

N^o 25,865



A.D. 1913

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Complete Specification Left, 29th Apr., 1914—Accepted, 5th Nov., 1914

PROVISIONAL SPECIFICATION.

Screened Lamp for Flash Light Photography.

I, ANGUS FERGUSON LAWS, Photographer, 42, Shields Road West, Newcastle-on-Tyne, do hereby declare the nature of this invention to be as follows:—

The lamp consists of a tray (on which is a pan to contain flash powder) and an opaque screen to prevent all direct light from the ignited flashpowder illuminating the sitter or object being photographed.

When therefore the lamp is put in a suitable position, as at the corner of a room, the opaque screen would be between the pan of flash powder and the sitter.

On igniting the powder the flash would illuminate the corner wall immediately in front and also the ceiling or other suitable reflector, and from there the light would be distributed and travel to the sitter in such a manner as to give the effects of lighting required by photographers.

The lamp may be made substantially or in a light portable form, the opaque screen being embodied in each case. The mode of ignition may be as shown in the drawing, or by any other method available.

The drawing shows the lamp as suitable for studio photography.

A is a wood stand made of two uprights 50 inches high, joined by cross bars at top and bottom, the total outside width being 18 inches and fitted with shoes or floor supports as shown.

B is a metal tray 18 × 18 inches at right angles to the stand A fixed 30 inches above the floor.

C is an opaque screen of metal 20 inches high by 18 inches wide, fixed on the upper part of the stand A from the top cross bar to the tray B.

D is also an opaque screen of metal 20 inches high × 18 inches wide fixed at right angles to screen C on the tray B and the stand A. In the drawing the position of D is indicated by dotted lines and although opaque it is drawn as if transparent in order not to obscure the other parts.

E is a shallow pan, to contain the flash powder, 3 inches square and $\frac{1}{2}$ inch deep with a long handle.

F is a gas pipe clamped to the side of, and extending to the centre of tray B, and terminating with a pointed nozzle 2 inches above the tray, to ignite the flash powder with a long tongue of flame.

G is a lever tap, fitted to the pipe F.

H is a spring, attached to one end of tap G, the other end being fastened to a cord passing below the tray B by means of pulleys fitted to stand A, and the cord may be held in the hand of the operator. On pulling the cord the tap G is opened full, and on release is drawn back by the spring H, thus shutting off the full gas supply leaving only sufficient at the nozzle to keep it alight.

K, K are ordinary gas taps.

L is a gas pipe to supply four incandescent burners with red, yellow, or other non-actinic coloured globes. The burners are fixed to the top cross bar of stand A, and are inside of screen C. The light from these burners being screened and reflected in the same manner as the flash light enables the operator to judge the effect of lighting on the sitter, and further by being non-actinic the

[Price 8d.]



Screened Lamp for Flash Light Photography.

operator can with his camera ready and the plate exposed await a favourable moment to ignite the flash.

M is a screen of wire gauze attached to an upright of the stand A and to a side of the tray B opposite to the screen D.

N is a wire gauze screen similar to M hinged to the tray B. It is shown open 5 in the drawing. It lifts up to close and when closed covers the whole tray B and the fittings on it, stretching from the opaque screen D on one side to the gauze screen M on the other side and reaching to the opaque screen C. N is closed when the flash powder is in position and after ignition it is opened to remove pan E for recharging. Its purpose is to catch possible sparks from the 10 flash and act as a protective covering against careless handling.

The flash powder is put in the pan E which is placed under the nozzle of pipe F the gas having been previously lit.

On pulling the cord the lever tap G is opened full and the small jet at the end of the pipe F spurts into a full flame reaching to the pan E and igniting 15 the flash powder.

Dated the 11th. day of November, 1913.

ANGUS FERGUSON LAWS.

COMPLETE SPECIFICATION.

Screened Lamp for Flash Light Photography.

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I, ANGUS FERGUSON LAWS, 42, Shields Road West, Newcastle-on-Tyne, Photographer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The purpose of the lamp is to use flash powder in such a manner as will admit 25 of control of the light given by the powder to secure properly lighted photographs.

In other photographic flash lamps it has been proposed to use flash powder placed on a horizontal tray and ignited by a downward impinging flame; also it has been proposed to use screens to shield the sitter or object from direct light, 30 so as to utilize only indirect, reflected or diffused light for making the exposures; also it has been proposed to use auxiliary non-actinic illumination in conjunction with the apparatus.

