

(No Model.)

F. M. GARLAND.
CARTRIDGE.

No. 430,229.

Patented June 17, 1890.

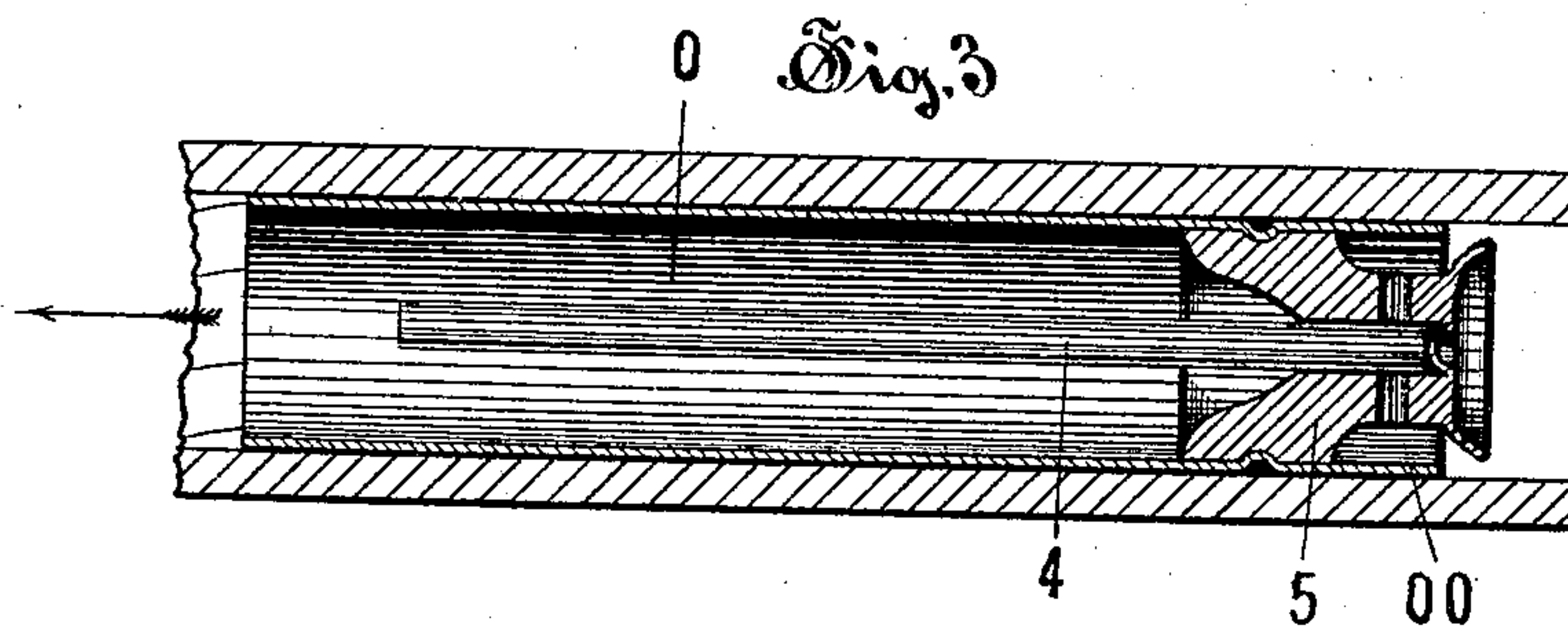
