

No. 638,820.

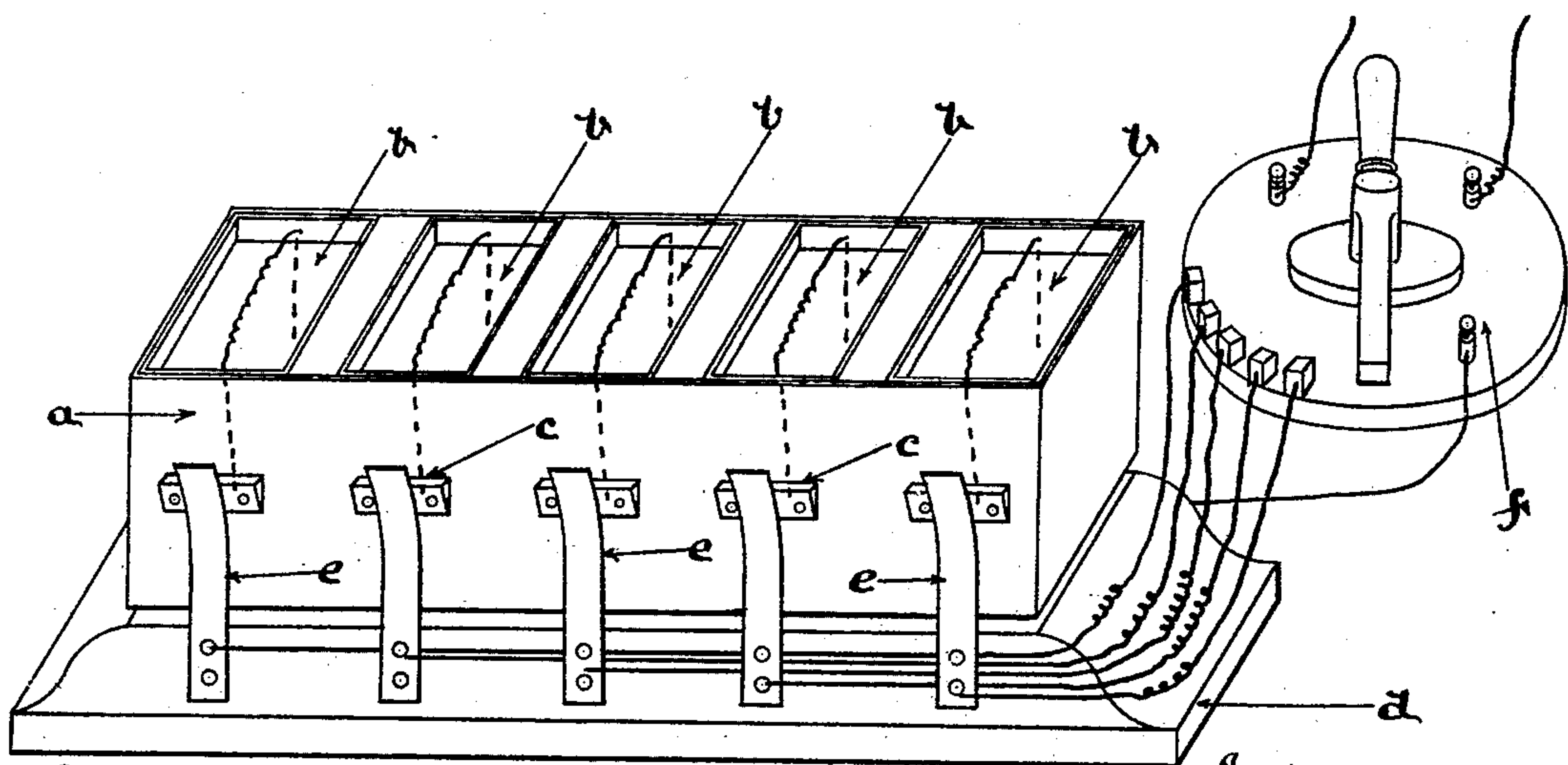
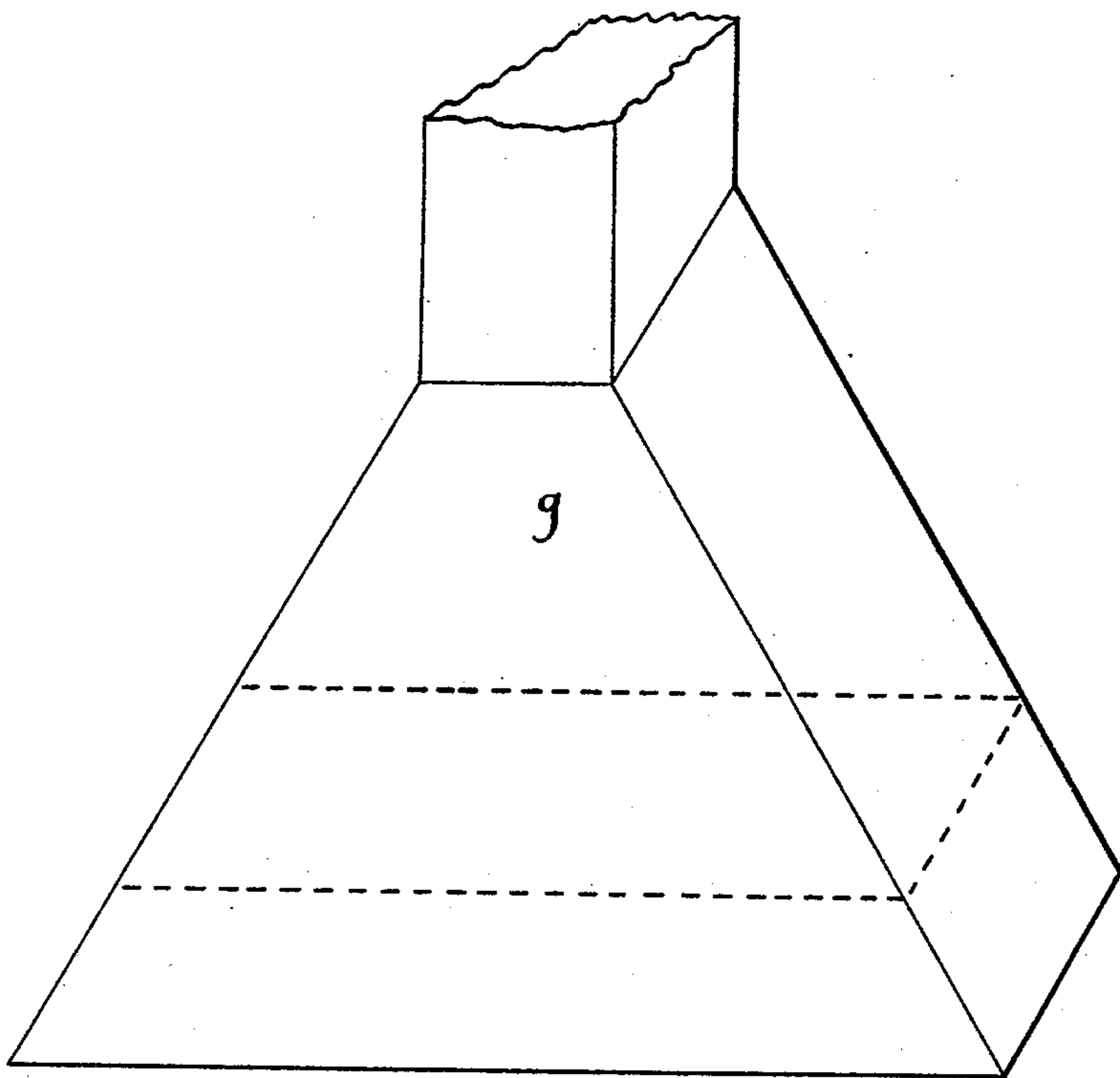
Patented Dec. 12, 1899.

