

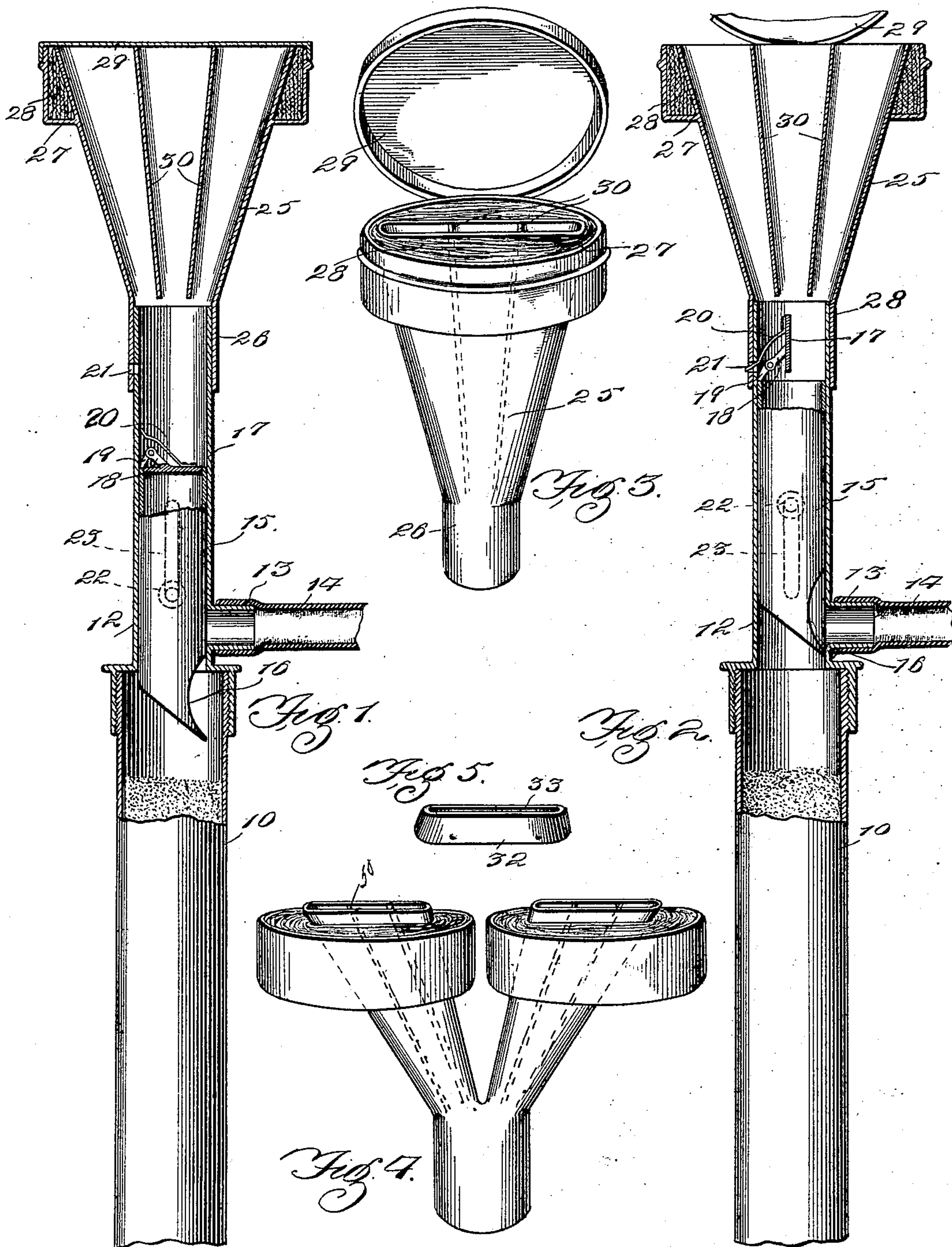
No. 689,319.

Patented Dec. 17, 1901.