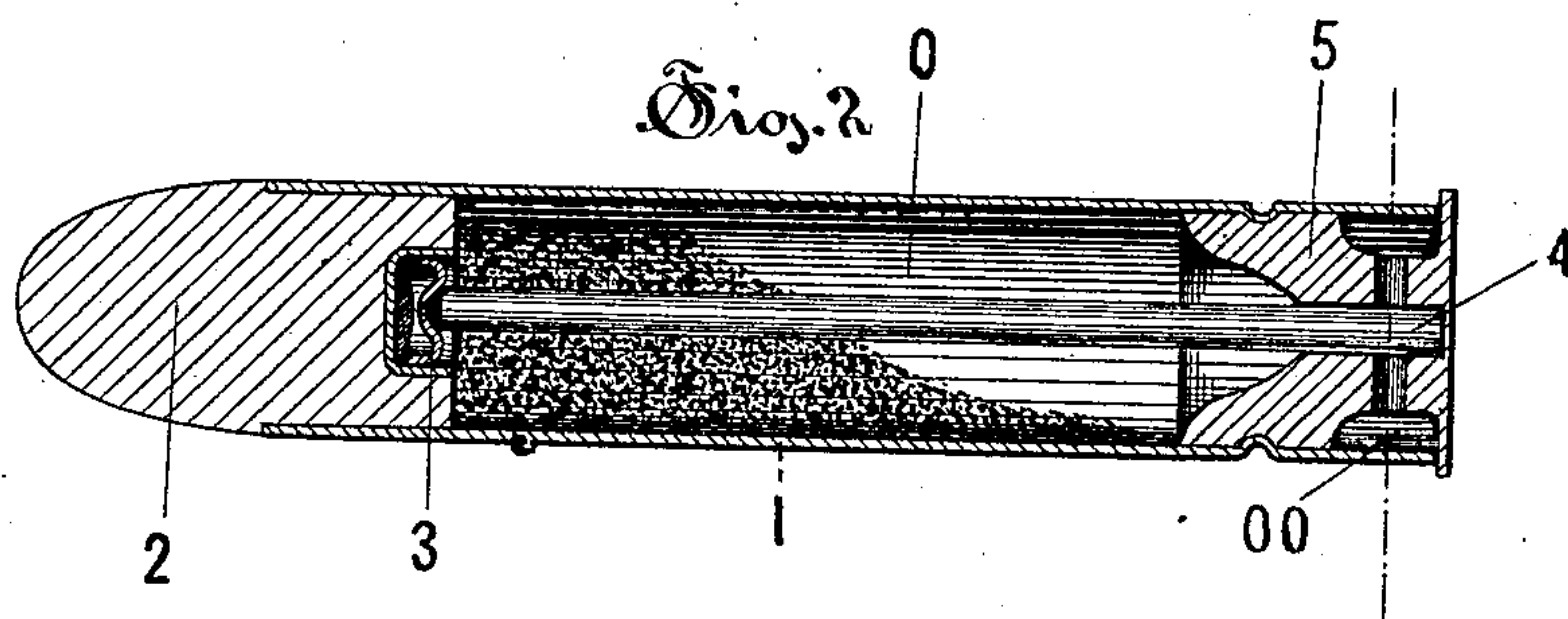
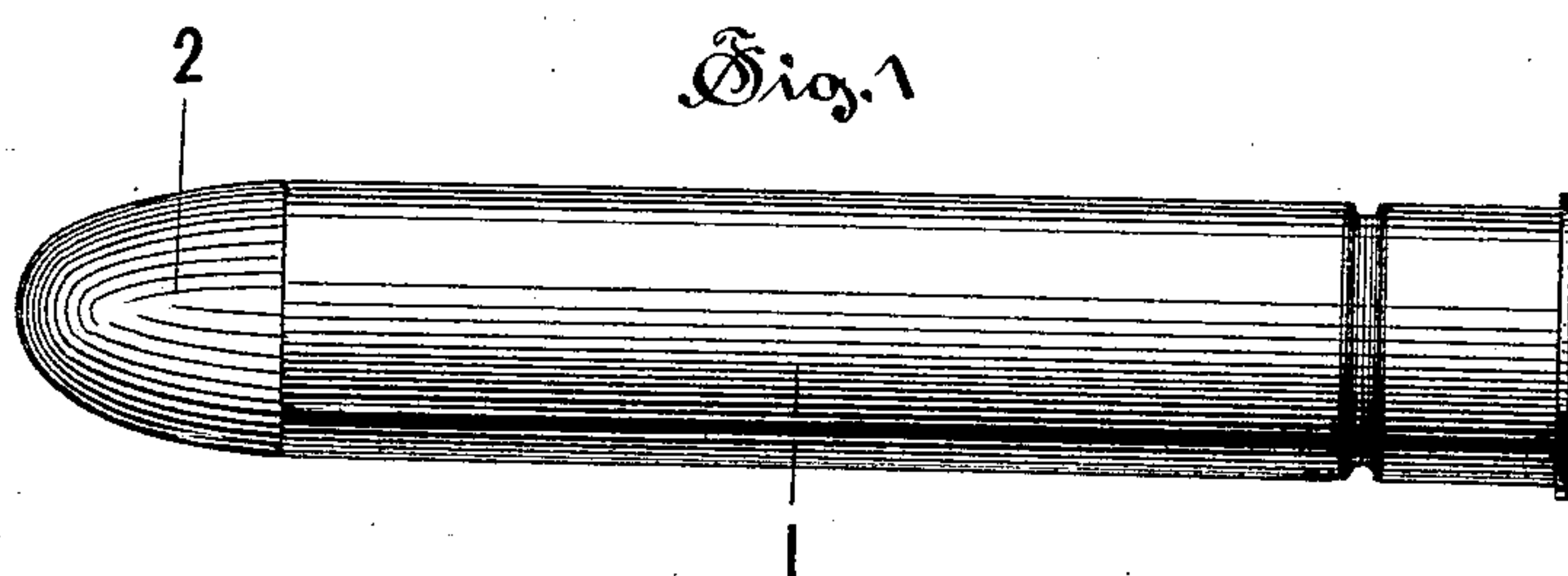
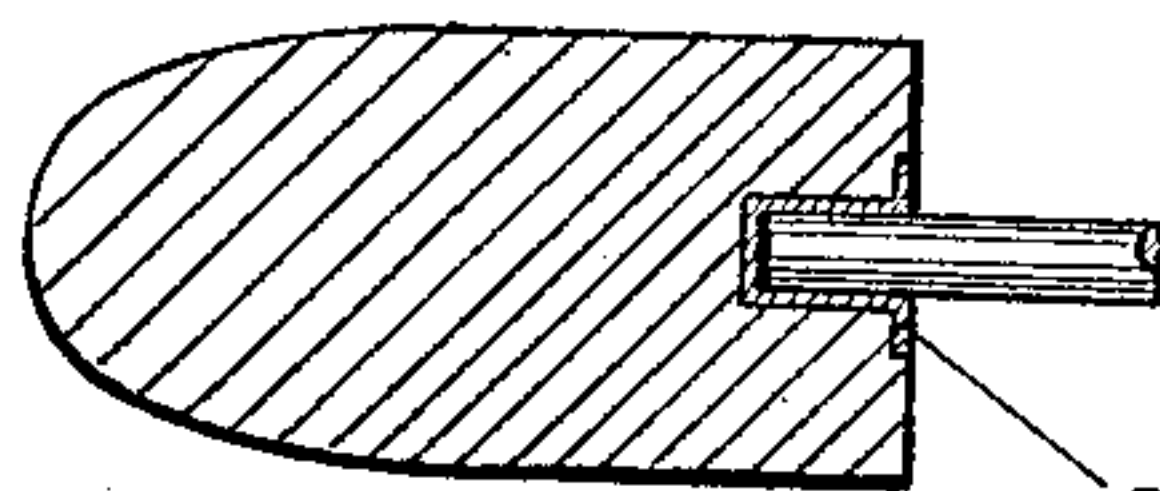


