

(No Model.)

N. J. DE BOW.
FLASH LIGHT APPARATUS.

No. 568,336.

Patented Sept. 29, 1896.

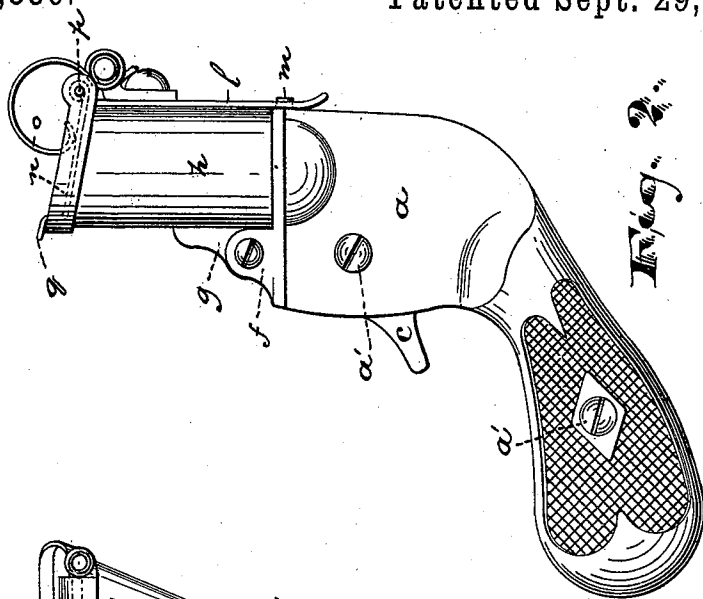


Fig. 2.

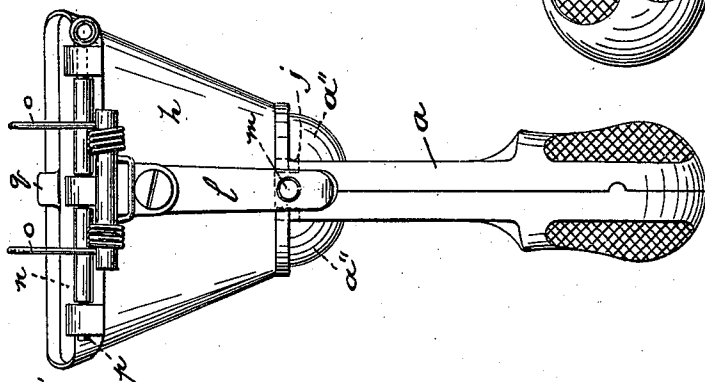


Fig. 1.

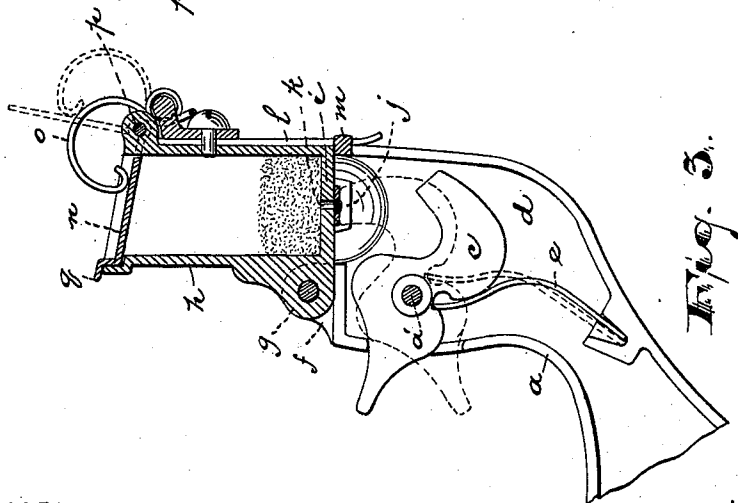


Fig. 3.

WITNESSES:

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C. B. Pitney

INVENTOR:

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UNITED STATES PATENT OFFICE.

NICHOLAS J. DE BOW, OF HARRISON, NEW JERSEY.

FLASH-LIGHT APPARATUS.

SPECIFICATION forming part of Letters Patent No. 568,336, dated September 29, 1896.

Application filed January 3, 1896. Serial No. 574,214. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS J. DE BOW, a citizen of the United States, residing at Harrison, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Flash-Light Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a flash-light for photographers' use which will be more instantaneous in its action, whereby the flash will be produced and cut off before the subject of the photographing operation will have had an opportunity to change his expression and give to his normal features the distorted, startled, or frightened appearance produced by the sudden flash of light, which distorted expression has commonly been reproduced in flash-light pictures when the flash has been more continuous and the exposure of sensitive film longer.

A further object is to enable the photographer to produce the flash with greater convenience and ease at the time of exposure and to prepare the charge to produce the flash with greater facility.