It has not before been proposed to combine the above features in one apparatus as in the lamp herein described with its system of opaque screen, auxiliary non 35 actinic illuminant, and ignition by downward impinging flame, which places flashlight under complete control both for securing all desirable effects of lighting and of ensuring a maximum of combustion of the powder with a minimum of smoke.

The lamp consists of a tray (on which is a pan to contain flash powder), and a 40 means of employing a downward impinging flame to ignite the powder, and a means of non-actinic illumination, also an opaque screen to prevent direct light from the ignited flash powder illuminating the sitter or object being photographed. The screen may be made of any suitable opaque material that is not 45 translucent, such as wood, metal, cardboard, or the like.

When therefore the lamp is placed in a suitable position as at the corner of a room, the said screen would be between the pan of flash powder and the sitter or object. On igniting the powder the lamp would illuminate the corner walls immediately in front and also the ceiling or other reflectors and from there the light would be distributed and travel to the sitter in such a manner as to give 50 the effects of lighting required by photographers.

The mode of ignition as shown in the drawing (left with the Provisional

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Application) is for ordinary coal gas, but other gas or spirit may be used in any known way to get a downward impinging flame.

The said drawing shows the lamp as suitable for studio photography.

5 A is a wood stand made of two uprights 50 inches high, joined by cross bars at top and bottom, the total outside width being 18 inches and fitted with shoes or floor supports as shown.

B is a metal tray 18 × 18 inches at right angles to the stand A fixed 30 inches above the floor.

10 C is an opaque screen of metal 20 inches high by 18 inches wide fixed on the upper part of the stand A from the top cross bar to the tray B.

D is also an opaque screen of metal same size as C, fixed at right angles to screen C on the tray B and the stand A.

In the drawing the position of D is indicated by dotted lines so as not to obscure the other parts.

15 E is a shallow pan to contain the flash powder 3 inches square and $\frac{1}{2}$ inch deep with a long handle.

F is a gas pipe clamped to the side of, and extending to the centre of tray B, and terminating with a pointed nozzle, two inches above the tray B to ignite the flash powder with a long tongue of flame.

20 G is a lever tap fitted to the pipe F.

H is a spring attached to one end of tap G, the other end being fastened to a cord passing below the tray B by means of pulleys fitted to stand A, and the cord may be held in the hand of the operator. On pulling the cord the tap G is opened full and on release is drawn back by the spring H, thus shutting off
25 the full gas supply leaving only sufficient at the nozzle to keep it alight.

K, K are ordinary gas taps.

L is a gas pipe to supply four incandescent burners having red, yellow, or other sufficiently non-actinic coloured globes. The burners are fitted to the top cross bar of stand A and are inside of screen C. The light from these burners being
30 screened and reflected in the same manner as the flash light enables the operator to judge the effect of lighting, also being sufficiently non-actinic light, the plate may be exposed for a brief period without being affected, during which period the flash may be set off.

M is a screen of wire gauze attached to an upright of stand A and the side of
35 tray B opposite to screen D.

N is a screen of wire gauze similar to M, hinged to tray B, shown open in the drawing; when closed it covers the tray B and fittings on it. It may be closed when the flash powder is in position and forms a protection.

40 The flash powder is placed in the pan E which is placed under the nozzle of the pipe F, the gas having been previously lighted. By pulling the cord, the lever tap G is opened full and the small jet at the nozzle of the pipe F spurts into a full flame which reaches to the pan E and ignites the flash powder.

45 The pipe F may be furnished with more than one nozzle allowing several spurts of flame to impinge on the pan E at the same time, ensuring more complete combustion of the powder and so minimising the smoke.

For a studio 25 feet × 10 feet and 10 feet high, the lamp may be placed 9 feet from background and 2 feet from side wall, with white reflecting material, such as cloth in front and above it all along the wall and ceiling so that the light of the flash reaches the sitter from these reflectors and not directly from the flash.

