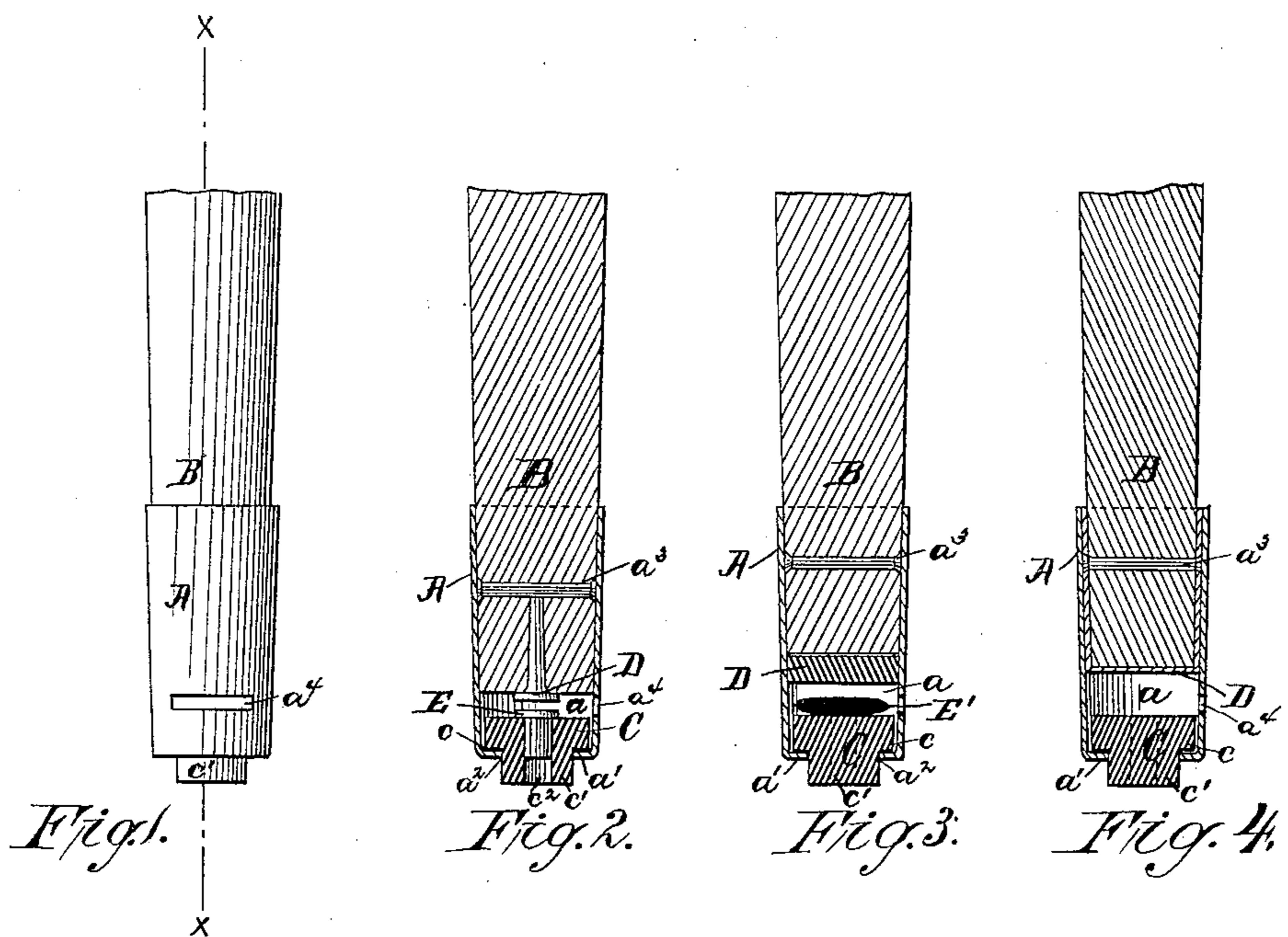


(No Model.)

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TOY CARTRIDGE EXPLODER.

No. 377,399.

Patented Feb. 7, 1888.



WITNESSES:

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TOY-CARTRIDGE EXPLODER.

SPECIFICATION forming part of Letters Patent No. 377,399, dated February 7, 1888.

Application filed April 22, 1887. Serial No. 235,724. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. McHARG, of Rome, county of Oneida, State of New York, a citizen of the United States, have invented certain new and useful Improvements in Toy-Cartridge Exploders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a device for exploding toy cartridges, which may be either the flange-headed primed metallic cartridge for toy guns or the flat paper cartridge for toy pistols, the said device being adapted to be attached to the end of a cane or to the head of an arrow; and my invention consists in the parts hereinafter described, constructed and combined to operate as and for the purpose set forth.

Figure 1 is a side elevation of an exploder containing my invention, showing the same mounted upon the end of a cane. Fig. 2 is a longitudinal central sectional view of the same on the line $x x$, Fig. 1, and showing a flange-headed cartridge seated in the exploder ready for discharge. Fig. 3 is a similar view of the same, showing a modification of some of the parts of the exploder and a paper cartridge seated ready for discharge. Fig. 4 is a similar view of the same, showing a further modification in the structure of the parts of the exploder.

A is a ferrule adapted to be detachably seated on the end of a cane, B, or other stick—such as an arrow—and it is of such a length that when seated upon the end of the cane its base will project beyond the base of the cane, as shown, thus constituting a chamber, a , between the base of the cane and the inner side of the base of the ferrule. I find it preferable to taper the ferrule toward its lower end, adapting it to fit upon the correspondingly-tapered end of a stick, as shown, and to have the least diameter of the stick somewhat greater than the least diameter of the ferrule. By this means, when the ferrule is seated on the stick, the stick cannot pass to the end or base of the ferrule, but when it has passed to its limit of movement into the ferrule the space or chamber a will be left, as described. The lower end or base of the ferrule is consti-

tuted of the inwardly-projecting annular flange a' , thus leaving a central opening or perforation, a^2 , in the base of the ferrule.