A. J. SWAAB & R. DE LAMPRECHT.

FLASH LAMP.

(Application filed June 12, 1899.)

(No Model.)



Witnesses:-

Benjamin Clark.
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per: E. Eaton,
Their Attorney.

UNITED STATES PATENT OFFICE.

ALFRED JAMES SWAAB AND RODOLPHE DE LAMPRECHT, OF LONDON,
ENGLAND.

FLASH-LAMP.

SPECIFICATION forming part of Letters Patent No. 638,820, dated December 12, 1899.

Application filed June 12, 1899. Serial No. 720,221. (No model.)

To all whom it may concern:

Be it known that we, ALFRED JAMES SWAAB and RODOLPHE DE LAMPRECHT, subjects of the Queen of Great Britain, and residents of London, in the county of Middlesex, England, have invented certain new and useful Improvements in Flash-Lamps, of which the following is a full, clear, and exact specification.

This invention consists of a new or improved flash-lamp for use with apparatus for exhibiting views and other purposes. In carrying out our invention we provide a support having the required number of compartments. These compartments are for the purpose of carrying a flash-powder, which is ignited through the action of a current of electricity. The switch provided is so arranged that the powder in the required number of compartments may be ignited, this ignition taking place owing to the heating effect of the current with which the powder is in contact.

An important feature of our invention is what we term a "condenser" for the purpose of condensing what may be termed "smoke." This condenser consists of a suitable chamber, which is supported above the apparatus, and after the powder has been ignited the smoke or objectionable fumes are condensed. The essential feature of the condenser consists in the employment of iron filings or turnings, which thus form a sieve or filter. The flash-light may be used for any required purpose, such as photography.

For the purposes of illustration we will now refer to the annexed drawing, in which the figure is a perspective-view showing our invention.

a is a support which carries the compartments *b*. These compartments are for the purpose of carrying the required flash-powder or composition. The contact-pieces *c* are provided upon the sides of the support and are so arranged that the support *a* may be removed from the piece *d* when required and another one inserted carrying a fresh charge of flash-powder after the previous one has been consumed. The springs *e* and contact-pieces *c* are in electrical communication with a current through the medium of a switch *f*, so arranged that the powder in the required

compartment may be fired, this being effected through the heating effect of the current passing through a coil of wire. Any suitable source of current may be employed. The chimney *g* is filled with a composition, such as sawdust and iron filings or turnings, for the purpose of condensing or retaining the smoke or fumes which arise upon the ignition or flashing of the powder. The condensing action is due to a large area which is exposed through the medium of the iron turnings or filings, or, in other words, acting as a honeycomb or sponge, thus condensing the fumes. By this arrangement it will be seen that according to the number of compartments so many flashes may be obtained, and when required the support carrying the compartments may be removed, a fresh one substituted therefor, and the flash-powder ignited as before, owing to the passage of the electric current. Any convenient form of flash-powder may be employed, such as that known as "magnesium" powder.

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

The flash-light apparatus in combination consisting of a support having compartments in which the flash-powder is carried said support being removable from a base provided with electrical contacts for the purpose of enabling a current to be passed through a coil of wire in contact with the flash-powder, a switch for enabling the current to be passed through the required compartment, a chimney or funnel containing sawdust, iron filings or turnings, supported above the compartments at the required height for the purpose of condensing or receiving the smoke or fumes arising after the flash or ignition of the flash-powder substantially as described and illustrated herein and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 1st day of May, 1899.

ALFRED JAMES SWAAB.

RODOLPHE DE LAMPRECHT.

Witnesses:

JAMES S. CRUNIS,

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