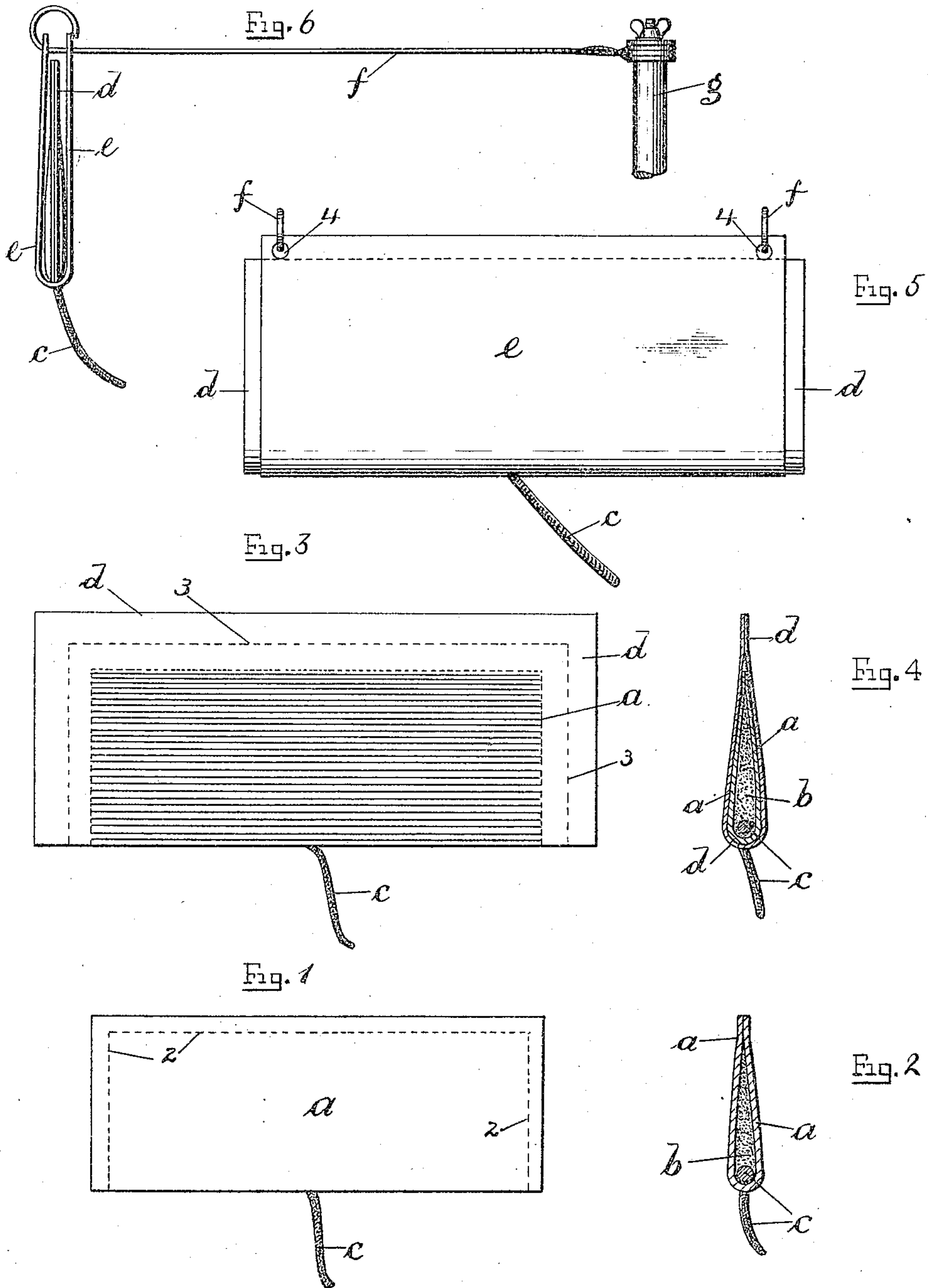


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I. G. McCOLL.
FLASH POWDER CARTRIDGE.
APPLICATION FILED FEB. 23, 1904.

NO MODEL.



WITNESSES
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FLASH-POWDER CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 774,333, dated November 8, 1904.

Application filed February 23, 1904. Serial No. 194,760. (No model.)

To all whom it may concern:

Be it known that I, IRVING G. McCOLL, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented an Improvement in Flash-Powder Cartridges, of which the following is a specification.

My invention relates to flash-powder cartridges particularly adapted for photographic purposes; and the object of my invention is the production of a flash-powder cartridge which when ignited will produce a flame of light of thin flat form extending over a considerable area and diffusing the light in the direction desired instead of in every direction, as would be the case were the flash-powder ignited in an open vessel.

In carrying out my invention I employ a sheet of non-combustible material folded on itself and having the edges thereof secured together by a suitable adhesive material, thereby forming an envelop for the flash-powder employed, and I prefer to employ a suitably-constructed fuse leading, preferably, through the fold of said sheet and by means of which the flash-powder is ignited. I may also employ a folded sheet of thin paper inclosing the folded sheet of non-combustible material and having its edges connected by an adhesive material similarly to those of the sheet of non-combustible material. In conjunction with the flash-powder cartridge I may employ a holder of metal or other material supported in any convenient manner and in which the cartridge is placed for use as hereinafter described.

