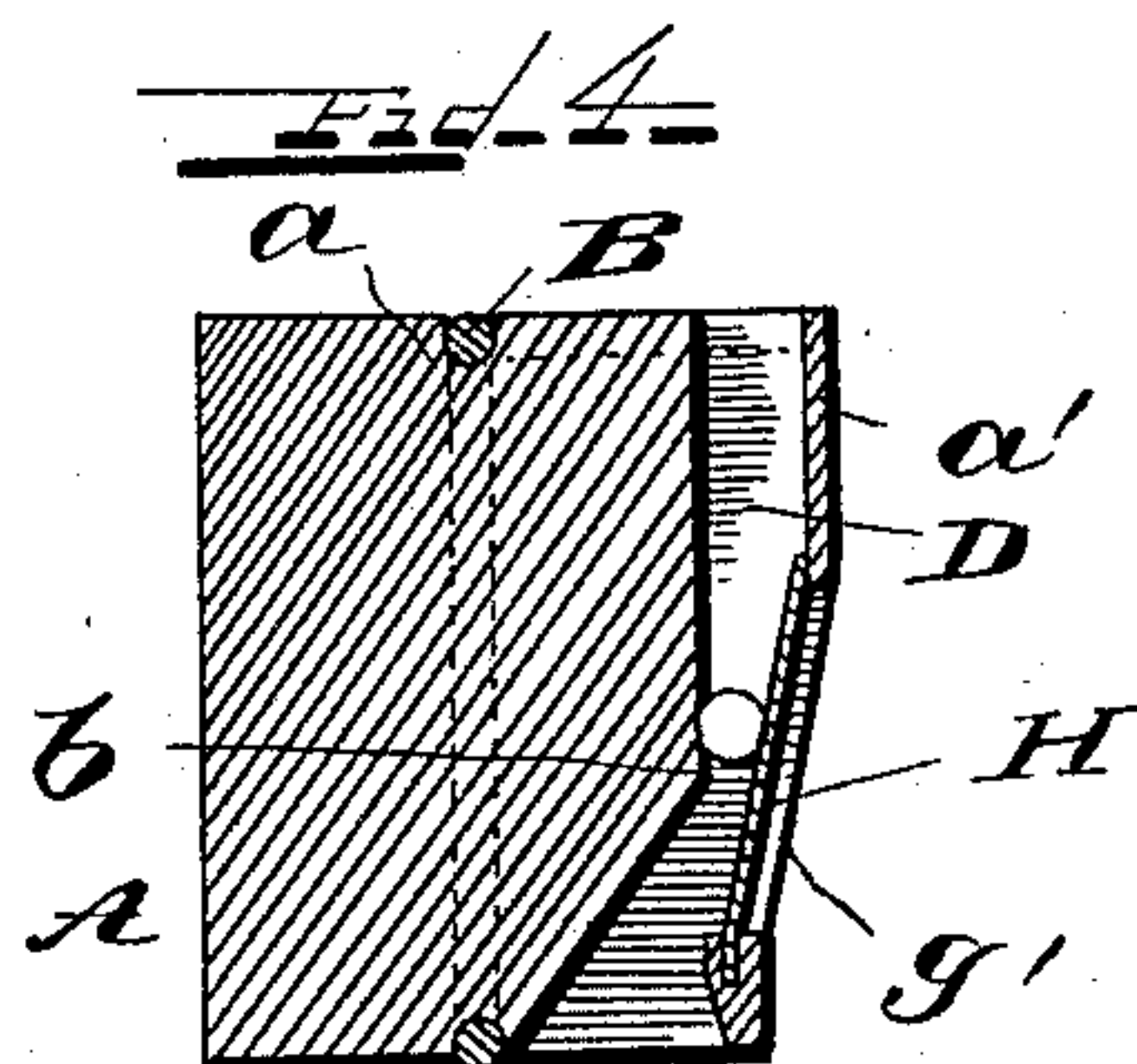
