

SPECIFICATION

Camera having a combined manually-operable exposure and focussing control

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This invention relates to a camera having a combined manually-operable exposure and focussing control.

According to the present invention, there is provided a camera comprising a single manually operable member movable selectively over first and second ranges corresponding respectively to daylight and flashlight operation of the camera, movement of the manually operable member in said first range causing at least one exposure parameter to be varied and/or effecting focussing of an objective lens of the camera, and movement of the manually operable member in said second range at least effecting focussing of said objective lens, a distance scale indicating the subject distances for which correct flashlight exposures can be obtained in the second range of movement of the manually operable member, and sensing means responsive to the sensitivity of the photographic film being used and arranged to modify the distance scale in accordance therewith.

By using a single manually operable member to effect both focussing and exposure control, a construction is obtained which enables simply and at a low cost numerous parameters to be adjusted both in daylight and in flashlight operation.

Preferably, the manually operable member has operatively connected thereto at least one first control cam arranged to control focussing of the objective lens and a second control cam arranged to control aperture size and/or shutter speed, each said control cam having first and second portions which are operational respectively when the manually operable member is in its first and second ranges of movement. Such an arrangement enables cameras having different operational characteristics (for example automatic exposure cameras and manually programmable exposure cameras) to be achieved with limited expenditure, since only the cam shape need be changed and therefore the camera can have many components in common. Moreover, by suitably shaping the control cams an arrangement can be obtained in which reverse focussing movement of the objective lens occurs for part of the travel of the manually operable member: this is particularly important regarding the transition of the manually operable member from its daylight range of operation to its flashlight range of operation.

In one particular embodiment, movement of the manually operable member in its daylight range of operation is used exclusively for focus adjustment of the objective lens, the aperture value of the camera being held constant. To this end, the first portion of the or each first control cam is made of varying configuration whereas the first portion of the second cam (which controls the aperture value of the camera) is made of constant configuration. Such an arrangement is particularly suited for use with a shutter whose speed is controlled automatically in accordance with subject brightness.

In another particular embodiment, the manually operable member is used to effect exposure control in the daylight range of operation, the focus condition of the objective lens remaining unchanged at a medium distance setting, for example 5 metres. To this end, the first portion of the or each first control cam is made of constant configuration whereas the first portion of the second control cam (which can be used to control aperture value and shutter speed concomitantly) is made of varying configuration.

In the flashlight range of operation, suitable shaping of the control cams allows focus-conditioned adjustment of aperture value and eventually of shutter speed, so that correct exposures are obtained under flashlight operation at various subject distances.

When a film of high sensitivity is used, the sensing means can be arranged not only to modify the distance scale for flashlight operation but also to provide an auxiliary diaphragm on the optical axis of the objective lens, the main diaphragm of the camera being set to an aperture larger than that of the auxiliary diaphragm in the flashlight range of operation. For example, the main diaphragm is set to an aperture value of $f/4$ where the auxiliary diaphragm has an aperture value of $f/5.6$. Preferably, the main diaphragm is used at an aperture or apertures (e.g. $f/6.3$) smaller than that of the auxiliary diaphragm in daylight operation of the camera, and correcting means of an optical or electrical nature adjusts the exposure time accordingly when the sensing means detects that a film of high sensitivity is being used. The auxiliary diaphragm can be arranged so that it is moved out of the optical axis of the objective lens during each shutter priming and film winding operation, and is returned to a position on said optical axis unless the sensing means senses a film of low sensitivity.

Where the camera includes a built-in electronic flash unit, transition of the manually operable member from its daylight range of operation to its flashlight range of operation can be used to actuate a switch to connect the flash unit to a power source. Provision can be made for a flash ready indicator (for example a light-emitting diode or a neon glow lamp) to be rendered inoperative upon transition of the manually operable member back from its flashlight range of operation to its daylight range of operation. This can be achieved by means of a flap which is movable so as to cover the flash ready indicator, the flap advantageously being provided on a member which is movable by the manually operable member and which is also provided with an actuator for said switch. Alternatively or additionally, cancellation of the flash ready indicator can be achieved by way of switching means connected between the indicator and a supply capacitor of the flash unit.

