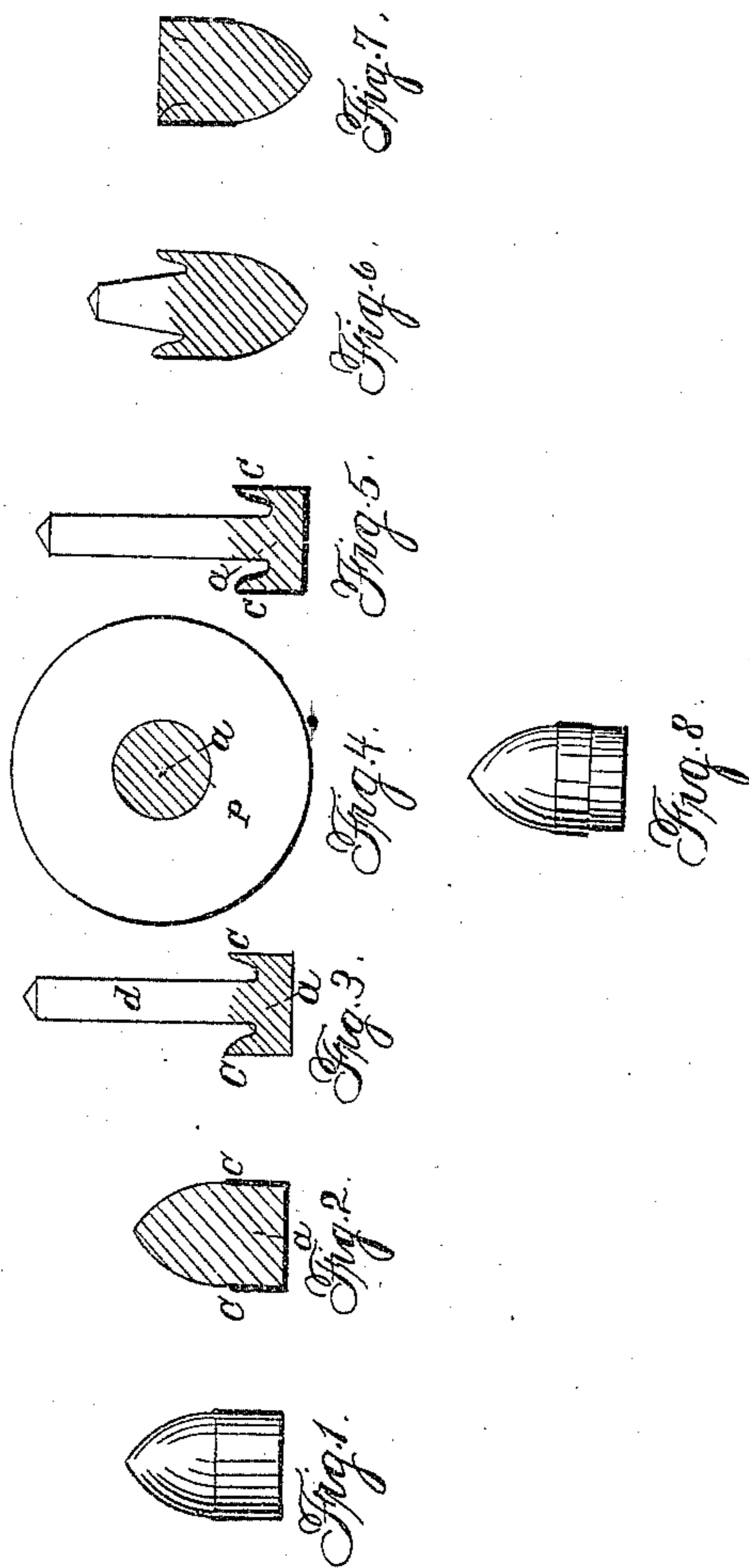


M PECK.  
Projectile.

No. 43,601.

Patented July 19, 1864.



