

(No Model.)

M. HERRINGTON.
CARTRIDGE.

No. 566,315.

Patented Aug. 25, 1896.

Fig. 1.

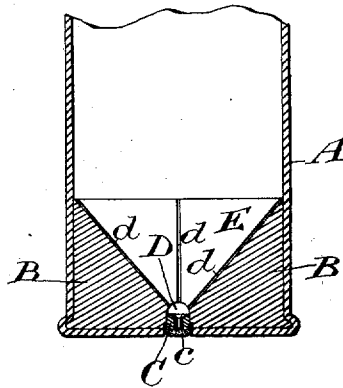
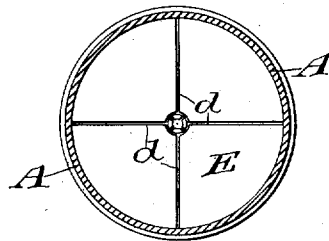


Fig. 2.



Witnesses:-
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UNITED STATES PATENT OFFICE.

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CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 566,315, dated August 25, 1896.

Application filed February 6, 1895. Serial No. 537,438. (No model.)

To all whom it may concern:

Be it known that I, MARSHALL HERRINGTON, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Cartridge-Cases, of which the following is a specification.

My invention relates to an improvement in cartridge-cases, in which provision is made for advancing the percussion or fulminate flame simultaneously along the exterior wall of the charge of powder for the purpose of igniting it at extended portions, and thereby securing a more complete burning of the charge before it escapes from the gun.

The invention consists in providing grooves which diverge from the fulminate-chamber along the wall of the powder-chamber, the grooves being of such width as to prevent the entrance of the powder-grains therein to choke them, thereby leaving a free passage for the fulminate-flame along the exterior of the charge.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a longitudinal central section through that portion of a shell where the powder-chamber is located, and Fig. 2 is a plan view looking into the open end of the shell.

The shell or casing is denoted by A and may be of any well-known or approved form. Its head is reinforced by a mass B of treated paper or other suitable material, as is common, and the anvil C for the reception of the percussion or fulminate cap *c* is located, as is common, at the center of the head end of the shell.

The powder-chamber is made of tapered form gradually increasing in size from the fulminate-chamber D beneath the anvil until it reaches the full size of the interior of the casing A. From the fulminate-chamber D

grooves *d* diverge, in the present instance being made to extend from the fulminate-chamber to the interior wall of the casing A along the tapered wall of the powder-chamber E. The number of grooves which I have found it feasible to use in practice is four a quadrant's distance apart, but the number may be increased or diminished as further tests or a change of powder may determine.

The grooves *d* are made with relation to the size of the grain of powder to be used as follows: If the powder be of coarse grain, then the grooves *d* may be wider, care being taken that they shall not be as wide as the smallest of the grains, and if the grains of powder used be smaller then the grooves should be proportionately reduced in width.

In operation it has been found that the flame of the fulminate or percussion flashing along the narrow grooves *d* and simultaneously igniting the charge of powder at various points along its exterior wall will not only serve to ignite the forward portion of the charge so as to give a gradual pressure in overcoming the inertia of the shot or bullet, but will at the same time fire the charge so effectually along its exterior that the entire burning of the charge may be assured and the muzzle velocity of the shot or bullet be materially increased.

What I claim is—

A cartridge-case having a powder-chamber provided with grooves diverging from the fulminate-chamber along the wall of the powder-chamber and of such width with respect to the powder-charge as to prevent the grains of powder from entering the grooves, substantially as set forth.

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Witnesses:

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