

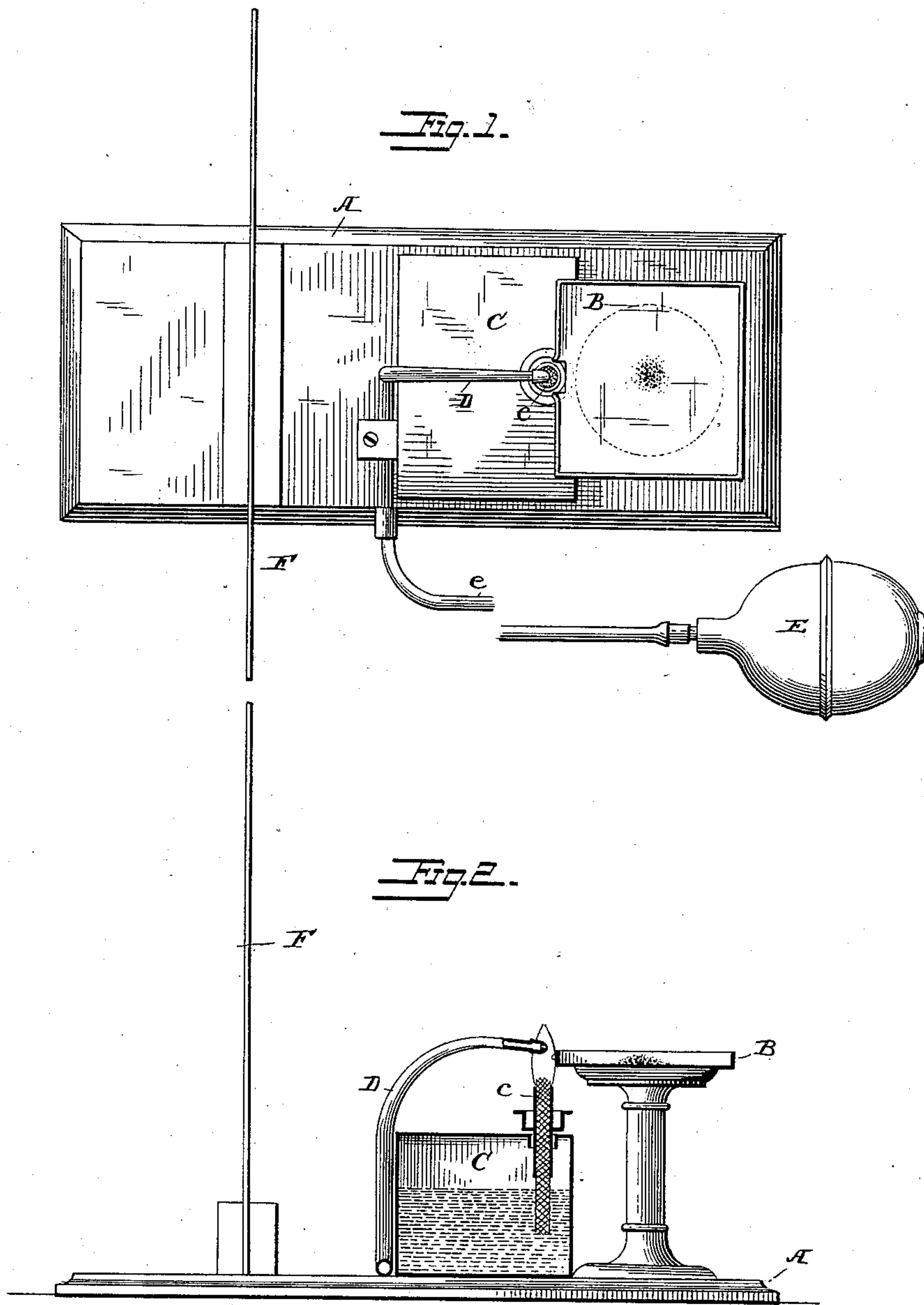
(No Model.)

T. H. McCOLLIN.

PHOTOGRAPHIC FLASH LIGHT APPARATUS.

No. 384,636.

Patented June 19, 1888.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS H. McCOLLIN, OF PHILADELPHIA, PENNSYLVANIA.

## PHOTOGRAPHIC FLASH-LIGHT APPARATUS.

SPECIFICATION forming part of Letters Patent No. 384,636, dated June 19, 1888.

Application filed February 29, 1888. Serial No. 265,743. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS H. McCOLLIN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Photographic Apparatus, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in photographic apparatus, and has especial reference to a "flashing apparatus" to be employed in what is known as "flash-light photography."

Heretofore the material for producing the flash has been ignited by means of a taper or light in the hand of the operator, causing the liability of a personal injury to the eyes or hands, and it has been found by actual experience that the attention of the subject is often directed to the operator as he ignites the material, causing a nervousness in the subject which results in the production of unsatisfactory and unnatural pictures.

The object of my invention is the production of an apparatus by which the flash is instantly produced without the knowledge of the subject, thereby entirely preventing any nervousness on the part of the subject, and at the same time avoiding the necessity on the part of the operator directing his eyes to the flash when igniting.

To attain the desired objects, the invention consists of a pneumatic apparatus for directing a flame against an ignitable material, thus producing a flash.

It also consists of the combination of a receptacle or holder, an ignitable material, a lamp, and a pneumatic device for igniting such material instantly to produce the flash; also, of a receptacle or holder for the material, and a lamp; and, further, of a nozzle arranged above the wick of the lamp, so as to be heated by the same; and, finally, the invention consists in the details of construction, all as hereinafter described and claimed.

Figure 1 represents a perspective view of a flash-light apparatus embodying my invention. Fig. 2 represents a top plan view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A designates a base of a convenient size to enable it to be held in the hand. Suitably supported above

said base is a receptacle, B, on which is placed the material for producing the flash, and adjacent to said receptacle is a lamp, C, the wick of which is near the edge of the receptacle.

D designates a metal tube having its end arranged above the wick of the lamp, and connected with this tube is a flexible or rubber tube, *e*, having a bulb, E, at its end. In lieu of said bulb I may use any other suitable pump or pumping device.

F designates a screen, carried by the base, which acts as a deflector.

From the foregoing description, taken in connection with the drawings, the operation of my invention will be readily understood.

The material for producing the flash is placed on the receptacle, the lamp is lighted, and the flame therefrom heats the end of the pipe. The subject having previously posed for the photograph, the bulb or bellows is then pressed, causing a blast of hot air to be thrown into the flame of the lamp and said flame directed against the ignitable material, thus instantly producing a flash and so augmenting the degree of incandescence of the constituents of the material as to produce a greatly-increased photographic power of the flash-light, the screen serving as a deflector or concentrator preventing the rays of the flash from being lost.

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

1. A photographic flash-light apparatus consisting of a holder for flashing material, a lamp, an air-tube, and a pumping device connected to said air-tube, the burner of said lamp being located between said holder and said air-tube, said parts being combined substantially as and for the purpose set forth.

2. In a flash-light apparatus, the combination, with a receptacle for containing ignitable material, and a lamp or burner, of a pneumatic tube having its nozzle arranged above the burner and adjacent to the material, whereby the air in said tube is heated to a high degree and directed with the flame to the material, thus instantly igniting the same, substantially as described.

THOS. H. McCOLLIN.

Witnesses:

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