C is a block adapted to fit within the chamber a , and of such a width or thickness as to permit it to play vertically therein toward and away from the base or end of the stick, the block fitting loosely to the ferrule-walls for this purpose. The under or outer face of the block is formed with a shoulder at c , adapted to engage against the flange a' of the ferrule, and it has the projection c' , adapted to extend through the central opening, a^2 , in the base of the ferrule, and to play loosely therein. The length of the projection c' is such that when the block C is pressed inwardly of the chamber a thereby the upper face of the block may be forced into contact with the base of the cane or stick.

D is an anvil on the end or base of the stick, and may be constituted, as shown in Fig. 2, of a flat-headed pin driven into the stick end, or of a metal plate or disk soldered into the ferrule A just below the end of the stick, as shown in Fig. 3, or of the base of a ferrule, as shown in Fig. 4, secured upon the end of the stick, and over which the detachable ferrule A is fitted. This metal anvil or surface is desirable, as the wear upon the end of the stick in firing the cartridges is thus obviated, while the certainty of exploding the cartridges is secured.

In the detachable attachment of the ferrule A to the end of the stick B, I find it desirable to seat in the stick the transverse pin a^3 with its ends at the surface of the stick on opposite sides. The ends of the pin thus furnish points or faces against which the inner face of the ferrule-wall fits or engages when the ferrule is slipped to its seat on the stick, and insure permanency of the proper relative position of the ferrule and stick end in thus seating the ferrule. Without this metal bearing furnished by the ends of the cross-pin a^3 the wear of the stick due to continued seating and unseating of the ferrule would cause the stick to project too far into the ferrule, or render the ferrule so loose upon the stick that it would not remain seated, as desired.

To adapt the described devices for the firing of primed metallic toy cartridges—such as

shown at E, Fig. 2—the block C has a perforation or opening through it, as at c^2 , from end to end, adapted to have the cartridge-body seated in it, with the flange-head thereof resting on the upper face of the block below the anvil D in the chamber a . When thus seated, the cartridge is exploded by driving the block C against the anvil, which may be done by striking the extended projection c' against some object, as by driving the cane against the pavement, or an arrow against a target. The exploder is loaded by detaching the ferrule from the stick, withdrawing the block C through the open top of the ferrule, extracting the spent shell, and inserting a fresh cartridge in the opening c^2 , and then dropping the block into its seat on the ferrule-flange and reseating the ferrule on the stick.

To adapt the described exploder for firing toy paper cartridges, as shown at E', Fig. 3, a slot, a^4 , may be made in the ferrule A, leading into the space constituting the chamber a , and adapted to permit the passage through it of a cartridge, E'. The opening c^2 in the block C may or may not be dispensed with at pleasure in this case, although the block is preferably made solid, as thus a louder report is made by the explosion of the paper cartridge.

To load with the paper cartridge, the cartridge is passed into the chamber a through the slot a^4 , and then rests upon the block C. The firing is accomplished by driving the block to the anvil D by a blow upon the extended projection c^2 , as before described.

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

1. In a toy-cartridge exploder, as an attachment to canes, arrows, or similar articles, the combination, with the stick B, provided at its end with an anvil, D, of the ferrule A, detachably attached to said anvil end of said stick and extending beyond said end to constitute a chamber, a , and having the opening a^2 through its bottom, together with the block C, fitted loosely and free to move by gravity in said ferrule-chamber, and having the projection c' on its lower face adapted to extend through said bottom opening in the ferrule, the shoulder c , engaging the rim of said opening, and the orifice c^2 , extending longitudinally through said block and its projection, whereby a percussion-cap or toy cartridge may be seated in

said orifice in said block and exploded by being driven, thus seated, against the anvil on the stick, as described.

2. In a toy-cartridge exploder, as an attachment to canes, arrows, and similar articles, the combination, with the stick B, having a tapered end, an anvil, D, on said tapered end, and a pin, a^3 , extending laterally through said tapered end, of the correspondingly-tapered ferrule A, adapted when seated on the stick to extend beyond the same and form a chamber, a , together with the block C, fitted loosely and free to move by gravity in said chamber, and provided with the projection c' , adapted to extend through an opening in the ferrule end, and a shoulder, c , adapted to engage the rim of said opening, as described.

3. In a toy-cartridge exploder, as an attachment to canes, arrows, and similar articles, the combination, with the stick B, carrying on its end an anvil, D, of the ferrule A, fitted upon said anvil end of said stick and adapted to extend therefrom to constitute the chamber a , together with the block C, fitted loosely and adapted to move by gravity in said ferrule-chamber, and having the projection c' on its lower face adapted to extend through an opening in the ferrule end, and a shoulder, c , adapted to engage the rim of said opening, the said ferrule having formed in its side the slot a^4 , leading into the ferrule-chamber at a point between the anvil and the block when said block rests on the bottom of said ferrule, as and for the purpose set forth.

4. In a toy-cartridge exploder, the combination, with the stick B, tapered at one end, as described, and having a ferrule fixed on said tapered end by a pin, a^3 , passing laterally through the stick and the ferrule, of the supplemental ferrule A, detachably fitted upon the fixed ferrule and adapted to extend beyond the extremity of the same to constitute a chamber, a , together with the block C, having play by gravity in said chamber, and provided with a projection, c' , extending through and having play in an opening in the bottom of said detachable ferrule, as and for the purpose set forth.

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Witnesses:

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