

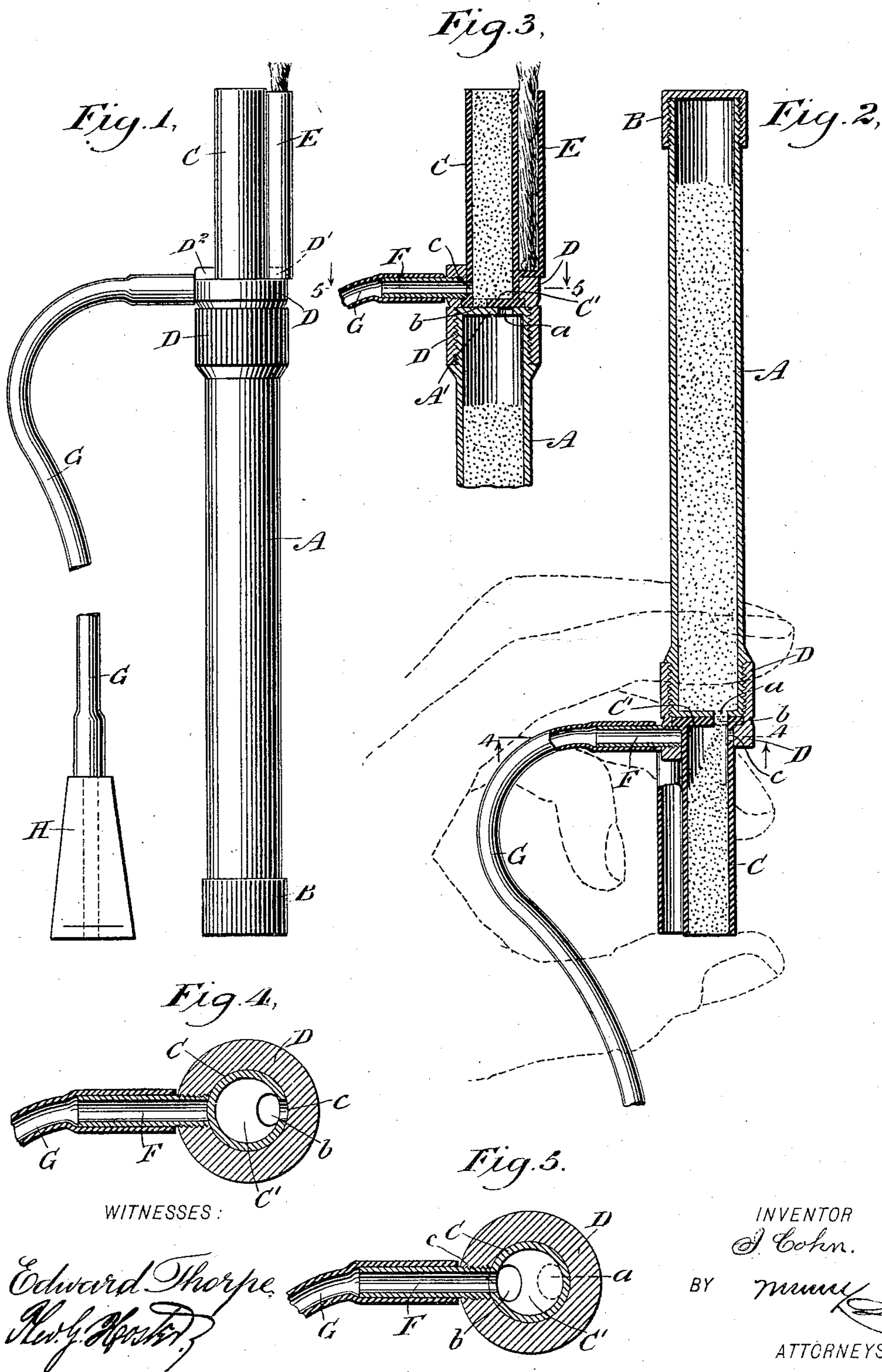
No. 610,472.

Patented Sept. 6, 1898.

I. COHN.  
FLASH LIGHT APPARATUS.

(Application filed Mar. 2, 1898.)

(No Model.)



# UNITED STATES PATENT OFFICE.

ISRAEL COHN, OF NEW YORK, N. Y.

## FLASH-LIGHT APPARATUS.

SPECIFICATION forming part of Letters Patent No. 610,472, dated September 6, 1898.

Application filed March 2, 1898. Serial No. 672,256. (No model.)

*To all whom it may concern:*

Be it known that I, ISRAEL COHN, of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Flash-Light Apparatus, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved flash-light apparatus which is simple and durable in construction, easily manipulated, and arranged to positively prevent undue ignition of the powder in a magazine at the time a single charge is ignited.

The invention consists of novel features and parts and combinations of the same, as will be described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional side elevation of the same in position for filling the nozzle with a charge from the magazine and with the air-pipe cut off. Fig. 3 is a sectional side elevation of the improvement in position for flashing, with the magazine cut off from the charge and the air-pipe in communication with the charge-nozzle. Fig. 4 is an enlarged inverted sectional plan view of the improvement on the line 4 4 of Fig. 2, and Fig. 5 is a sectional plan view of the same on the line 5 5 of Fig. 3.

