C. W. LANCASTER.

Cartridge.

No. 97,653. Patented Dec. 7, 1869.

Fig. 3

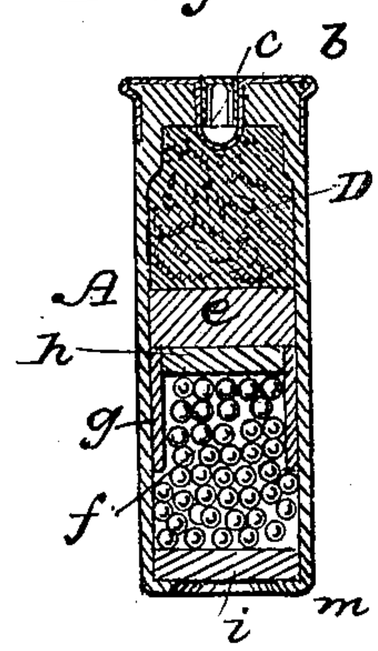


Fig. 5.

Fig. 1

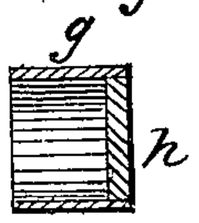


Fig. 6

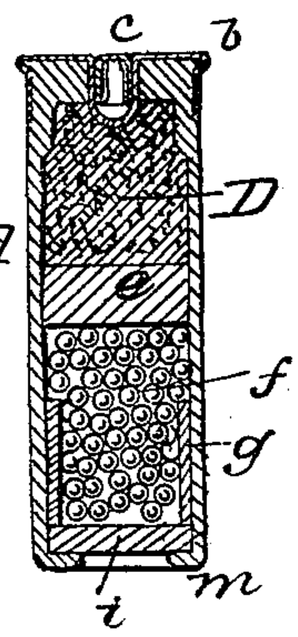


Fig. 4

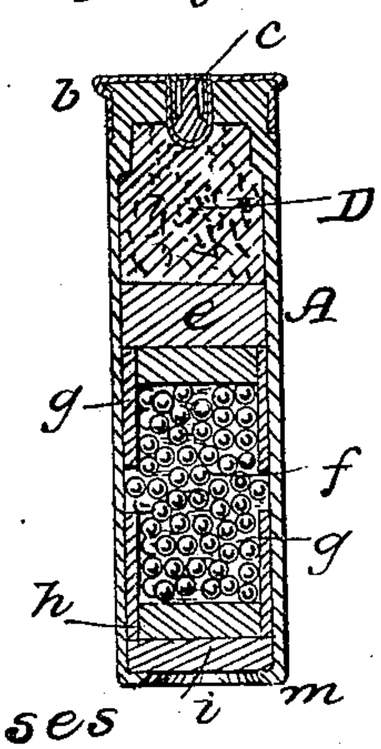
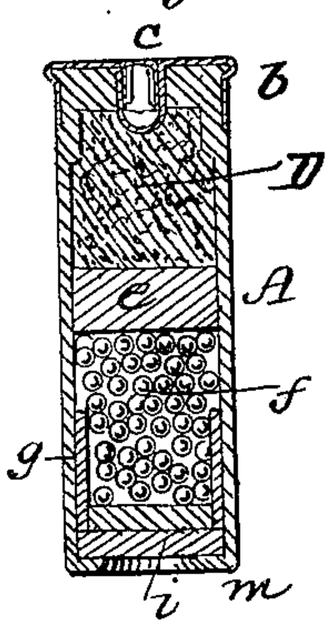


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES WILLIAM LANCASTER, OF LONDON, ENGLAND.

IMPROVEMENT IN SHOT-CARTRIDGES.

Specification forming part of Letters Patent No. 97,653, *dated December* 7, 1869.

To all whom it may concern:

Be it known that I, CHARLES WILLIAM LANCASTER, of London, England, have invented certain new and useful Improvements in Shot-Cartridges; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and the letters of reference thereon.

My invention relates particularly to that class of cartridges known as cased cartridges, and which (unlike that kind of cartridge which has only an envelope for the ammunition, which perishes with the first discharge) is adapted to be reloaded, or recharged, and fired over and over.

Previous to my invention, shot-cartridges have been made in a variety of ways, designed to prevent the shot from "scattering." In that class of shot-cartridges in which the charge of powder and shot is merely confined or enveloped in a wrapper, which is discharged with its contents, the shot have been confined within an auxiliary wrapper or envelope made of thin canvas or cloth, designed to confine or hold together the charge of shot during a portion of the time of its flight. In other instances the charge of shot has been incased in a wire cage, inclosed in the paper wrapper of the cartridge, and giving to this kind of cartridge the technical name of "wire cartridge."

And in that class of cartridges known as "cased cartridges," it has been suggested to prevent the scattering of the shot by inclosing them in an auxiliary shell, or case partially inserted within the shell of the cartridge, or that portion which remains in the chamber of the arm after firing.