In the drawings, Figure 1 is an elevation of my improved cartridge, and Fig. 2 is a cross-section of the same. Fig. 3 is an elevation of the cartridge, showing the paper casing; and Fig. 4 is a cross-section of the same. Fig. 5 is an elevation of the cartridge-holder with the cartridge therein; and Fig. 6 is an end view of the cartridge, the holder, and a support therefor.

a represents a sheet of asbestos or other suitable non-combustible material which is folded centrally on itself and the parts thereof connected at their free edges by any suitable adhesive material, as indicated by the

dotted line 2, Fig. 1, after the flash-powder has been placed therein. An envelop of non-combustible material is thus formed which contains a flash-powder, (indicated at *b*.) The fold of the envelop is centrally provided with an aperture through which a fuse *c* is passed, communicating with the flash-powder and by which the same is ignited.

Referring to Figs. 3 and 4, I may employ a sheet *d* of thin paper of the same shape as the sheet of non-combustible material *a*, but larger. This sheet of paper is folded centrally on itself, fitted over the folded sheet *a*, and has its free edges secured together by an adhesive material, as indicated by the line 3, Fig. 3, similarly to the manner in which the free edges of the sheet *a* are connected. The casing formed by the sheet *d* prevents the escape of the flash-powder should the edges of the envelop *a* become disconnected in transit or otherwise. The fuse *c* passes centrally through the fold of the sheet *d*. The cartridge devices, Figs. 1 to 4, inclusive, may be held in any desired manner while being fired.

In the use of my improved flash-cartridge I preferably employ a holder *e*, advantageously made of sheet metal bent upon itself so as to be of flattened-U shape in cross-section and in which the cartridge is received and supported, the rounded portion or fold of the holder being provided with an aperture for the fuse *c*. The upper edges of the holder may be provided with holes 4 in corresponding positions to receive the curved ends of a wire bracket *f*, suitably connected to a post *g* or other support.

The holder *e* may be supported as hereinbefore described or in any other desired manner, or the holder may be dispensed with and the cartridge held by means of a tongs or other suitable instrument. The edges of the holder *e* are in close proximity, so that between them a narrow aperture is formed which insures the form of the light-flame.

It will now be understood that whether the holder is employed or whether the cartridge is held by any other means the edges of both the envelop of non-combustible material and the paper casing will be separated by the igniting of the powder and the gases generated

thereby, and, moreover, the flame will be more or less confined and directed into a sheet extending from the three separated sides of cartridge.

5 I claim as my invention—

1. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of flash-powder contained in the envelop formed
10 by the sheet of non-combustible material, and means for igniting the said powder.

2. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of
15 flash-powder contained in the envelop formed by the sheet of non-combustible material and a fuse extending through the folded portion of the said envelop for igniting the powder.

3. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of
20 flash-powder contained in the envelop formed by the sheet of non-combustible material, a sheet of paper folded over the said envelop with its edges secured together, forming a
25 casing for said envelop and means for igniting the said powder.

4. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of
30 flash-powder contained in the envelop formed by the sheet of non-combustible material, a sheet of paper folded over the said envelop with its edges secured together forming a casing for the said envelop and a fuse extending
35 through the folded portion of said envelop for igniting the said powder.

5. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of
40 flash-powder contained in the envelop formed by the sheet of non-combustible material, means for igniting the said powder, a holder adapted to receive the said envelop and a support for the said holder.
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6. A cartridge comprising a sheet of non-

combustible material folded on itself and having its edges secured together, a charge of flash-powder contained in the envelop formed by the sheet of non-combustible material, a
50 fuse extending through the folded portion of the said envelop for igniting the powder, a holder adapted to receive the said envelop and a support for the holder.

7. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of
55 flash-powder contained in the envelop formed by the sheet of non-combustible material, a sheet of paper folded over the said envelop with its edges secured together forming a casing for said envelop, means for igniting the
60 said powder, a metallic holder of U-shaped cross-section adapted to receive the said envelop and casing and being provided with holes in corresponding positions adjacent to
65 its upper edges and a wire bracket whose ends are passed through the said holes in the holder to support the same.

8. A cartridge comprising a sheet of non-combustible material folded on itself and having its edges secured together, a charge of
70 flash-powder contained in the envelop formed by the sheet of non-combustible material, a sheet of paper folded over the said envelop with its edges secured together forming a casing for the said envelop, a fuse extending
75 through the folded portion of the said envelop for igniting the powder, a metallic holder of U-shaped cross-section adapted to receive the said envelop and casing and being
80 provided with holes in corresponding positions adjacent to its upper edges and a wire bracket whose ends are passed through the said holes in the holder to support the same.
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Signed by me this 18th day of February, 1904.

IRVING G. McCOLL.

Witnesses:

GEO. T. PINCKNEY,
BERTHA M. ALLEN.