A. C. LOKER.
FLASH LIGHT LAMP.

(Application filed May 4, 1901.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT C. LOKER, OF KANSAS CITY, MISSOURI.

FLASH-LIGHT LAMP.

SPECIFICATION forming part of Letters Patent No. 689,319, dated December 17, 1901.

Application filed May 4, 1901. Serial No. 58,781. (No model.)

To all whom it may concern:

Be it known that I, ALBERT C. LOKER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Flash-Light Lamp, of which the following is a specification.

This invention relates to flash-light lamps; and it has for its object to provide a device of this nature wherein the flash-powder will be held in a reservoir from which charges may be successively drawn and blown into the lamp-flame, a further object of the invention being to provide a lamp having separate burners that may be interchangeably connected to the reservoir to vary the width of the flame produced; and an additional object of the invention is to provide means for varying the duration of the light.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a view partly in vertical section and partly in elevation and showing the lamp with the parts in position ready for filling the receiver from the reservoir. Fig. 2 is a view similar to Fig. 1 and showing the parts in position ready to blow the powder from the receiver through the flame of the lamp. Fig. 3 is a perspective view of the burner of the lamp with the cover raised. Fig. 4 is a perspective view showing a different form of burner. Fig. 5 is a perspective view showing the removable extension for prolonging the duration of the flame for making time exposures.

Referring now to the drawings, the lamp consists of a cylindrical body portion 10, having a screw-cap 11, from which extends the cylindrical sleeve 12, coaxial with the body portion, and which communicates through the cap with the body, and from one side of the sleeve and directly above the cap there extends a nipple 13 for engagement of the tube 14 of a bulb or other form of bellows commonly used with devices of this nature.

The flash-powder is not blown directly from the reservoir through the sleeve, but instead is first taken up by a receiver 15 and is carried up into the sleeve, so that the blast may be admitted therebelow to force the powder out at the top of the receiver. This receiver,

as shown, consists of a length of tube having a closed slanting bottom, and in one side of which receiver and directly above the lowermost portion of the bottom thereof is formed an inlet-opening 16, and the receiver is adapted for sliding movement in the sleeve to project the lower portion having the opening into the reservoir, so that by inverting the lamp the powder in the reservoir may be caused to run into the receiver or such portion thereof as may be required to fill the receiver. To prevent the powder from running out at the opposite end of the receiver when the lamp is inverted, a cover 17 is provided. The cover has an arm 18, which extends upwardly therefrom when the cover is in closed position and is hinged to an ear 19 at the upper end of the receiver, and attached to the cover beyond the arm from the pivot thereof is a leaf-spring 20, which extends upwardly and over the arm and ear and bears against the inner surface of the sleeve, so as to hold the cover in closed position. When the receiver is moved upwardly through the sleeve, the end of the spring travels upwardly and finally enters an opening 21 in the side of the sleeve, so that the upward movement of the free end thereof is stopped, and further upward movement of the receiver serves to tilt the cover and raise it. This opening of the cover, however, does not take place until after the open end of the receiver has passed into the sleeve, so as to be closed thereby.

To reciprocate the receiver in the sleeve and to limit the movement thereof, a pin 22 is provided and is passed through a slot 23, formed longitudinally in the sleeve, and is then engaged with the receiver. By grasping this pin or pressing thereon the receiver may be moved one way or the other, while the engagement of the pin with either end of the slot limits the movement of the receiver in the sleeve. When the receiver is returned into the sleeve, the opening 16 registers with the nipple 13, so that the blast entering through the nipple will blow the powder out through the top of the sleeve.

A burner is provided for the end of the sleeve 12 and, as shown in Fig. 3 of the drawings, consists of a flared and flattened tube 25, having a cylindrical lower end 26, adapted to fit upon the upper end of the sleeve, and

at the upper broadened end of which is formed an inclosing cup 27, which is provided with a wick 28, which encircles the end of the tube, and this wick is adapted to take up and hold the alcohol or other fuel burned in the lamp. A lid 29 is provided for the end of the cup, and which when lowered closes the cup and the end of the burner-tube or outlet-tube.

