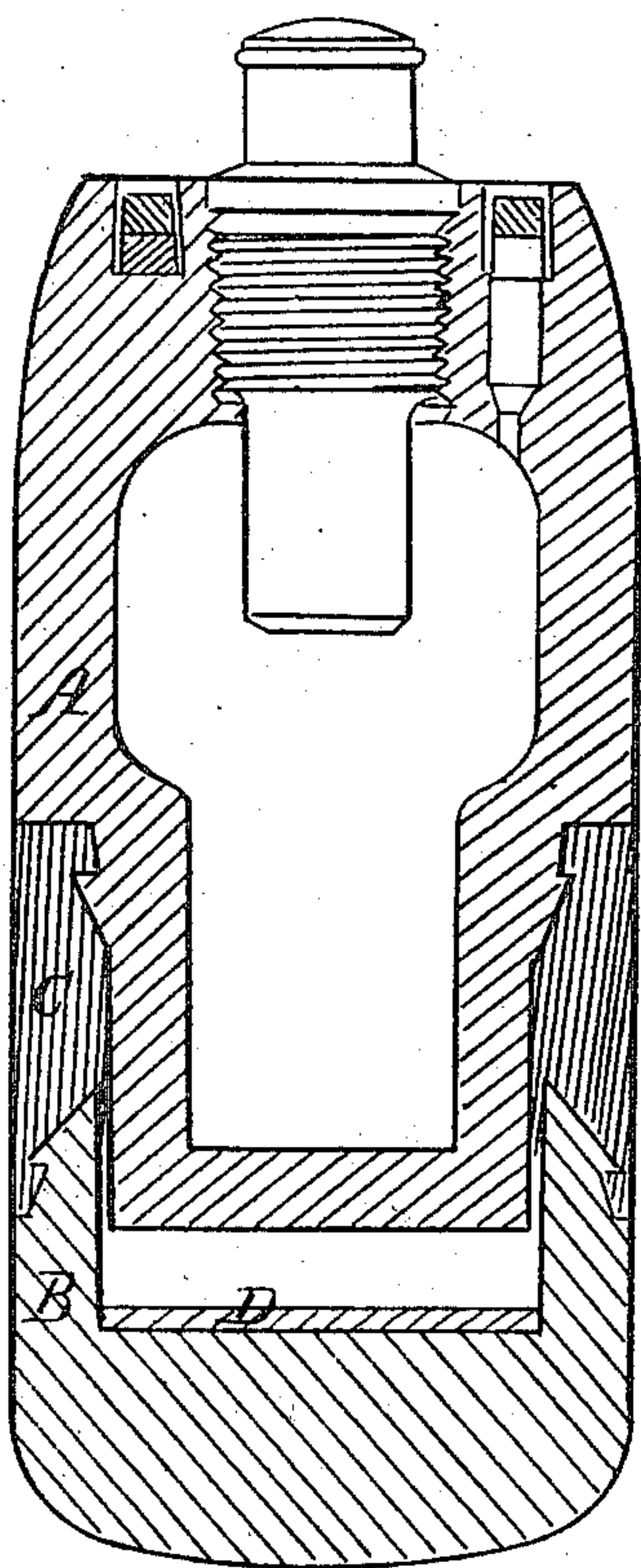
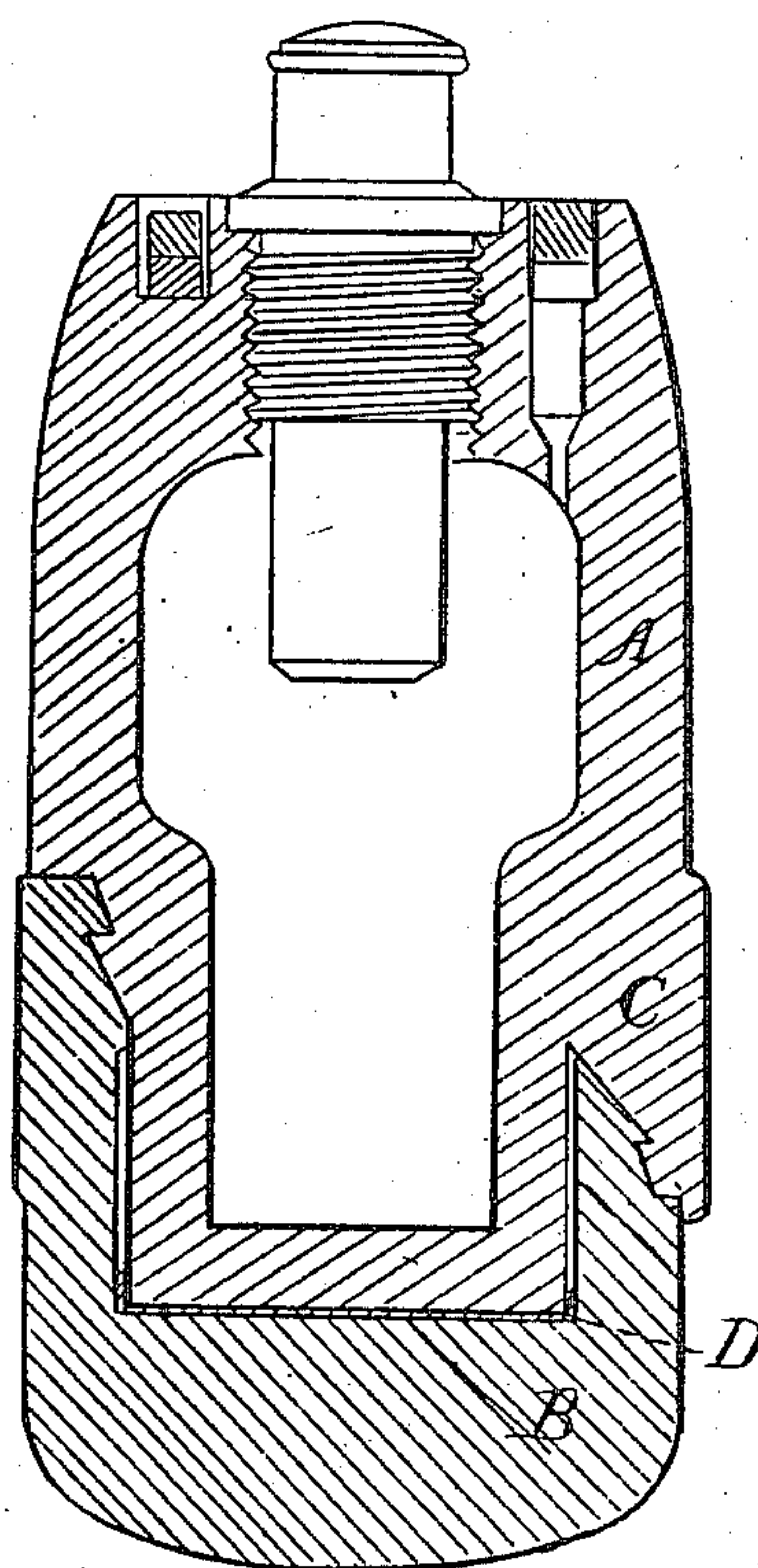