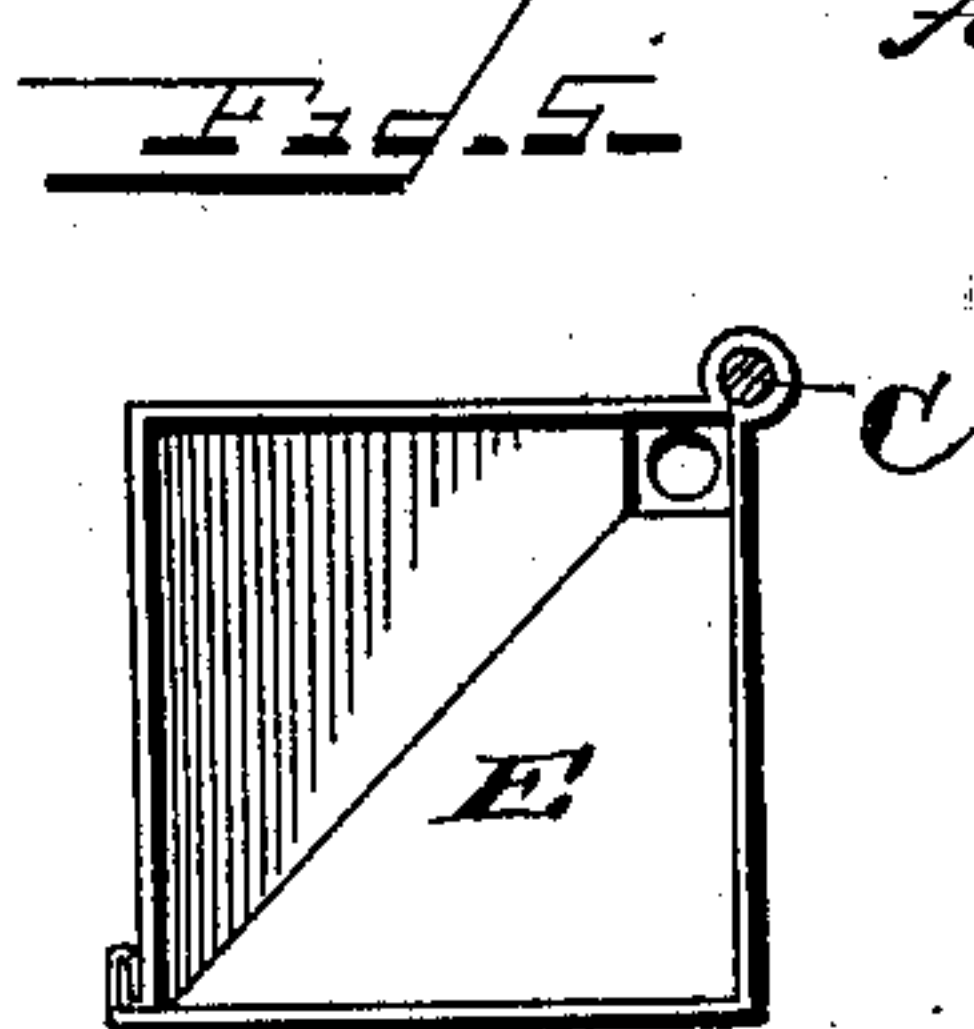
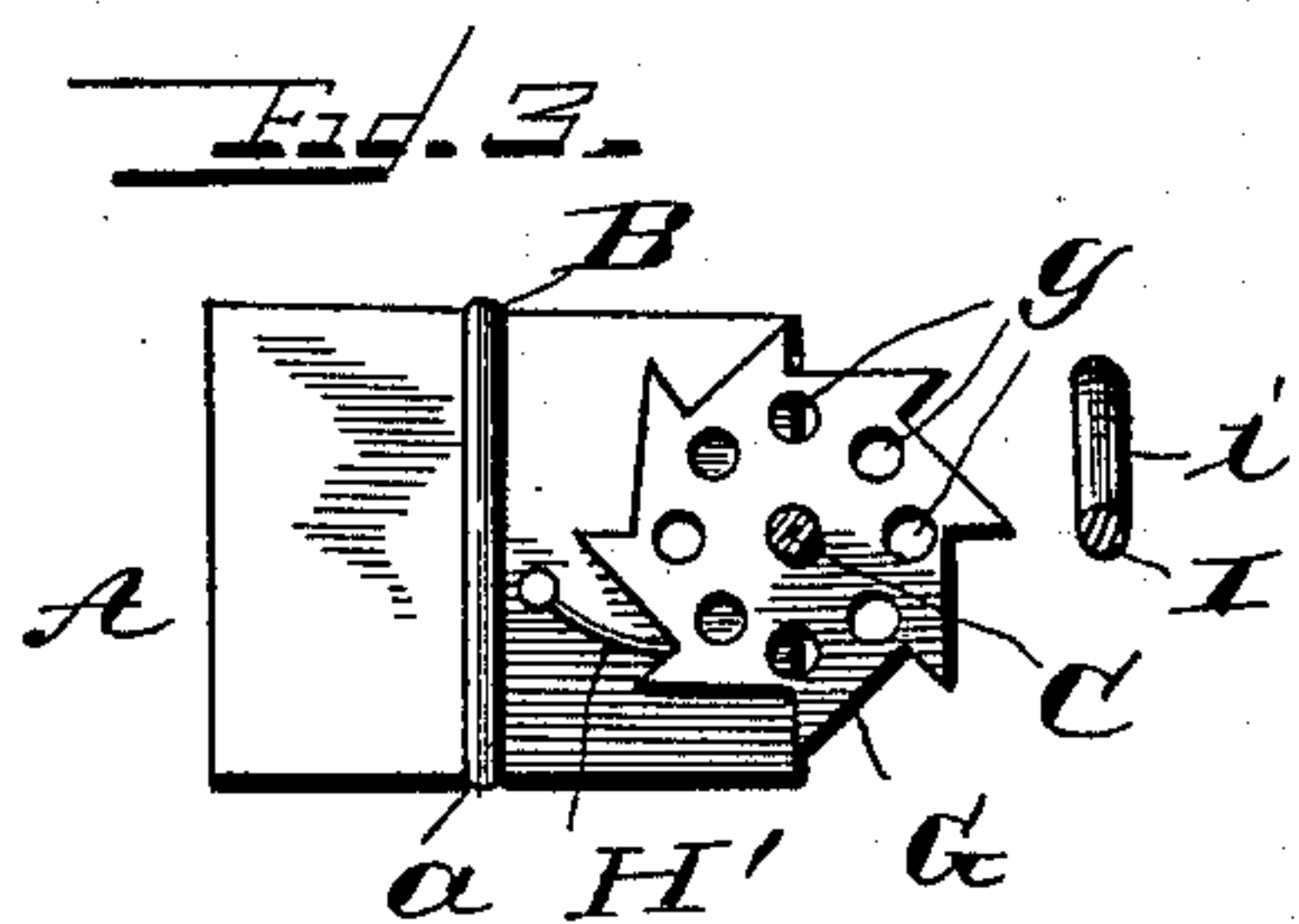
