(No Model.)

S. G. SPEIR.

POCKET LAMP.

No. 471,985. Patented Mar. 29, 1892.

Fig. 1.

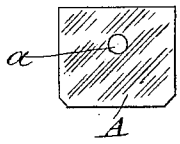


Fig. 2.

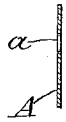
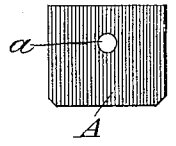


Fig. 3.



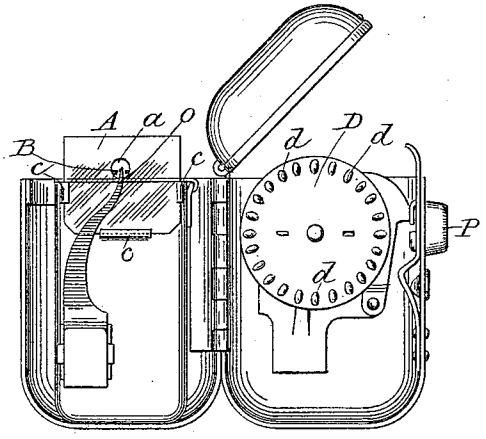


Fig. 4.

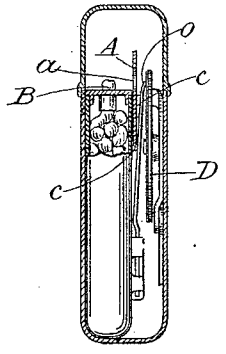


Fig. 5.

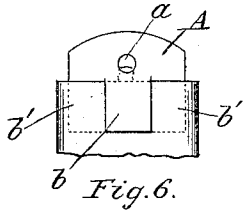


Fig. 6.

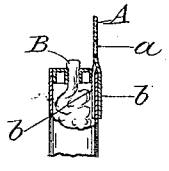


Fig. 7.

Stuart G. Speir,

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Witnesses.

Charles Seckerick

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UNITED STATES PATENT OFFICE.

STUART G. SPEIR, OF ALBANY, NEW YORK, ASSIGNOR OF ONE-THIRD TO JOHN C. PENNIE, OF WASHINGTON, DISTRICT OF COLUMBIA.

POCKET-LAMP.

SPECIFICATION forming part of Letters Patent No. 471,985, dated March 29, 1892.

Application filed March 4, 1891. Serial No. 383,692. (No model.)

To all whom it may concern:

Be it known that I, STUART G. SPEIR, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented a new and useful Improvement in Pocket-Lamps, of which the following is a full, clear, and exact description.

In a well-known form of pocket-lamp now in extensive use a series of ignitible pellets are carried by a fulminate-carrier having a step-by-step movement, and an ignitor is arranged to explode the pellets one by one as they are brought into proximity to the wick of the lamp, the explosion of the pellet projecting or shooting the gas of the exploded fulminate against the wick. A defect in this form of lamp is that after the wick is lighted a draft of air against the flame will cause it to sway toward the fulminate-carrier and ignite the remaining pellets on the carrier, so that many of them are destroyed.

It is the object of my invention to remedy this defect, and to this end I interpose a perforated shield between the wick and the pellet-carrier, which will permit the burning gas of the exploded fulminate to pass therethrough to the wick, but will prevent the return passage of the flame of the wick, so that even when the flame is blown against the shield by a draft of air the unused pellets are not liable to accidental ignition.

In the accompanying drawings, which are a part of this specification, Figure 1 is a full side view of the perforated shield made of mica. Fig. 2 is a sectional view of the shield, looking toward its edge. Fig. 3 is a full side view of the shield made of metal. Any similar material may be used. Fig. 4 is a view of the lamp opened, so as to show the interior. Fig. 5 is a sectional view of the interior. Fig. 6 is a side view of the shield, showing a way of attaching it conveniently to the side of the well—that is, the receptacle for the oiled wicking which feeds the lamp-flame. Fig. 7 is a sectional view showing the same attachment of the shield to the side of the well.

The same letters indicate the same parts in the different figures.

A is the shield, and *a* the aperture or perforation.

B is the wick of the lamp.

In Fig. 4 the clips marked C hold the shield in position when this method of attachment is preferred to that shown in Figs. 6 and 7.

D is the carrier, which carries the explosive or ignitible pellets. *d* indicates the ignitible pellets.

In Fig. 6, *b* is the piece of the shield which passes down one side of the wall of the well, and *b'* indicates the parts which pass down the other side to hold the shield in place when this method of attaching the shield is preferred to that shown in Fig. 4.

P in Fig. 4 is the thumb-piece, which is pressed to rotate the disk. It rotates the carrier by a pawl-and-ratchet movement. When the piece P is pressed, it actuates the carrier and a pellet is brought into line with and exploded opposite the aperture *a* by the ignitor O. The burning gas of the explosion darts through the aperture and ignites the wick B. The pellets not exploded, though near to the one acted on by the ignitor, are now guarded by the interposed shield from the flame of the wick. As is well known, a flame cannot be blown through a small aperture, and the pellets are thus entirely shielded.

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

1. In a lamp, the combination of the wick, the fulminate-carrier, and a shield interposed between the wick and the carrier, said shield having an open perforation, so as to permit the explosive gas of the fulminate to pass therethrough to the wick, but preventing the return passage of the flame of the wick, substantially as described.

2. In a lamp, the combination of the wick, the fulminate-carrier, the ignitor, and a perforated shield interposed between the wick and the carrier, said shield being independent of the ignitor, substantially as described.

3. In a lamp, the combination of the wick, the fulminate-carrier, the ignitor, and a perforated shield interposed between the ignitor and the wick, substantially as described.

4. In a lamp, the combination of the wick, a fulminate-carrier, an ignitor arranged between the carrier and the wick, and a perforated shield interposed between the wick and the ignitor, substantially as described.

5. In a lamp, the combination of the wick, a fulminate-carrier, an ignitor, and a perforated shield interposed between the wick and the fulminate, said shield being independent of the carrier and the ignitor, substantially as described.

6. In a lamp, the combination of the wick, a fulminate-carrier, and a shield interposed between the wick and the fulminate, said shield having an unobstructed aperture, whereby the explosive gas of the fulminate is permitted to pass therethrough to the wick, but the return passage of the flame of the wick is prevented, substantially as described.

7. In a lamp, the combination of the wick, a fulminate-carrier, an ignitor arranged between the carrier and the wick, a support for the carrier on the opposite side from the ignitor, and a perforated shield interposed between the wick and the ignitor, substantially as described.

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