50 The opaque screens C and D would be between the flash powder and the sitter or other object being photographed.

The opaque screen can be detachably connected to the structure.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that
55 what I claim is:—

1. A flash lamp to be used for photographic purposes having an opaque screen

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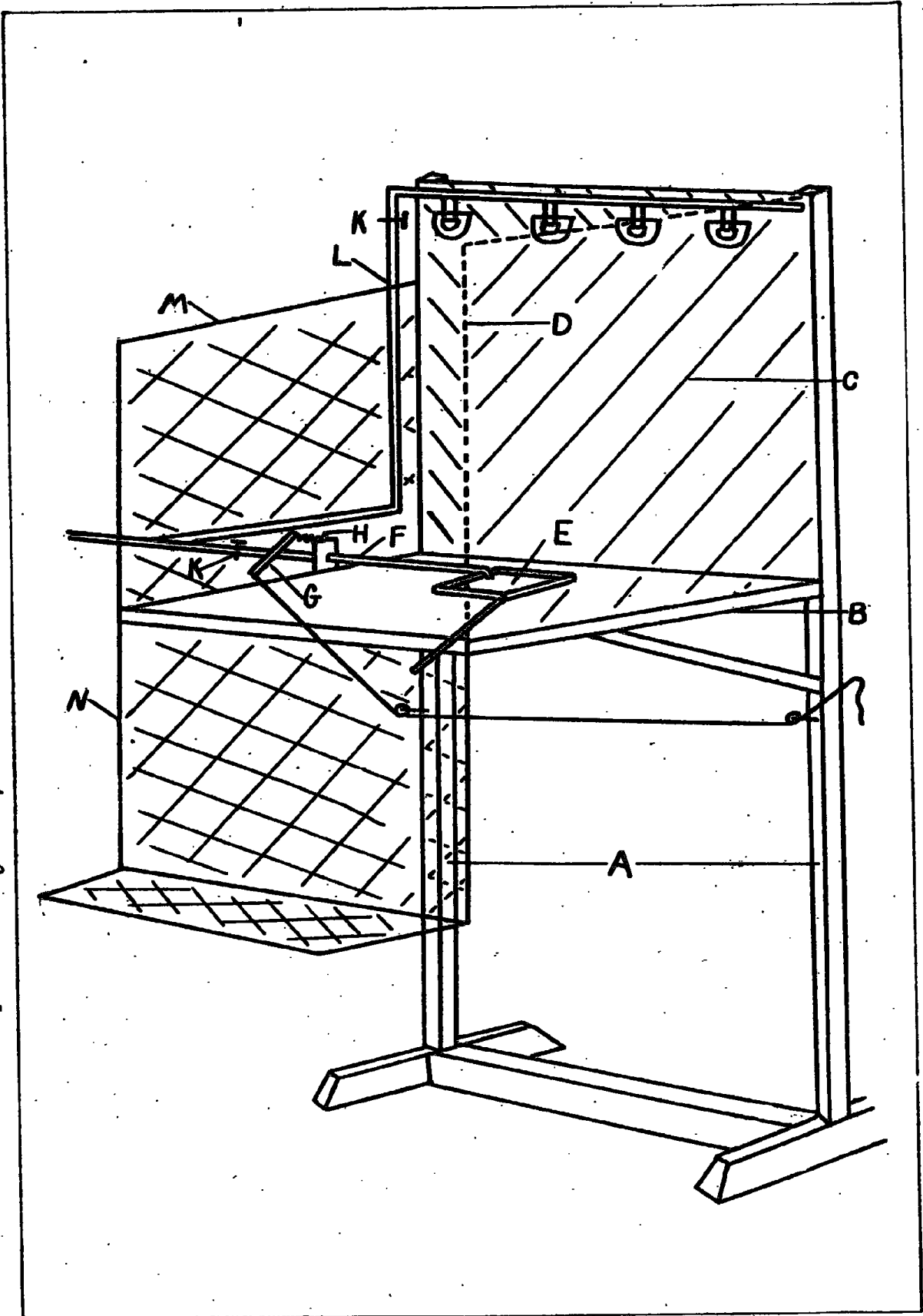
placed between the sitter or object and the flash, and a mode of ignition of the powder by downward impinging flame, all substantially as described.

2. A flash lamp to be used for photographic purposes having an opaque screen between the object or sitter and the flash, and a mode of ignition of the powder by downward impinging flame, and an auxiliary non-actinic source of illumination, substantially as and for the purpose described. 5

Dated the 27th day of April, 1914.

ANGUS FERGUSON LAWS.

[This Drawing is a reproduction of the Original on a reduced scale.]



Malby & Sons, Photo-Litho.

