

# UNITED STATES PATENT OFFICE.

R. O. DOREMUS AND B. L. BUDD, OF NEW YORK, N. Y.

## IMPROVEMENT IN BALL-CARTRIDGES.

*Specification forming part of Letters Patent No. 34,725, dated March 18, 1862.*

*To all whom it may concern:*

Be it known that we, R. OGDEN DOREMUS and BERN L. BUDD, of the city, county, and State of New York, have invented certain Improvements in the Manufacture of Ball-Cartridges; and we do hereby declare that the following is a full, clear, and exact description of the same.

Our invention consists in an improvement in the manufacture of cartridges, in which the ball and powder are combined without the aid of paper or covering of any kind. We have discovered that ordinary gunpowder may be compacted in suitable molds by pressure, so that said powder can be made to assume any required form, as cylinders, cubes, &c., without destruction to its combustible and explosive qualities, and for which invention and improvements we have made separate application for patents.

We make our ammunition as follows: The charge of powder is prepared as described in said application. A bullet is first dropped into the mold. We take either the usual Minie ball, having a concave or hollow at its back, or else one of another kind especially prepared, which is a conical ball with a small fin or tail projecting from the back. The ball is inserted into the mold point downward. Upon this is placed the powder, and then the piston is brought down by the press and the powder compacted into form and forced partly into the concavity of the ball, if it be of the Minie kind; or else incloses the fin, if it be

of the other form. The whole is then to be discharged from the mold, when the powder and ball will be found to be firmly united. The ball is then to be patched, and is ready for use as in ordinary cartridges.

It will be obvious that for the manufacture of cartridges having a charge of powder of varying densities or degrees of combustibility, so as to impart to them the principle of acceleration as understood in gunnery, the charge is or may be united with the ball by several successive operations, *i. e.*, the powder is compacted, each layer separately, with a pressure varying according to the degree of combustibility intended to be produced.

Among the important features of this ammunition—beside possessing the qualities named in our other application as due to powder in the solidified form—are readiness of use, while in consequence of the absence of paper covering men need no longer be condemned for infantry who have lost their side teeth.

We claim—

The herein-described method of forming cartridges by uniting the ball directly with the compacted granulated powder, as set forth.

In witness whereof we have hereunto set our hands and seals.

R. OGDEN DOREMUS. [L. S.]  
BERN L. BUDD. [L. S.]

Witnesses:

L. PITKIN,  
C. A. DOREMUS.