Other advantages and results may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved flash-light apparatus for photographers, and in the arrangements and combinations of parts, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the views, Figure 1 is a front elevation of the improved flash-light apparatus or device. Fig. 2 is a side elevation of the same, and Fig. 3 is a central vertical section showing the interior construction more clearly.

In said drawings, *a* indicates the handled body portion of the device, comprising two sections of metal, preferably of cast metal,

held together in any suitable manner by screws *a'* *a'* or other fastening means. The said castings in side elevation are curved somewhat after the manner of the butt-end of a pistol, and at their upper ends they provide bearings for a trigger-pivot *a'*, which may be one of the fastening-screws. The inner sides of the said sections are recessed to form a chamber *d*, Fig. 3, in which the trigger *c* is arranged. A spring *e* is also arranged in said chamber and adapted to hold said trigger back and away from the detonating-cap and to force the same forward against said cap to explode the same by impact and produce a flame which may be transmitted to the magazine. Adjacent to the hammer end of the trigger the body-casting sections *a* are extended laterally, as at *a''*, and form a chamber to receive certain cap-holding projections *j* of the anvil. The walls of the castings entirely surround the said trigger at its hammer extremity, so as to muffle the noise due to the detonating or explosion of the cap, and thus prevent the said explosion from startling the subject as much as possible. The said castings *a* are also provided with ears *f*, between which is pivoted a lug *g* of a magazine *h*. The said magazine consists of a funnel or flaring casting adapted to receive the charge of flash-light powder or composition and to spread the flame, so as to produce a more vivid or stronger light and effect a more perfect impression upon the sensitive plate or film. At the pivotal end of the said magazine the same is provided with the anvil *i*, against which the cap is laid, and with lugs *j*, between which the said cap may be forced and held by mere frictional contact. The said anvil is perforated, as at *k*, Fig. 3, so that the flame produced by explosion of the cap will be directed into the powder-chamber of the magazine to ignite the powder.

A suitable spring-catch *l* is fastened upon one side of the magazine, so as to engage a cooperating lug *m* of the body portion of the device. At the outer or larger end of the flaring magazine the same is provided with a cover *n*, which is normally held closed by the spring *o*, the said cover being pivoted upon a pin *p*, held in suitable bearings of the magazine and turning on said pivot against the power of said spring to admit of the maga-

zine being loaded or charged preliminary to producing the flash. The cover is provided with a finger-lip *q* to facilitate the opening operation. When igniting the powder by means of the cap, the process of inflammation of the powder is well under way before the gas produced by such inflammation is sufficiently powerful to raise the cover, and at the close of the inflammation, after the greater portion of the explosive substance is consumed, the springs are sufficiently powerful to close before the tailings of the explosive mixture are consumed. Thus the flame or flash is made much shorter in duration than it would be were the beginnings and endings of the flash open to produce an impression on the sensitive plate.

The cover is separable from the magazine, so as to admit of it being removed when a less instantaneous exposure is desired, the pin *p* being provided with a finger projection by which it may be readily withdrawn from its bearings.

In operating the device the photographer first arranges the cap in position on the anvil and allows the hammer to rest against the same. He then places the charge of flash-producing powder within the magazine and draws back the trigger, as when discharging an ordinary pistol or revolver. When the subjects to be photographed are in position, the trigger is pulled and the flash produced, all as will be well understood.

Having thus described the invention, what I claim as new is—

1. The improved flash-light, apparatus comprising a handled body, a trigger, a magazine, and a spring-actuated cover for said magazine, all arranged and adapted to oper-

ate, substantially as and for the purposes set forth.

2. The combination with the handled body, provided with a trigger, and a spring for operating the same, and having pivotal bearings, of the magazine pivoted upon said bearings and having an anvil to receive the cap and a cover normally closed and adapted to be opened instantaneously by the gas produced by the explosion, all parts being combined and arranged, substantially as set forth.

3. The combination with the handled body, having a spring-actuated trigger, of a flaring magazine pivoted on said body and held by a catch, the said magazine having a perforated anvil and cap-holding projections, substantially as set forth.

4. The combination with the handled body having a spring-actuated trigger, of a magazine pivoted on said body, and held by a catch, the said magazine having a perforated anvil, a cap-holder, a pivoted cover and a spring for holding said cover normally closed, substantially as set forth.

5. The combination with the handled body having a spring-actuated trigger, of a magazine pivoted on said body and held by a catch, the said magazine having a perforated anvil, a cap-holder, a removable cover and a spring for normally holding said cover closed, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of December, 1895.

NICHOLAS J. DE BOW.

Witnesses:

CHARLES H. PELL,
C. B. PITNEY.