In order to cause the powder to pass out equally at all parts of the outlet-tube, said tube is provided with transverse partitions 30.

In Fig. 4 of the drawings there is shown a double burner wherein there are two of the flared and flattened tubes provided with cups at their upper ends and wicks. In the use of the double burner the powder divides and a part passes through each section, thus increasing the width of the flame and causing a quicker flash, it being understood that in the operation of the device the wick is ignited and the powder is blown into the flame.

In order that the outlet end of the outlet-tube may be reduced in size to insure a longer flow of powder and corresponding increase in duration of the flame, an extension 32 of flattened tubular form is provided, and which may be fitted over the end of the outlet-tube, the extension being tapered so as to present only a narrow slit 33 for egress of the powder.

It will be understood that a number of the extensions for the outlet-tube may be used for varying the flow of the powder to the lamp-flame.

The operation of this lamp will be understood by those skilled in the art, and it will be seen that it is only necessary to press the receiver inwardly and to reverse the lamp to fill the receiver. The receiver is then returned, and the lamp having been lighted the air may be forced into the receiver to blow the powder outwardly and through the flame.

In practice modifications of the specific construction shown may be made, and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

It will be further understood that with a quick blow of air through the lamp a quick flash results, while with a slower blow a longer flash is secured.

What is claimed is—

1. A device of the class described comprising a reservoir, a receiver movable into and out of the reservoir, and an air-inlet disposed to direct air into the receiver when the latter is in its outer position, to blow the contents of the receiver therefrom.

2. A device of the class described comprising a reservoir, a receiver mounted for movement into and out of the reservoir to receive powder and carry it from the reservoir, an air-inlet disposed for communication with the receiver when the latter is in its outer position to direct air into the receiver to blow the powder therefrom, and a burner constructed and

arranged to support a flame in the path of the powder from the receiver.

3. A device of the class described comprising a reservoir having a sleeve connected thereto and communicating therewith, a tubular receiver disposed in the sleeve and having an opening in its side adjacent to its inner end, said receiver being adapted for movement to project the inner portion thereof into the reservoir to receive powder therefrom through said opening, an inlet-opening in the sleeve with which the opening of the receiver is adapted to register when the receiver is moved from the reservoir whereby the powder may be blown from the receiver and a cover for the receiver having means for opening it when the receiver is moved from the reservoir.

4. A device of the class described comprising a reservoir having a sleeve communicating therewith, a receiver in the reservoir and adapted for movement into and out of the sleeve, said receiver having an opening for connecting it with the reservoir when moved thereinto, a cover for the outer end of the receiver, means for closing the cover when the receiver is moved inwardly and for opening the cover when the receiver is moved outwardly, an air-supply pipe connected with the sleeve to register with the opening of the receiver when the receiver is in its outer position to permit ingress of air to blow the powder from the receiver, and a lamp connected to the sleeve to support a flame in the path of the powder from the sleeve.

5. A flash-light lamp having a burner and a powder-carrying tube disposed to direct powder to a flame supported by the burner, said tube having longitudinal partitions to deflect the powder laterally thereof.

6. In a device of the class described, a burner and a flared tube disposed to direct powder into a flame supported by the burner, said tube having diverging longitudinal partitions arranged to deflect powder laterally therein to cause it to pass equally through the flared end of the tube.

7. In a device of the class described, the combination with a burner and a tube disposed to direct powder into a flame supported by the burner, of an open-ended extension for attachment over the outlet end of the tube and having its outer end contracted.

8. A device of the class described comprising a bifurcated tube adapted to convey powder and a burner supported by each bifurcation of the tube to sustain a flame in the path of powder blown through such bifurcation.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT C. LOKER.

Witnesses:

JOHN A. BEARD,
C. W. RICHARDSON.