

No. 777,032.

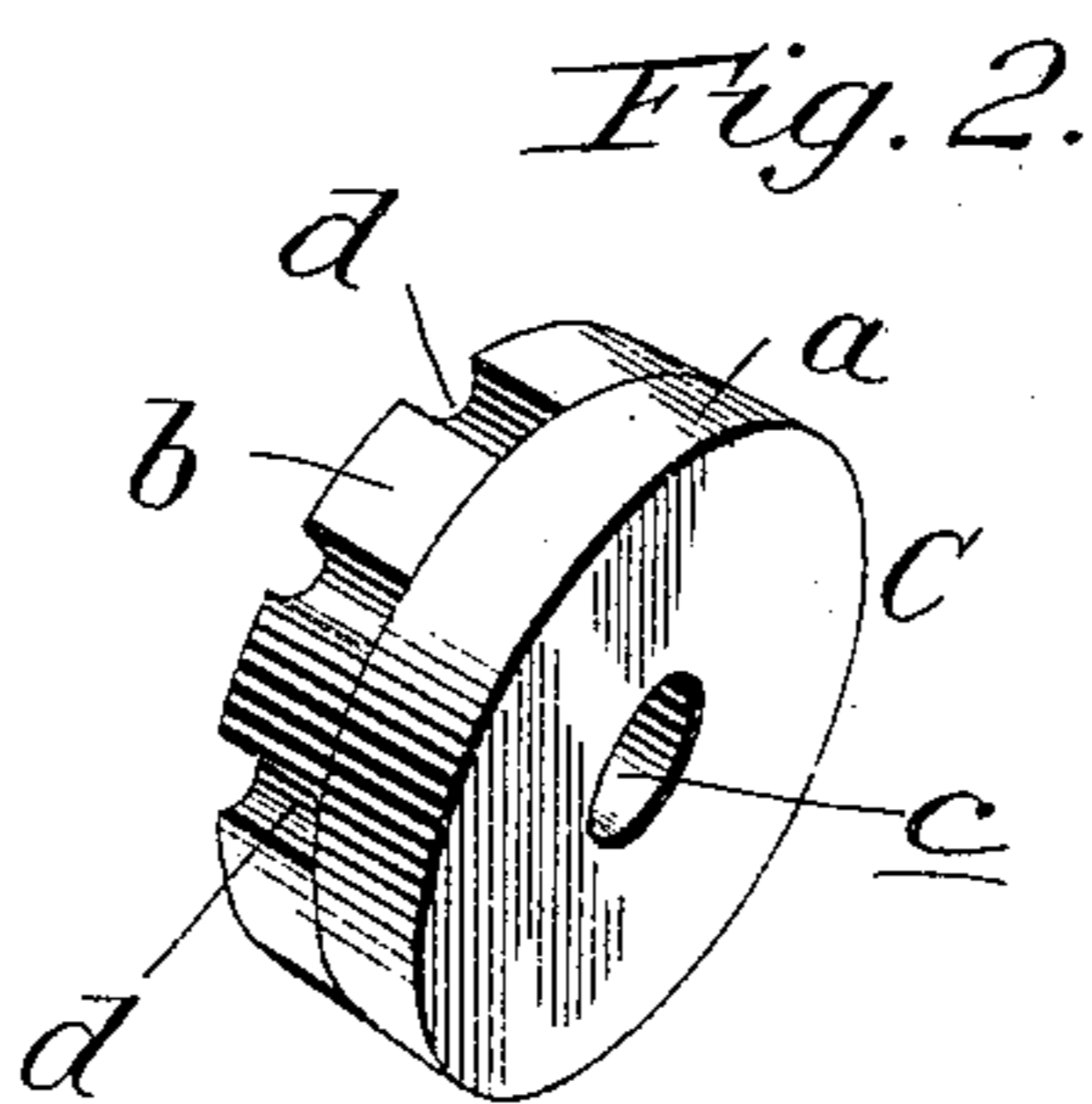
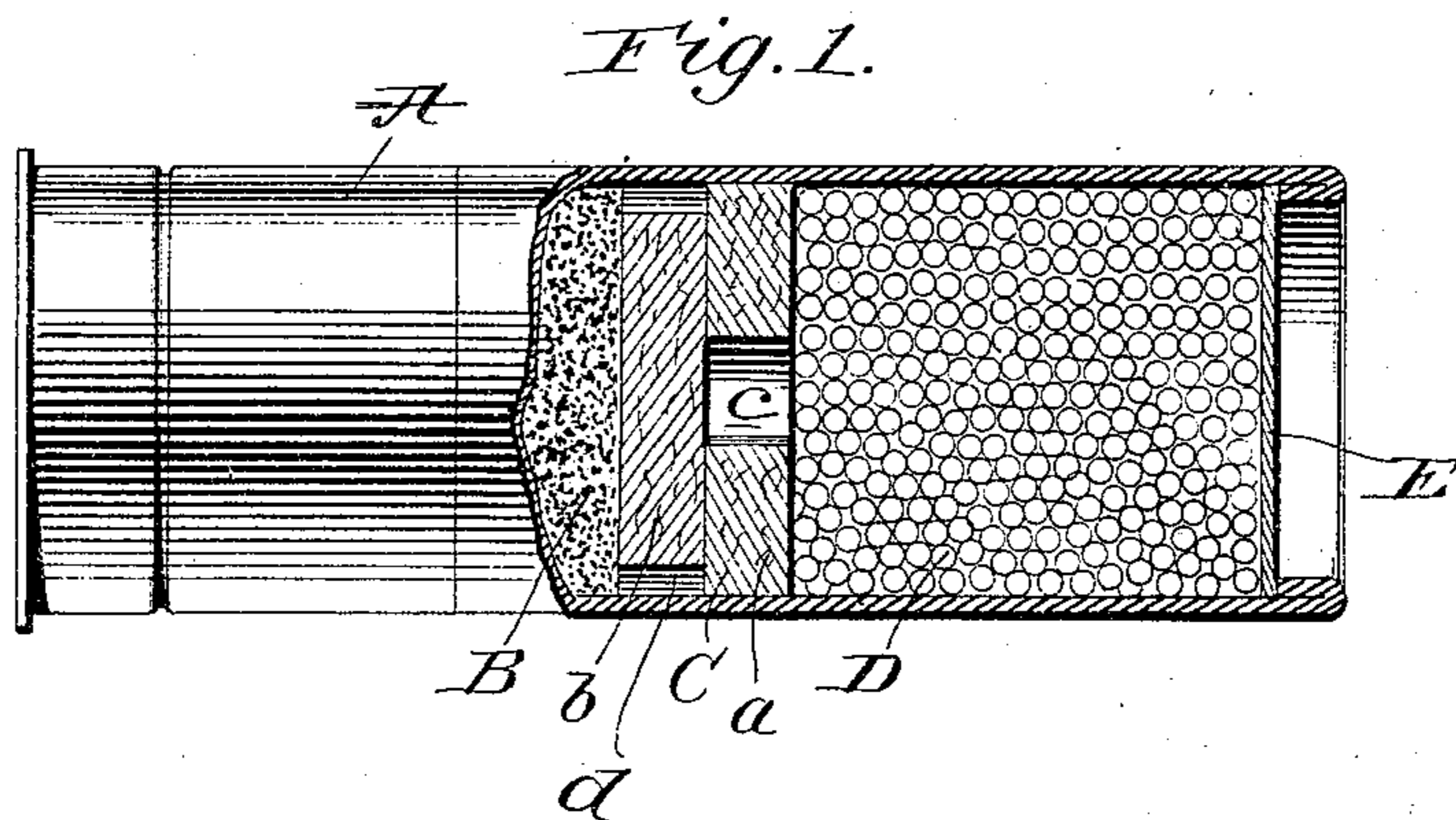
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C. LA DOW.