Fig. 2.



Witnesses.

*Kimball W. Peterson*

*D. H. Peterson*

Signature.

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# UNITED STATES PATENT OFFICE.

B. B. HOTCHKISS, OF NEW YORK, N. Y.

## IMPROVEMENT IN PACKING PROJECTILES FOR RIFLED ORDNANCE.

Specification forming part of Letters Patent No. 47,725, dated May 16, 1865.

*To all whom it may concern:*

Be it known that I, B. B. HOTCHKISS, of the city and county of New York, and State of New York, have invented a certain new and useful Improvement in Projectiles for Rifled Ordnance; and I do hereby declare that the following is a full and exact description thereof.

The accompanying drawings form a part of this specification.

Figure 1 is a longitudinal central section, showing the parts in the condition before firing. Fig. 2 is a corresponding section, showing the parts in the condition induced by the discharge.

Similar letters of reference indicate corresponding parts in both the drawings.

The nature of my invention consists in the employment of a cheap cushion of soft material mounted within a Hotchkiss projectile, in the manner hereinafter shown, and adapted to deaden the concussion or shock experienced in the act of firing.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings, and of the letters of reference marked thereon.

A is the casting, which forms the main body of my projectile.

B is a casting, which forms the rear cap, and C is a belt of lead, which encompasses the main part A, and connects the parts A and B strongly together by locking into them in the manner represented. The parts A, B, and C are adapted to operate together in the manner described in the patent issued to my brother, Andrew Hotchkiss, dated October 16, 1855.

D is a disk of pine wood, of such diameter

as to nearly or quite cover the entire base of the cavity in the cap B, and of such thickness as to fill about one-quarter of the space between the base of the cavity in the cap B and the base of the main part A. It is inserted previous to the applying of the parts A and B together. When the projectile is fired, the force of the powder drives the cap B forward with great velocity and closes the space in which the disk D is confined. In the absence of the soft disk D, the metal of A and B strike together with such force as to endanger the breaking of one or both the parts by the violence of the blow. The elasticity of the soft wood D, by gradually arresting the motion, saves the parts from fracture.

I have tested my invention practically and found it successful. The seven-inch Ames gun, which has lately attracted much attention, has thrown my projectile over seven miles. It is believed to be the longest range ever attained. The great weight of the projectiles and the intense mechanical action of the powder thereon made these more liable to break from the concussion above referred to than smaller projectiles. Nearly all broke in the gun until I introduced this cushion.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

The employment of the soft disk or cushion D, in combination with a Hotchkiss projectile, and arranged to operate in connection therewith, substantially in the manner and for the purpose herein set forth.

B. B. HOTCHKISS.

Witnesses:

KIMBALL W. STETSON,  
D. W. STETSON.