Modification of the distance scale in accordance with the film sensitivity sensed by the sensing means is conveniently accomplished by providing at least part of the distance scale on a slide which is moved beneath a window in a housing of the camera. In a preferred arrangement, the distance scale is composed of fixed indicia indicating the smaller subject distances and movable indicia in-

dicating the larger subject distances for which correct flashlight exposures can be obtained, the movable indicia being selectively visible through a window in the camera housing in accordance with the sensed film sensitivity. Where the camera has automatically controlled exposure, the indicia can be arranged so that only the largest subject distance is modified for which a correct flashlight exposure can be obtained having regard to the film sensitivity and the guide member of the flash unit.

In the case of a manually programmable exposure camera, an exposure scale can be provided representing aperture size and/or shutter speed values which are varied by movement of the manually operable member in its daylight range of operation, and the sensing means can be arranged to modify the exposure scale in addition to modifying the distance scale in accordance with the sensed film sensitivity. In this case, the exposure scale and the movable indicia of the distance scale are conveniently provided commonly on a slide which is moved by the sensing means, the exposure scale being visible through a further window in the camera housing.

Where focussing of the objective lens is performed by moving a lens barrel thereof axially, the manually operable member is preferably operatively coupled to the lens barrel by means of at least one cam and cam follower arrangement, movement of the manually operable member effecting relative rotation between the cam and cam follower of each such arrangement generally about the lens barrel axis. Advantageously, a plurality of cams are provided in equi-angularly spaced relation about the lens barrel axis: for example, three such cams can be provided mutually spaced by 120° . The manually operable member can be coupled to the lens barrel through the intermediary of a member rotatable generally about the lens barrel axis and having a control cam which controls said at least one exposure parameter.

Embodiments of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is an exploded perspective view of part of a camera according to a first embodiment of the present invention, in which exposure control is effected automatically;

Figure 2 is a diagram of exposure and focussing information provided on the camera of *Figure 1*;

Figure 3 is a diagram of the cam surface of a focus control cam which forms part of the camera shown in *Figure 1*;

Figure 4 is an exploded perspective view of part of a camera according to a second embodiment of the present invention, in which exposure control is effected manually;

Figure 5 is a diagram of exposure and focus information provided on the camera of *Figure 4*; and

Figure 6 is a diagram of the cam surface of a focus control cam which forms part of the camera shown in *Figure 4*.

The camera depicted in *Figure 1* comprises an objective lens 1 which is focussed by axial movement of a lens barrel thereof, a lug 2 on the lens barrel engaging the cam surface 3 of a fixed focus control cam 4. In fact, three focus control cams are

provided spaced apart by 120° about the axis of the lens barrel, but for convenience only one of the cams is actually shown. The lens barrel has axial grooves 5 therein in which internal lugs on an intermediate ring 6 engage, the intermediate ring also having external lugs 7 which engage respective grooves in a control ring 8. The control ring 8 is rotatable generally about the lens barrel axis, such rotation being transmitted to the lens barrel through the intermediate ring 6 and causing axial focussing movement of the lens barrel by virtue of the engagement of the lugs 2 with the focus control cam 4. Gear teeth on the outer periphery of the control ring 8 mesh with corresponding gear teeth on an elongate adjuster slide 9, such that manual movement of the adjuster slide in the longitudinal direction causes rotation of the control ring 8 and hence focussing movement of the objective lens. The adjuster slide 9 has two ranges of movement, corresponding respectively to daylight and flashlight operation of the camera, and the cam surface 3 of each focus control cam 4 has a first portion which is engaged by the respective lug 2 when the adjuster slide is set for daylight operation and a second portion which is engaged by the respective lug 2 when the adjuster slide is set for flashlight operation.

