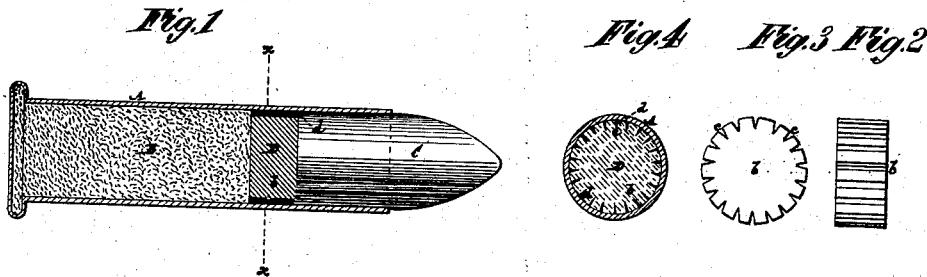


J. W. COCHRAN.

Improvement in Metallic-Cartridges.

No. 127,308.

Patented May 28, 1872.



Witnesses.
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R. H. Brown

J. W. Cochran

UNITED STATES PATENT OFFICE.

JOHN W. COCHRAN, OF NEW YORK, N. Y.

IMPROVEMENT IN METALLIC CARTRIDGES.

Specification forming part of Letters Patent No. 127,308, dated May 28, 1872; antedated May 14, 1872.

To all whom it may concern:

Be it known that I, JOHN W. COCHRAN, of the city, county, and State of New York, have invented a new and useful Improvement in Cartridges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a longitudinal section of a cartridge having my invention applied to it; Fig. 2, an edge view of a wad or cleaner and lubricator used in the cartridge, showing the same before being finished and inserted in the shell of the cartridge; Fig. 3, a face view of said wad-cleaner and lubricator under similar conditions; and Fig. 4, a transverse section of the cartridge at the line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts throughout the several figures of the drawing.

My invention consists in a cartridge which has for its component parts a shell, its charge, the ball, and a lubricating-wad cleaner, arranged between the charge and ball, and composed of an elastic material or body charged with plumbago or lubricating material in a pulverulent state, whereby said wad-cleaner not only operates during its expulsion with the ball to clean out the bore of the gun, but also to lubricate it and so facilitate the discharge of a succeeding ball—or, in other words, to keep the bore of the barrel in both a clean and slippery condition. This double function of the wad, whereby it acts both as a cleaner and lubricator, is effected in part by the yielding or elastic character of its body and in part by the plumbago or other lubricating powder with which said body is charged, and which, unlike grease, has no corroding or injurious effect upon the ball or metallic shell of the cartridge.

Referring to the accompanying drawing, A represents the shell of the cartridge; B, its

charge; C, the ball; and D, the lubricating-wad or cleaner. This wad or cleaner is composed of a plug or body, *b*, of cork, wood, or other suitable yielding or elastic material, made cylindrical to correspond with the shell, but of somewhat larger diameter than the interior of the latter. Such body is then nicked or serrated at its edge, as represented in Figs. 3 and 4, and the whole rolled in powdered graphite, or plumbago, or other lubricating powder, or such lubricating substance is otherwise forced into the cuts or cavities *c* in the body, and the latter or its periphery generally charged with the powder. This being done the wad or cleaner is forced through a taper funnel or tube into and to its place in the shell, the same being compressed while thus being driven home, and the plumbago or lubricating powder *d* securely held in the cuts or recesses *c* in the body.

When the charge is exploded in the cartridge the lubricating wad or cleaner D follows in the wake of the ball, the gases acting upon the latter only through the wad, which by reason of its compressed condition in the shell and elasticity when out of it, forms such a close fit to the shell and to the bore of the barrel and its grooves, that the gases cannot pass the wad to impair its action, but the wad in passing through the bore not only wipes it out, but deposits over its whole surface a thin film of the plumbago or other lubricating powder.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination of the shell A, the charge B, the ball C, and the wad or cleaner D charged with lubricating powder, substantially as specified.

J. W. COCHRAN.

Witnesses:

FRED. HAYNES,
R. E. RABEAU.