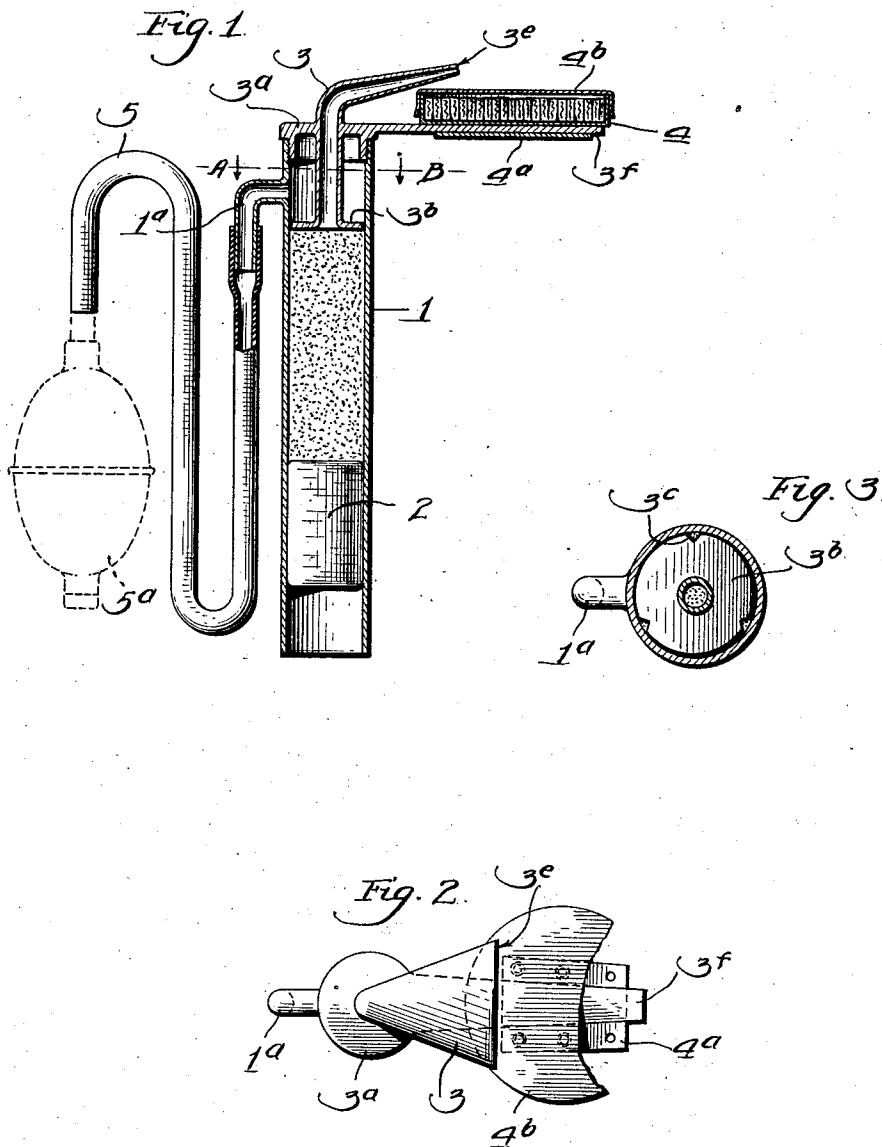


O. B. MACK & G. R. GAMBLE.
FLASH LIGHT LAMP.
APPLICATION FILED JUNE 6, 1912.

1,048,086.

Patented Dec. 24, 1912.



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UNITED STATES PATENT OFFICE.

OSCAR B. MACK AND GEORGE R. GAMBLE, OF SAN DIEGO, CALIFORNIA.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, OSCAR B. MACK and GEORGE R. GAMBLE, citizens of the United States, and residents of San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Flash-Light Lamps, of which the following is a specification.

This invention relates to flash lamps in which a powder is used to produce a flash for taking pictures and the like, and the objects of our invention are, first, to provide a device of this class which is simple and economical of construction, second, that is easily operated, third, that is very safe, and fourth, that a number of flash lights may be made without refilling the device.

With these and other objects in view as will appear, our invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon, which form a part of this specification, in which:—

Figure 1 is a side sectional and partial elevational view of our lamp complete, Fig. 2 is a top view thereof with a portion broken away and Fig. 3 is a sectional view through A—B in Fig. 1.