The control ring 8 also has on its outer periphery an exposure control cam composed of a first portion 11 which is operative when the adjuster slide 9 is set for daylight operation and a second portion 12 which is operative when the adjuster slide is set for flashlight operation. A control member 13 is biased by a spring 14 into engagement with the exposure control cam, the member 13 being moved backwards and forwards by means of the exposure control cam. Pegs 15 and 16 transmit such movement of the member 13 to blades 17 and 18 of a main diaphragm of the camera so as to open and close the aperture of the latter.

In this particular embodiment, the first portion 11 of the exposure control cam is of constant configuration so that the aperture of the diaphragm 17, 18 is held at a constant value (for example, $f/6.3$) during movement of the adjuster slide 9 in its daylight range of operation. However, the first portion of each focus control cam 4 is of varying configuration so that movement of the adjuster 9 in its daylight operational range effects focussing movement of the objective lens 1, the focus setting of the lens being indicated by means of an indicator mark 10 on the adjuster slide and a fixed distance scale 19. This arrangement is particularly suited for use with an electronically controlled shutter, wherein the shutter speed is controlled automatically in accordance with the prevailing exposure conditions..

As illustrated, the second portion 12 of the exposure control cam is also of constant configuration, so that the aperture of the diaphragm is held at a constant but different value (for example, $f/4$) during movement of the adjuster slide 9 in its flashlight range of operation. The second portion of each focus control cam is made of varying configuration such that movement of the adjuster slide in its flashlight operational range effects focussing of the objective lens 1, the subject distance being indicated by

means of the aforementioned indicator mark 10 on the adjuster slide and a distance scale 20. The specific shape of the cam surface 3 of each focus control cam is shown in Figure 3, numeral 38

- 5 denoting as reference line, the length of each cam surface 3 corresponding to the length of the exposure control cam 11, 12. In Figure 1 arrow A indicates the direction in which the objective lens 1 moves as the focus setting thereof is increased. From the
- 10 shape of the cam surface 3 shown in Figure 3, it will be appreciated that the objective lens moves in the reverse direction over part of the travel of the adjuster slide 9, namely when the latter undergoes the transition between its daylight and flashlight
- 15 ranges of movement.

- In a modified arrangement (not shown), the second portion 12 of the exposure control cam is made of varying rather than constant configuration, so that movement of the adjuster slide 9 in its
- 20 flashlight range of operation not only effects focusing of the objective lens 1 but also alters the aperture value of the diaphragm 17, 18. In this way, focus conditioned adjustment of the diaphragm aperture value is possible, enabling correct flashlight
- 25 exposures to be obtained at varying subject distances.

- The distance scale 20 for flashlight operation of the camera is composed of fixed indicia indicating the smaller subject distances and movable indicia
- 30 indicating the larger subject distances. The movable indicia are provided on a slidable scale carrier 20a so as to be visible selectively through a window 20b in a housing of the camera and adjacent the fixed indicia. The scale carrier 20a has rack teeth which mesh with
- 35 a gear wheel 21, the gear wheel 21 also meshing with gear teeth on a slidable sensor component 22. The sensor component 22 is biased by a spring 23 so that a free end 24 thereof senses markings 26 on a film cassette 25 indicating the sensitivity of the
- 40 photographic film contained therein. The sensor component is thus moved in accordance with the film sensitivity, and such movement is transmitted to the scale carrier 20a through the gear wheel 21 so that the movable indicia actually visible through the
- 45 window 20b depends upon the sensed film sensitivity. For example, when using film of sensitivity 19 DIN the cassette 25 has a lug thereon which causes the sensor component 22 to be moved in the direction of arrow C, thereby moving the scale
- 50 carrier 20a so that an indicia representing 3 metres appears in the window 20b. When using film of sensitivity 27 DIN: the cassette 25 has the illustrated markings thereon which cause the sensor component 22 to be moved in the opposite direction to
- 55 arrow C so that an indicia on the scale carrier 20a representing 4 metres appears in the window 20b. These indicia represent the maximum subject distance at which a correct flashlight exposure can be obtained for the particular film being used.

