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PATENT SPECIFICATION

DRAWINGS ATTACHED

1.152.917



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The Inventor of this invention in the sense of being the actual deviser thereof within the meaning of Sect 16 of the Patents Act 1949 is:— MANFRED RADTKE of German nationality and of Holderlinstrasse 16, Korb/Kreis, Waiblingen, Germany.

COMPLETE SPECIFICATION

Flash Adapter

We, EASTMAN KODAK COMPANY, a Company organised under the Laws of the State of New Jersey, United States of America of 343 State Street, Rochester, New York 14650, United States of America (Assignees of KODAK AKTIENGESSELLSCHAFT), do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns flash adapters for use with cameras having built-in flash devices arranged to take flash cubes or for attachable flash devices arranged to receive flash cubes and to enable such devices to receive flash lamps having an A.G. (all glass) or metal bases. By flash cubes as used in this specification is meant units which comprise a plurality of flash lamps each having an individual reflector and mounted on a base so as to be capable of being rotated in a socket therefor of a camera or attachable flash device to present, sequentially, each of the flash lamps in alignment with the optical axis of the camera.

Cameras and attachable flash devices of this kind are known in which a drive means is provided for sequentially rotating the flash cube to align the individual flash lamps with the optical axis of the camera. If an adapter is provided for insertion into the flash cube socket, then with such a camera or attachable flash device, on operation of the drive means, the adapter will normally be rotated.

It is an object of the present invention to overcome the aforesaid disadvantage.

According to the present invention, there

[Price 4s. 6d.]

is provided a flash adapted for enabling a camera having a flash device, or a flash device attachable to a camera, arranged to receive a flash cube, to be used with single flash lamps having A.G. (all glass) metal bayonet, or screw-threaded mounts, the flash adapter comprising a socket for receiving such a single flash lamp, a foot arranged to be received in a socket of a flash device arranged to receive flash cubes and means for preventing rotation of the adapter in the socket.

The invention will be described further, by way of example, with reference to the accompanying drawing, in which:—

Figure 1 is a partial perspective view of a photographic camera having a flash device and of an adapter for insertion into a socket of the device;

Figure 2 is an underneath plan view of the adapter shown in Figure 1; and

Figure 3 is a fragmentary front elevation of the adapter shown in Figs. 1 and 2.

Referring to the drawings, a flash device 2 is built-into a photographic camera 1 and comprises a rotatable socket member 2a having a cross-shaped receiving socket 2b. The socket member 2a may be rotated, for example, by means of a film winding member of the camera through a slipping clutch. Thus, a flash cube (not shown) located in the socket 2b will be indexed to present its flash lamps sequentially in dependence upon winding on of the film by the film winding member. The socket 2b includes an upright spigot 2c for locating a flash cube therein. An annular recess 2d surrounds the socket member 2a and electrical contacts 2e and 2f are provided in the recess 2d.

A flash adapter 3, according to the present

invention, comprises a socket 3a for receiving a mount of a single flash lamp 4 for example having an A.G. (all glass) base. The adapter 3 may, of course, be provided with an appropriate socket for receiving a flash lamp with metal bayonet or a screw-threaded base. A cover 5 is pivoted to the adapter 3 so as, when a lamp is not mounted in the socket 3a, permits the socket to be covered by the cover 5. The cover 5 includes a reflector 6.

The underside of the adapter 3 is provided with a foot 3b which has a central bore 3d for receiving the spigot 2c. Projections 3c are provided on the foot 3b giving a cruciform appearance, the projections 3c being received in the cross-shaped socket 2b of the socket member 2a. A ring-shaped projection 3e is of dimensions such as to locate in the annular recess 2d in the flash device 2. Contacts 3f and 3g are carried by the ring 3e and are spaced on the ring so as to cooperate with the contacts 2f and 2e of the socket of the device 2.

In accordance with the present invention, the adapter 3 has projection 3h which is arranged to locate in a notch 2g provided in the flash device 2 of the camera. The arrangement is such that, when the adapter is located in the socket of the device, when the projection 3h is engaged in the notch 2g and, firstly, ensures the adapter is oriented so that the light emanating therefrom is aligned with the optical axis of the camera and, secondly, prevents rotation of the adapter upon rotation of the socket member 2a. As mentioned above, the socket is normally driven through a friction clutch and accordingly the socket member may be held whilst the film winding member is being operated. The co-operating projection 3h of the notch 2g serves also for locating the contacts 3f and 3g in engagement with the contacts 2f and 2e in the annular recess 2d.

The invention is not confined to the precise

details of the foregoing example and variations may be made thereto. For instance, it has been proposed that a flash cube should have a square-shaped foot and that the socket of a flash device, therefore, should also be square-shaped. The present invention, of course, is applicable to an adapter having a square-shaped foot for location into such a socket.

The adapter 3, besides accommodating a flash lamp when in use may also accommodate batteries or other sources of power for igniting the flash lamp when synchronising circuit of the camera including the contacts 2f and 2e is closed.

WHAT WE CLAIM IS:—

1. A flash adapter for enabling a camera having a flash device, or a flash device alone, arranged to receive a flash cube, to be used with single flash lamps having A.G. (all glass) metal bayonet or screw-threaded mounts, the flash adapter comprising a socket for receiving such a single flash lamp, a foot arranged to be received in a socket of a flash device arranged to receive flash cubes and means for preventing rotation of the adapter in the socket.

2. An adapter as claimed in Claim 1 wherein the foot of the adapter is of cruciform shape, is arranged to locate in a correspondingly shaped socket of a flash device, and is surrounded by a ring arranged to be received in an annular recess of the socket of the flash device.

3. An adapter as claimed in Claim 2 wherein the projecting ring has a radial projection arranged to be received in a correspondingly formed notch of the annular recess of the flash device.

4. A flash adapter substantially as herein before described with reference to and as illustrated in the accompanying drawings.

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The underside of the adapter 3 is provided with a foot 3b which has a central bore 3d for receiving the spigot 2c. Projections 3c are provided on the foot 3b giving a cruciform appearance, the projections 3c being received in the cross-shaped socket 2b of the socket member 2a. A ring-shaped projection 3e is of dimensions such as to locate in the annular recess 2d in the flash device 2. Contacts 3f and 3g are carried by the ring 3e and are spaced on the ring so as to cooperate with the contacts 2f and 2e of the socket of the device 2.

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WHAT WE CLAIM IS:—

1. A flash adapter for enabling a camera having a flash device, or a flash device alone, arranged to receive a flash cube, to be used with single flash lamps having A.G. (all glass) metal bayonet or screw-threaded mounts, the flash adapter comprising a socket for receiving such a single flash lamp, a foot arranged to be received in a socket of a flash device arranged to receive flash cubes and means for preventing rotation of the adapter in the socket.

2. An adapter as claimed in Claim 1 wherein the foot of the adapter is of cruciform shape, is arranged to locate in a correspondingly shaped socket of a flash device, and is surrounded by a ring arranged to be received in an annular recess of the socket of the flash device.

3. An adapter as claimed in Claim 2 wherein the projecting ring has a radial projection arranged to be received in a correspondingly formed notch of the annular recess of the flash device.

4. A flash adapter substantially as herein before described with reference to and as illustrated in the accompanying drawings.

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