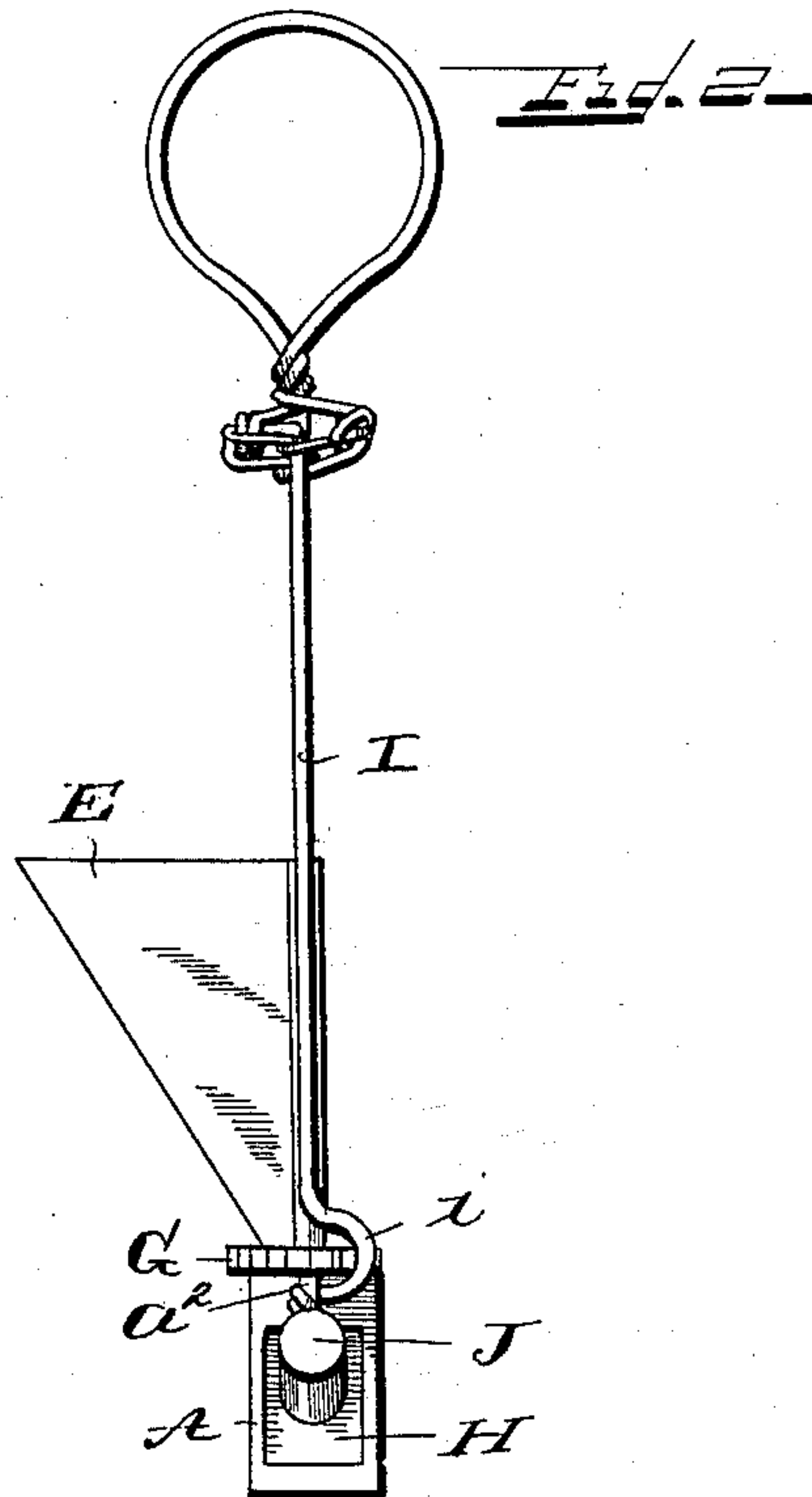