DEVICE FOR CONTROLLING FLIGHT OF MULTIMISSLILE PROJECTILES.

APPLICATION FILED SEPT. 3, 1904.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## DEVICE FOR CONTROLLING FLIGHT OF MULTIMISSION PROJECTILES.

SPECIFICATION forming part of Letters Patent No. 777,032, dated December 6, 1904.

Original application filed January 7, 1904, Serial No. 187,998. Divided and this application filed September 3, 1904. Serial No. 223,209. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LA DOW, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Devices for Controlling Flight of Multimissile Projectiles, of which the following is a specification.

This invention consists in a novel means or device for varying and controlling the flight of shot or other missiles constituting a multimissile projectile and designed to cause a more than normal spreading of the charge in firing.

The present application is a division of one filed in my name under date January 7, 1904, and designated by Serial No. 187,998, this division being intended to cover a specific embodiment of the broader invention claimed in said application or other divisions thereof.

In the accompanying drawings, Figure 1 is a side elevation of a cartridge embodying my invention, the shell being broken away and the contents shown partly in section; and Fig. 2 is a perspective view of the wad, separator, or device by which the flight of the shot is regulated and varied as desired.

A indicates a cartridge-shell of common form and character; B, a powder charge therein; C, my novel wad or separator; D, a shot-charge, and E a retaining or sealing disk or wad placed in advance of or above the shot to prevent their escape. The shell is shown as having its end crimped or inturned in a manner common and well known.

The wad or separator C comprises two members *a* and *b*. Of these the forward one, *a*, is centrally perforated, as at *c*, and the rear one, *b*, is peripherally notched, recessed, or furnished with passages *d* from face to face. These passages are shown as opening out of the periphery, but may be just within the circumference, if desired. It will be observed that this wad or separator is interposed between the powder and shot charges with the centrally-perforated wad next the shot. Under this arrangement a portion of the gases incident to combustion or explosion of the powder charge passes by way of the notches

or passages *d* to the rear face of the forward member *a*, thence between the proximate faces of the two members *a* *b* to the central opening *c*, and by it to the shot charge, entering the latter at or near its axis. This action occurs at some point in or perhaps throughout the travel of the shot charge through the barrel of the gun, and as a result the charge on leaving the muzzle of the gun is somewhat more separated, diffused, or spread apart by the expanding gas within it than is a like charge fired with the cartridge loaded in the ordinary way.

By properly varying and proportioning the thickness of the separator C or its members and the size of opening *c* and passages *d* it is practicable to vary, determine, and control with very considerable accuracy the degree or extent of spreading of the charge in firing.

It is observed that a shell loaded in the manner here set forth causes a more even or uniform distribution of the shot over a given area than is obtainable otherwise.

I have shown a single member *a* and a single member *b* and prefer so to use the device; but obviously two or more may be arranged in alinement to give any desired thickness, the principle and construction remaining unaltered.

While designed primarily for shot-cartridges, the invention is applicable to any multimissile projectile, and the separator may be used without a shell or case.

Having thus described my invention, what I claim is—

1. A cartridge comprising a shell of ordinary construction adapted to maintain its integrity when the charge is fired therefrom; a powder charge contained within said shell; a multimissile projectile charge in advance of the powder charge; a centrally-perforated wad; and a wad having openings out of line with the center, both interposed between the powder and projectile charges, the centrally-perforated wad being next to the projectile charge.

2. In a cartridge, the combination of a shell having an integral body portion; a charge of powder and a charge of separate missiles con-

tained therein; and a series of wads separating said charges, the foremost of said wads being centrally perforated and another of said wads having part of its area cut away outside  
5 of its central portion.

3. A cartridge comprising a shell, a charge of powder and a charge of separate missiles contained therein, and a centrally-perforated wad between said charges and next to the projectile charge, in combination with another  
10 wad having a series of passages to cooperate with the perforation of the first wad, whereby the gases incident to the burning or explosion of the powder are enabled to influence the  
15 flight of the projectile charge and the movement of its missiles in a direction transverse to the axis of the shell.

4. In a cartridge, the combination of a shell;

a powder charge; a multimissile projectile charge; and a separating-body interposed between said charges and comprising two wads or members placed face to face, the forward wad having a central opening and the rear wad having openings at or near its periphery, whereby a portion of the gases of combustion is permitted to pass to and between the faces of the wads and thence through the central perforation of the forward wad to the projectile charge.

In testimony whereof I have signed my name  
to this specification in the presence of two subscribing witnesses.

CHARLES LA DOW.

Witnesses:

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FANNIE WISE.