In each kind of shot-cartridges heretofore known there is some essential characteristic lacking or some serious objection embodied.

In that kind in which some simple and efficient means for effecting the retention together or concentration of the shot is employed the cartridge is wholly perishable, and not of a character to render it so desirable for use in breech-loading arms generally as the cased cartridge. While in the last-named and most desirable kind of cartridge no efficient economic and desirable means has been heretofore employed to prevent the scattering of the shot, in this kind of shot-cartridges it is most essential that the whole contrivance or apparatus should be simple, cheap, efficient, and adapted to withstand transportation, and capable of being conveniently handled.

To provide such a cartridge, with the additional advantage of a perfect capacity to prevent the scattering of the shot, is the object of my invention, which to this end consists in a cased cartridge, composed of a simple shell of suitable size, shape, and material, within which are inclosed the powder, the shot, and a shot-holding device, as will be presently more fully explained.

To enable those skilled in the art to make and use my invention, I will proceed to describe it more fully, referring by letters to the accompanying drawings, in which—

Figure 1 is a sectional elevation of one of the shot-holding cases or hollow wads which I employ within the shell or case to prevent the scattering of the shot. Fig. 2 is a longitudinal central section of one of my improved shot-cartridges. Fig. 3 is a similar view, showing a different arrangement of the shot-holding tube or wad. Fig. 4 is another section, showing a modification. Fig. 5 is a detail view of modified form of holding device or hollow wad, and Fig. 6 a sectional view of a cartridge showing the adaptation of this said modification in the shot-wad.

In the several figures the same part is designated by the same letter of reference.

A is the shell or body of a cased cartridge, which may be made of any suitable material, and of a shape and size adapted to the kind of breech-loading guns in which it is designed to be used. I propose to make this case or shell of papier-maché or paper-stock, with a metallic flanged butt at *b*, and provide it with a suitable primer, as seen at *c*. Within the case or shell A is placed the charge of powder, as seen at D, over which is put a wad or disk, *e*, and between this disk and the closed terminal of the cartridge are inclosed the charge of shot, *f*, and the shot confining or concentrating tube or hollow wad *g*. This hollow wad I propose to make of paper or

other suitable material, cylindrical in form, adapted to fit inside of the shell A, and with one of its ends closed by a wad or disk, *h*, as clearly shown at Fig. 1, or of a short cylinder open at both ends, and to be used in conjunction with the terminal wad *i* only, as clearly illustrated at Figs. 5 and 6.

At Fig. 2 I have shown the hollow wad or shot-concentrator *g* placed near the terminal end of the shell, and so as to surround the greater portion of the charge of shot, while at Fig. 3 I have shown it in a reversed position. At Fig. 4 the charge of shot is confined at both ends, and almost wholly by two hollow wads, *g g*, and at Fig. 6 only a single wad or tube, open at both ends, is placed around the shot and in contact with the terminal wad *i*. In each instance the terminal end of the shell A is turned inward and over the wad *i*, so as to securely confine and hold in place said wad and the entire contents of the shell.

It will be seen that a cased cartridge made as I have herein described will be exceedingly simple, efficient, and economic of manufacture, while it will be well adapted to transportation and convenient handling, and that to refill the shell or case A it is only necessary to supply the necessary charges of powder and shot, arrange in the wads and shot-concentrator *g*, as shown, and turn over the terminal ends of the cases, as seen at *m*, which may be done in any convenient manner. By means of a simple little machine known and used for that purpose, these ends of the refilled cases may be spun over or turned down perfectly and rapidly.

When a cartridge such as I have described is fired, the shot, at the moment of discharge, are forced against the walls of the cylindrical wad C, and are held together by the latter during a short distance beyond the muzzle of the gun, where, the wad being driven ahead, the shot leave the concentrator *g* and proceed in their flight. By means of the hollow wads *g* the shot are prevented from scattering from the muzzle of the gun, and the charge is rendered more efficient.

I am aware that shot-cartridges have been made in which the charge of shot has been enveloped within a bag, and in other instances in a wire cage, and the whole covered by a paper wrapper. I am also aware that cased cartridges have been made in which a separate shot case has been inserted partially within (not inclosed within) the shell. But in neither of these kinds of cartridge are all the objects and advantages gained by my improvement attained. I do not wish to be understood as claiming either a cased cartridge for shot, or a shot-retaining case, to be used in connection with a mere wrapper containing the powder.

What I do claim as of my invention, and desire to secure by Letters Patent, is—

A cased shot-cartridge, in which the powder, shot, and shot-concentrating hollow wad, or its equivalent, are inclosed and held within the shell, substantially as herein described, for the purposes set forth.

In witness whereof I, the said CHARLES WILLIAM LANCASTER, have hereunto set my hand this 15th day of May, 1869.

CHARLES W. LANCASTER.

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