Witnesses  
Chas. N. Inwoods.  
Rufus Sanford.

Inventor.  
Mito. Peck  
By atz. John E. Carr  
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# UNITED STATES PATENT OFFICE.

MILO PECK, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN PATCHED BALLS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. 43,601, dated July 19, 1864.

*To all whom it may concern:*

Be it known that I, MILO PECK, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Patched Balls for Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the same, when taken in connection with the accompanying drawings and the letters of reference marked thereon, and which said drawings constitute part of this specification, and represent, in—

Figure 1, my patched ball complete; Fig. 2, a vertical central section of the same. Figs. 3, 4, and 5 illustrate the process of manufacture. Figs. 6 and 7 show that the patch may be put on from the other end, and Fig. 8 a ball adapted to metallic cartridges.

The principal object of my invention is to produce a patched ball for use in cartridges.

The advantages which a ball properly patched has over balls not patched in giving direction to the ball and to contain the lubricating substance are too well known to require more to be said to properly set them forth.

The difficulties which have attended the manufacture of cartridges with patched balls have chiefly arisen in gathering and holding the patch around the ball. By my invention this difficulty is entirely overcome, and the patch so perfectly attached and secured to the ball as to make it, so far as the manufacture of cartridges is concerned, a part of the ball itself; and my invention consists in first forming one end of the ball so as to leave a rim or flange of the metal, while the metal which is to form the balance or other end of the ball is of a smaller diameter than the end first formed, and extends in the center and axially of the ball like a spindle. Then place the first-formed end upon a round patch of the requisite diameter; then gather the outer edge up and over the said rim or flange; then by proper dies or other contrivance compress the balance of the metal down upon the edge of the patch, so as to securely hold the patch and form the other end of the ball.

To enable others skilled to produce my improved patched balls, I will proceed to more fully describe their construction as illustrated in the accompanying drawings.

I first, in dies or molds prepared for the purpose, form the rear end, *a*, of the ball with a rim or flange, *c*, as seen in Fig. 3, with the metal *d*, which is to form the balance or point

of the ball, standing as a spindle in the center; then set the rear end, *a*, upon a patch, *p*, of the proper diameter and material, as seen in Fig. 4; then place the patch and ball in a die, which will gather the patch up around the ball; then, with a follower properly constructed, turn the edge of the patch down onto the rim, as seen in blue, Fig. 5; then, by another follower of the proper form, press the spindle *d* down onto the patch, and so as to form the point of the ball, as seen in Figs. 1 and 2. This completes the ball, and the patch cannot be torn from the ball. The patch being so smoothly gathered around and so firmly held to the ball, there are no more difficulties attending its use in the manufacture of cartridges than in the use of the bare ball. By dipping the rear end of the patched ball in the lubricating substance the patch will absorb a sufficient quantity for its own use, and will be much cleaner to handle than balls where the lubrication adheres to the metal, as in the ordinary cartridge.

For metallic cartridges I prefer to form a shoulder on the rear of the ball, as seen in Fig. 8.

I have represented my patch as put on at the rear of the ball; but it may be put on from the point, as seen in Figs. 6 and 7, where the point is represented as first formed, the patch placed on the point, and gathered in like manner, as for the rear, before described, then the balance of the metal compressed in like manner, as before described. I prefer, however, the first described, as it leaves the ball bare at the point, uses less material for the patch, is secured entirely around the ball so that it cannot be torn therefrom, while, in the other case, the point may be forced through the patch in its passage from the barrel of the arm, and the object of the patch thereby defeated; therefore,

Having fully described my invention, and without confining myself to patching either the front or rear end of the ball, I claim as new and useful and desire to secure by Letters Patent—

As a new article of manufacture, a patched ball for fire-arms, when the patch is secured to the ball by compressing the metal of the ball upon the patch, substantially as herein set forth.

Witnesses:

J. N. MCINTIRE,  
JOHN E. EARLE.

MILO PECK.