- 60 An auxiliary diaphragm 27 is normally disposed on the optical axis of the objective lens 1, but in response to each shutter priming and film winding operation it is moved in the direction of arrow B off the optical axis and against the action of a return
- 65 spring 30. Where a film of sensitivity 19 DIN is used,

the sensor component 22 is moved into a position in which it can be engaged by a hook-shaped projection 28 on the auxiliary diaphragm 27, such that return of the auxiliary diaphragm onto the optical axis is prevented. At the same time, a neutral density wedge 31 mounted on the auxiliary diaphragm 27 is moved in front of a photocell 33 which controls the operation of an exposure time control unit 31. On the other hand, when film is sensitivity 27 DIN is used

70 the sensor component 22 is disposed out of the path of the hook-like projection 28, and the auxiliary diaphragm 27 is permitted to return to its starting position on the optical axis of the objective lens under the action of the spring 30.

- 80 The auxiliary diaphragm has an aperture 29 which is larger than the aperture to which the main diaphragm 17, 18 is set under daylight operation of the camera but which is smaller than the aperture to which the main diaphragm is set under flashlight
- 85 operation. For example, the auxiliary diaphragm has an aperture value of f/5.6 where the main diaphragm is set to f/6.3 for daylight operation and f/4 for flashlight operation. Thus, in daylight operation of the camera, the auxiliary diaphragm is ineffective and any adjustment of exposure required to compensate for the increased film speed is achieved by the neutral density wedge 31 being removed from in front of the photocell 33. On the other hand, in
- 90 flashlight operation of the camera the auxiliary diaphragm overrides the function of the main diaphragm and thereby provides a suitable adjustment of the exposure to compensate for the increased film speed. The size of the aperture 29 is chosen so that sufficient exposures are provided
- 95 within the distance range of the flash unit while allowing for film-conditioned exposure tolerances. Where the exposure control cam portion 12 is shaped so as to provide for focus-conditioned adjustment of the main diaphragm aperture during
- 100 flashlight operation, the correct aperture setting is approximated by the auxiliary diaphragm.

- A control lever 34 is arranged to pivot in the direction of arrow D upon transition of the adjuster slide 9 from its daylight to its flashlight range of
- 110 operation, thereby closing switch contacts 35 to connect a built-in flash unit (not shown) of the camera to a power source. At the same time, a cover flap 38 on an end of the lever 34 uncovers a flash ready indicator 36, such as a light-emitting diode or a
- 115 neon glow lamp, which then becomes visible through a window 37 in the camera housing. Upon transition of the adjuster slide 9 back from the flashlight to the daylight range of its operation, the cover flap 38 moves back to the cover the flash ready
- 120 indicator and the switch contacts 35 are re-opened. Additionally or alternatively, the flash ready indicator can be rendered inoperative by way of switch means connected between the indicator and a supply capacitor of the flash unit.

- 125 Figure 2 shows the diagrammatic form the exposure and focussing information which is provided on the camera housing, and indicates in particular the daylight and flashlight operational ranges of the camera.

- 130 The camera shown in Figure 4 is generally similar

to that described above with reference to Figure 1, and accordingly similar parts are denoted by the same reference numerals but primed. In this embodiment, however, movements of the adjuster 9' in its daylight range varies the aperture value and shutter speed of the camera but does not affect the focus condition of the objective lens 1', the latter being set to a suitable medium distance such as 5 metres. In order to achieve this function, the first portion 11' of the exposure control cam is made of varying configuration whereas the first portion of each focus control cam 4' is made of constant configuration. In addition, the control member 13' is provided with a lug 40 which operates a mechanical shutter speed control device 41, so that the shutter speed of the camera is controlled concomitantly with the aperture value of the main diaphragm 17', 18'.