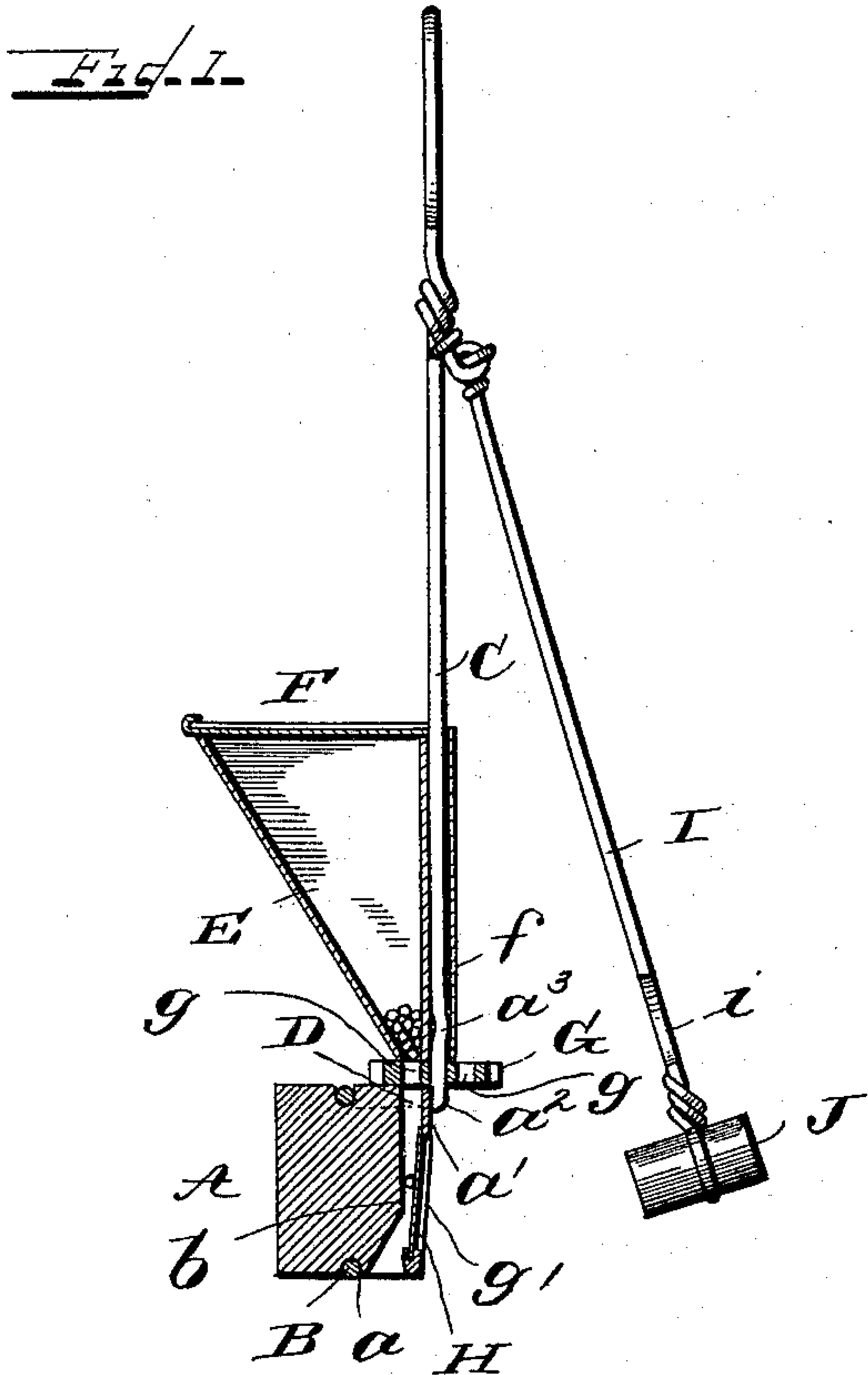