The improved flash-light apparatus is provided with a tubular magazine A, adapted to contain a quantity of powder (magnesia or the like) for forming a number of single charges, as hereinafter more fully explained. The magazine A is closed at one end by a screw-cap B, which when removed permits of filling the magazine with the desired powder. The bottom A' of the magazine is provided on one side with a port a, adapted to register with a port b, formed in the bottom C' of a nozzle C, open at its outer end and adapted to contain sufficient magnesia or like powder for a single charge, the said nozzle C being mounted to turn in a cap D, screwed or otherwise secured to the bottom of the magazine A. The nozzle C extends in alinement with the magazine A from the bottom of the latter, as plainly illustrated in the drawings,

and the said nozzle is provided on one side with a fuse or match receiver E, in which a match or fuse is inserted and ignited at its outer end whenever it is desired to ignite the powder blown out of the nozzle C over the lighted end of the fuse to produce an intense flash of light. The lower or inner end of the fuse-holder E serves as a stop for limiting the turning motion of the nozzle C by abutting against either of two shoulders D' or D<sup>2</sup>, formed on the top of the cap D. When the fuse-holder E abuts against the shoulder D', as shown in Figs. 1 and 3, then the port b is cut off from the port a, so that the interior of the magazine A is completely cut off from the interior of the nozzle C. When, however, the nozzle is given a half-turn to bring the fuse-holder E against the other shoulder D<sup>2</sup>, then the port b registers with the port a, and the nozzle C can now be filled with powder from the magazine A by holding the apparatus upside down and closing the outer end of the nozzle by the thumb of the user's hand, as indicated in Fig. 2.

In the side of the nozzle C, next to the port b, is arranged a port c, adapted to register with an air-pipe F, secured in the cap D and carrying a flexible tube G, provided with a mouthpiece H. When the ports b and a are cut off from each other, as indicated in Figs. 1, 3, and 5, then the port c registers with the air-pipe F, and when the operator now blows into the mouthpiece H then the air passes through the tube G and pipe F by the port c into the inner end of the nozzle C to force the charge contained therein out of the nozzle, past the lighted end of the fuse, and ignite the powder to produce a flash of light. When the nozzle C is in the position shown in Figs. 2 and 4—that is, when the ports a and b register—then the pipe F is cut off from the nozzle C, so that blowing into the mouthpiece H at the time the magazine A and the nozzle C are connected will not force air into the nozzle, and consequently a discharge and ignition of the powder does not take place as long as the nozzle C and the magazine A are in communication with each other.

It is evident from the foregoing that when the nozzle C is filled from the magazine A and the operator forgets to turn the nozzle C to cut off the latter from the magazine and lights

the fuse and blows into the mouthpiece H then a discharge of the powder in the nozzle does not take place, as the air-pipe F is cut off from the nozzle. The operator will at once  
5 notice that air does not pass through the mouthpiece H, the pipe G, and pipe F and is consequently reminded that the nozzle C has not been turned to the proper position for ignition. When the nozzle is turned to connect the port *c* with the pipe F, then the ports  
10 *a* and *b* are disconnected, and consequently ignition of the powder in the magazine A is not liable to take place when the charge is forced out of the nozzle C and ignited by the  
15 fuse, as above explained.

The device is very simple and durable in construction, is easily manipulated, and can be readily carried about, at the same time permitting a number of charges to be obtained  
20 from the magazine for producing a series of flash-lights for photographic or other purposes.

Having thus fully described my invention, I claim as new and desire to secure by Letters  
25 Patent—

1. A flash-light apparatus, comprising a magazine, a charge-nozzle adapted to be filled from the said magazine, and adapted to be cut off therefrom after filling, and an air-pipe  
30 adapted to register with the said nozzle at the time the latter is cut off from the magazine, the nozzle when turned, cutting off the air-pipe before the nozzle moves in register with the magazine, substantially as shown and described.  
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2. A flash-light apparatus, comprising a magazine formed in its bottom with a port, a charge-nozzle mounted to turn and having its bottom on the bottom of the magazine, the nozzle-bottom being provided with a port adapted to register with the port in the magazine-bottom, to permit of filling the nozzle from the magazine, and an air-pipe for forcing a blast of air into the nozzle at the inner end thereof, the said pipe being adapted to register with a  
40 second port in the nozzle after the port in the bottom of the nozzle is cut off from the magazine-port, substantially as shown and described.  
45

3. A flash-light apparatus, comprising a  
50 magazine formed in its bottom with a port, a charge-nozzle mounted to turn and having its bottom on the bottom of the magazine, the nozzle-bottom being provided with a port adapted to register with the port in the magazine-bottom, to permit of filling the nozzle  
55 from the magazine, an air-pipe for forcing a blast of air into the nozzle at the inner end thereof, the said pipe being adapted to register with a second port in the nozzle after the  
60 port in the bottom of the nozzle is cut off from the magazine-port, and a fuse-holder carried by the said nozzle and adapted to form a stop for limiting the turning motion of the nozzle between fixed shoulders, substantially as  
65 shown and described.

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Witnesses:

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