Similar characters of reference refer to similar parts throughout the several views. The tube 1, plug 2, conductor 3, ignition burner 4, and elastic tube 5 constitute the principal parts of our lamp. The tube 1 is of any suitable size and length and is provided on its outer surface near its upper end with a small tube 1^a preferably integral therewith, which connects with said tube. On the extended end of this tube 1^a is placed an elastic tube 5, the extended end of which is adapted for the attachment of an ordinary rubber bulb 5^a, which is the preferable construction. The bulb 5^a may be dispensed with and the operator may blow into the end of the tube with satisfactory results. The upper end of the tube 1 is internally threaded and adapted for the plug 3^a which screws into said upper end. Centrally located in this plug 3^a is the conductor 3 which extends down into the tube some distance below the connecting point of the tubes 1 and 1^a. This conductor 3 is provided on its lower end with a flange 3^b adapted to form

a partition in said tube 1. The flange 3^b is provided with a plurality of notches 3^c cut out of the periphery of said flange for the purpose of allowing the air to pass through these notches into the chamber below the flange 3^b along the inner surface of said tube 1. The extended outer end of the conductor 3 is spread so as to provide a long and very narrow opening at the extreme end 3^e as shown best in Figs. 1 and 2. This plug 3^a is also provided with an extended arm 3^f which is tapered as shown best in Fig. 2, which extends in the same direction but at a different angle as the portion 3^e of the conductor pipe, and some distance below it. Upon the extended arm 3^f is adapted to be placed an annularly shaped box 4, which is preferably filled with lamp wicking wound around therein. It is provided on its lower surface with a tapered socket 4^a adapted to fit over the end portion of the extended arm 3^f and fit tightly when pressed thereon. This box is provided with a suitable lid 4^b adapted to be removed when the lamp is in use. The lamp wicking is intended to be saturated with alcohol or the like and is adapted to be used as a lighter for the flash light. In the lower end of the tube 1 is provided a plug 2 which is preferably of cork and which is adapted to be moved reciprocally in said tube. Between the plug 2 and the flange 3^b in said tube is placed the flash light powder which is usually a magnesium powder but may be any flash light powder desired.

Though we have shown and described a particular construction and arrangement of parts, we do not wish to be limited to this particular construction and arrangement, but desire to include in the purview of our invention, the construction and arrangement substantially as set forth in the appended claims.

It is obvious that with this construction there is provided a flash light lamp that is simple and economical of construction; that is easily operated and efficient in its action; that the air entering between the plug 3^a and the flange 3^b will be forced down along the inner surface of the tube 1, and will consequently cause a portion of the powder to be blown upwardly at the center, causing it to pass out through the conductor 3; that the plug 2 may be moved in the pipe by simply pressing it when a portion of the powder has been used; that the lamp wicking filled

with alcohol or other combustion liquid provides an efficient pilot light for igniting the powder when blown from the end 3° of the conductor tube 3; that several flash lights may be taken, one after the other, without extinguishing the pilot light or replenishing the powder in the tube 1.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. A flash light lamp comprising a tube, an adjustable plug in said tube adapted to be moved therein, a conductor pipe provided with a broad narrow exit member and a flange member provided with a plurality of notches in its periphery mounted in the upper end of said tube, a lighting means mounted in connection with said conductor pipe immediately beneath the extended end of said exit member, and an air tube connecting with said first mentioned tube above said flange.

2. A flash light lamp comprising a tube, a plug in the lower end of said tube adapted to be reciprocally moved therein, a plug in the upper end of said tube provided with a conductor pipe provided with a long and narrow exit member and provided with a flange member on said conductor pipe some distance from the upper end of said tube provided with notches in its periphery adapted to allow the passage of air downwardly in said tube, a lighting means mounted in connection with said conductor pipe immediately beneath the extended end thereof, and a flexible air tube connecting with said first mentioned tube between the end of said pipe and said flange.

3. A flash light lamp comprising a tube provided with an inlet tube connected thereto near its upper end, an adjustable plug in the lower end of said tube adapted to be moved therein, a conductor pipe mounted centrally in a plug in the upper end of said tube provided with a long and narrow exit member and provided with a flange member on its lower end diametrically filling said

tube some distance from the upper end of said tube and provided with notches in its periphery adapted to allow the passage of air downwardly along the inner surface in said tube, a box filled with lamp wicking wound therein mounted in connection with said conductor pipe immediately beneath the extended end thereof, and an elastic air tube connecting with said inlet.

4. A flash light lamp comprising a tube provided with an inlet tube in its wall near its upper end, an adjustable plug in the lower end of said tube adapted to be moved therein, a plug screwed into the upper end of said tube provided with a conductor pipe provided with a long narrow exit member and provided with a flange member on said tube some distance below said inlet tube and provided with notches in its periphery adapted to allow the passage of air downwardly in said tube near the walls thereof, a lighting means mounted on a lug in connection with said conductor pipe, an elastic air tube connecting with said inlet tube, and means in connection with said elastic tube to facilitate the blowing of air into said tube.

5. In a flash light lamp, the combination with a powder magazine provided with an air inlet tube of a plug screwed into the upper end of said tube provided with a conductor pipe provided with a long narrow outlet member mounted in said plug and provided with a flange member in said tube some distance below said inlet tube and provided with notches in its periphery adapted to allow the passage of air downwardly in said tube.

In testimony whereof, we have hereunto subscribed our names in the presence of two subscribing witnesses.

OSCAR B. MACK.
GEORGE R. GAMBLE.

Witnesses:

ABRAM B. BOWMAN,
ELMER E. RODABAUGH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."