(No Model.)

J. A. SHIPPARD.  
DETONATING TOY.

No. 596,549.

Patented Jan. 4, 1898.



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES A. SHIPPARD, OF WASHINGTON, DISTRICT OF COLUMBIA.

## DETONATING TOY.

SPECIFICATION forming part of Letters Patent No. 596,549, dated January 4, 1898.

Application filed June 26, 1897. Serial No. 642,450. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. SHIPPARD, a citizen of the United States, residing at Washington, in the District of Columbia, have invented an Improvement in Detonating Toys, of which the following is a specification.

My invention relates to improvements in detonating toys which are especially designed for the use of and to afford amusement to children; and it has for its object to dispense with the more dangerous kind of toys usually handled by them to cause explosions or reports; and the invention consists in the novel construction and arrangement of the several parts, as will be hereinafter more in detail described, and particularly pointed out in the claims.

In the accompanying drawings, to which reference is had and which fully illustrate my invention, Figure 1 represents a sectional view of the invention embodying my improvements, taken on the line  $x x$  of Fig. 2. Fig. 2 is a front elevation of the same; and Figs. 3, 4, and 5 are enlarged detail views thereof. Similar letters of reference indicate corresponding parts in the several figures.

A designates a square or nearly square solid metallic base-block or anvil having formed centrally around the same a correspondingly-shaped groove  $a$ , and intersecting this groove and formed at right angles thereto is another groove  $a'$ . Within these grooves is taken and firmly secured a wire B, which is bent again at right angles to the intersecting groove  $a'$ , as at  $a^2$ , and terminates in a hand-holding vertical rod C. Immediately above the point or angle  $a^2$  in the lower end of the rod is formed a bend, the object of which is to hold or bind securely a hopper onto a ratchet-wheel, said ratchet-wheel being in turn mounted on the anvil, all of which will be hereinafter more in detail described.

D designates a chute formed in the rear side of the anvil A. This chute, beginning at a point, as at  $b$ , which is about one-third of the way from the bottom of the anvil, is of angular form, and from the point mentioned runs vertically to the top of the anvil, this being the receiving-point of the chute for the caps prior to their entry into the chute.