Fig. 5



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK M. GARLAND, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF, W. A. FOSKETT, AND F. P. NEWTON, OF SAME PLACE, AND E. B. BEECHER, OF WESTVILLE, CONNECTICUT.

CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 430,229, dated June 17, 1890.

Application filed May 27, 1889. Serial No. 312,206. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. GARLAND, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Cartridge, of which the following is a specification.

This invention is a cartridge which is adapted by means of its special construction to make, when the gun is fired, two explosions, the first of which gives the bullet its impulse in the usual manner, and the second of which causes the ejection of the cartridge-shell.

In the drawings, Figure 1 represents a side view of the cartridge; Fig. 2, a view in central longitudinal section of the cartridge; Fig. 3, a sectional view of the shell in the act of passing through the barrel; Fig. 4, a transverse section on the broken line in Fig. 2, and Fig. 5 a view of a bullet with the ordinary percussion-cap.

To enable others skilled in the art to make my improved cartridge, I will proceed to fully describe the same.

1, Figs. 1 and 2, represents the case of the cartridge, having at its front end the bullet 2.

3, Fig. 2, represents a cap or its equivalent, and 4 a percussion-pin. These parts may be of any proper construction.

5, Figs. 2 and 3, represents the shell, the rear end of which is essentially constructed in such manner as to form a chamber 0 0, as shown.

The chamber 0 contains the main charge of powder, and the chamber 0 0 the auxiliary charge. An open space is left around the percussion-pin at the rear end, in order that the auxiliary charge may be ignited by the explosion of the main charge.

The operation is as follows: The gun is fired by the impact of the front end of the percussion-pin against the cap or its equivalent, this impact causing the first explosion, that of the main charge of powder. The explosion of the main charge of powder causes the ignition and consequent explosion of the auxiliary charge of powder, and by means of this second explosion the shell is ejected from the gun. The flange of the shell is bent by the force of the

second explosion sufficiently to pass through the barrel of the gun, as shown in Fig. 3.

Any kind of powder may be used, of course; but wood-powder is preferred for the auxiliary charge to prevent fouling of the gun. If this is used, the gun will be kept clean, the fouling resulting from the first explosion being cleansed by the passage of the shell through the barrel.

The special advantage of this cartridge is that the ejection of the shell results from the firing of the gun, while in other cases, when the gun is fired, an additional action is required to eject the shell.

Having thus fully described my improved cartridge, what I claim as new, and desire to secure by Letters Patent, is—

1. A cartridge containing a main explosion-chamber and a head or base for closing the rear end of the shell, the said head or base being connected to the interior of the shell, a chamber formed between the shell and the head or base in a recess therein for the supplemental charge, the end of the shell being closed by an overlapping portion of the head or base extending only to the outer periphery of the shell, whereby the supplemental charge is adapted to eject the shell, a firing-pin, and a passage between the main and supplemental chambers, substantially as described.

2. A cartridge containing a chamber for the main charge, a firing-pin extending through said chamber, a base, recessed to form a chamber for a supplemental charge for ejecting the shell, a central passage in the base for the firing-pin, forming, also, a communication to the supplemental chamber, substantially as described.

3. A cartridge having two explosion-chambers and a base between the chambers secured to the interior of the cartridge-shell and having a flange forming the end of the cartridge, substantially as described.

This invention signed and witnessed this 16th day of May, 1889.

FRANK M. GARLAND.

Witnesses:

CHAS. R. NORTH,

CHAS. G. VAN SCHUYVER.