E designates a hopper provided with a lid

F, the hopper receiving and holding any suitable number of caps desired, said hopper being also provided with a rear open-ended channel  $f$ , through which is passed the hand-holding rod C, said rod being also passed through a central opening formed in a rotating ratchet-wheel G, interposed between the lower open-ended hopper and the top of the anvil. This ratchet-wheel is also provided with a suitable number of detonating-cap openings  $g$ , disposed circularly therein. Each of said openings  $g$  receives a cap from the hopper-opening above and feeds it around the chute-opening step by step in the rotation of the wheel, the openings of which aline with the chute-opening in the anvil, and it is dropped in the vertical portion of the chute and closely held therein at the exploding-point, as at  $g$ , between a suitable resilient metallic plate  $h$ , secured to the rear side of the anvil and the inner wall of the same by means of a swinging hammer, which will be hereinafter explained. The resiliency of the plate is such as to force the cap against the inner wall of the anvil, exploding it and dropping remains of the exploded cap entirely out of the anvil through the lower open end of the chute. This anvil has also secured to it a pawl H', which engages the teeth of the ratchet-wheel and thus prevents backlash.

I designates a swinging hammer-rod, its upper end being loosely but securely fastened in any suitable manner to a point near the upper end of the hand-holding rod C. This swinging hammer-rod is bent near its lower end, as at  $i$ , as clearly shown in Figs. 1 and 2, to allow the bent portion to contact with the teeth of the ratchet-wheel G and cause it to rotate and feed the caps received by the ratchet-wheel openings step by step around the chute-opening previously described. This bent portion  $i$  is also twisted from a point where the lower portion of the bend ceases in such a manner as to extend transversely around a hammer J, one end of which contacts with the resilient metallic plate H, secured in the chute in the rear portion of the anvil and between which and the inner wall of the anvil the detonating cap is interposed and explodes the same as rapidly as the hammer strikes the plate.



The operation of my invention is as follows: The hopper being supplied with a quantity of detonating caps, the device is in condition for immediate use, and this is accomplished  
5 by turning the ratchet-wheel until one of the cap-apertures therein registers with the opening in the bottom of the hopper, when a cap will fall in such opening. The ratchet-wheel is then turned or rotated farther and until  
10 the opening containing the cap registers with the opening or mouth of the chute, when the cap will fall from the opening in the wheel into the chute, falling down until it lodges between the wall of the anvil and the inner  
15 face of the detonating plate. Then by operating the hammer it will strike against the plate by its swinging motion, and the force of the concussion explodes the cap.

Having thus described my invention, what  
20 I claim as new, and desire to secure by Letters Patent, is—

1. In a detonating toy, an anvil formed with a vertical cap-chute, a spring-plate to close one side of the chute, means to feed the caps  
25 to the chute in succession behind said plate, and a swinging hammer to strike the said plate in front.

2. In a detonating toy, an anvil formed with a vertical cap-chute through it, a plate to  
30 close one side of the chute, a hopper to contain the caps, a rotating wheel horizontally arranged between the end of the hopper and the anvil and formed with cap-opening, and a swinging hammer to strike the plate and  
35 explode the cap.

3. In a detonating toy, an anvil formed with a vertical cap-chute through it, a plate to

close one side of the chute, a hopper to contain the caps, a horizontally-rotatable wheel  
40 between the lower end of the hopper and the upper end of the anvil formed with cap-apertures to receive a cap from the hopper and carry it to the chute, and a hammer to strike the plate and explode the cap.

4. In a detonating toy, the combination  
45 with the hopper having a rear open-ended channel; of an anvil having a chute formed therein as described, a resilient metallic plate secured in the chute, and a perforated ratchet-wheel interposed between the hopper and  
50 chute, and a pawl engaging the ratchet-wheel, substantially as described.

5. In a detonating toy, the combination  
55 with the hopper, having an open-ended channel, an anvil provided with a chute, a resilient metallic plate secured in the chute, a perforated ratchet-wheel interposed between the hopper and chute, a pawl engaging the ratchet-wheel; of a wire located in grooves in the anvil  
60 and passing centrally around the same and bent at right angles, and terminating in a vertical hand-holding rod passed through the ratchet-wheel and rear channel of the hopper, and having a bend near its lower end or  
65 angle, a swinging hammer-rod secured to the hand-holding rod, and having a bend near its lower end terminating in a twisted loop grasping a hammer or weight substantially as described and for the purpose set forth.

J. A. SHIPPARD.

Witnesses:

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D. Y. WOOD.