The exposure settings which are obtained at various positions of the adjuster slide 9' in its daylight range are indicated by means of a series of indicia on the scale carrier 20a', these indicia being visible through a window 39' (see Figure 5) in the camera housing and being modified by movement of the scale carrier 20a' with respect to the window 39' in accordance with the film sensitivity (29 or 25 DIN) used. It will be manifest that the distance scale 19 is now dispensed with.

Figure 5 shows diagrammatically the exposure and focussing information which is provided on the camera housing. Figure 6 shows the shape of the cam surface 3' of each focus control cam 4'.

In the camera described above the reference in Figures 1 to 3, operation of the adjuster slide 9 in the daylight range is used exclusively to control focussing of the objective lens 1 and exposure is performed automatically by means of an electronically controlled shutter, whereas in the camera described with reference to Figures 4 to 6 such operation of the adjuster slide 9' is used exclusively for manual setting of exposure and the focus condition of the objective lens 1' is held constant. Thus, two completely different camera functions are obtained using many components which are common to both constructions.

CLAIMS

1. A camera comprising a single manually operable member movable selectively over first and second ranges corresponding respectively to daylight and flashlight operation of the camera, movement of the manually operable member in said first range causing at least one exposure parameter to be varied and/or effecting focussing of an objective lens of the camera, and movement of the manually operable member in said second range at least effecting focussing of said objective lens, a distance scale indicating the subject distances for which correct flashlight exposures can be obtained in the second range of movement of the manually operable member, and sensing means responsive to the sensitivity of the photographic film being used and arranged to modify the distance scale in accordance therewith.

2. A camera as claimed in claim 1, wherein the

sensing means is arranged to engage means on a container of photographic film inserted in the camera which indicates the sensitivity of said film.

3. A camera as claimed in claim 1 or 2, wherein at least part of the distance scale is provided on a slide which is moved beneath a window in a housing of the camera by the sensing means in accordance with the sensing film sensitivity.

4. A camera as claimed in claim 1, 2 or 3, wherein the distance scale is composed of fixed indicia indicating the smaller subject distances and movable indicia indicating the largest subject distances for which correct flashlight exposures can be obtained, the movable indicia being selectively visible through a window in a housing of the camera in accordance with the sensed film sensitivity.

5. A camera as claimed in any preceding claim, further comprising an exposure scale representing the exposure parameter or parameters which are varied by movement of the manually operable member in its said first range, the sensing means being arranged to modify the exposure scale in accordance with the sensed film sensitivity.

6. A camera as claimed in claim 5 when appended to claim 3, wherein the exposure scale is also provided on said slide and is moved beneath a further window in the camera housing in accordance with the film sensitivity.

7. A camera as claimed in any preceding claim, wherein the manually operable member is operatively coupled to an axially movable lens barrel of said objective lens by means of at least one cam and cam follower arrangement, movement of the manually operable member effecting relative rotation between the cam and cam follower of each such arrangement generally about the axis of the lens barrel.

8. A camera as claimed in claim 7, wherein a plurality of cams are provided in equi-angularly spaced relation about the lens barrel axis.

9. A camera as claimed in claim 7 or 8, wherein the manually operable member is operatively coupled to the lens barrel through the intermediary of a member rotatable generally about the lens barrel axis and having a control cam which controls said at least one exposure parameter.

10. A camera as claimed in any preceding claim, wherein the manually operable member has operatively connected thereto at least one first control cam arranged to control focussing of said objective lens and a second control cam arranged to control aperture size and/or shutter speed, each said cam having first and second portions which are operational respectively when the manually operable member is in its first and second ranges of movement.

11. A camera as claimed in claim 10, wherein the second control cam controls the aperture value of a diaphragm of the camera, and the first portion of the or each first control cam is of varying configuration whereas the first portion of the second control cam is of constant configuration so that movement of the manually operable member in its first range effects focussing of said objective lens but does not affect the aperture value of said diaphragm.



to that described above with reference to Figure 1, and accordingly similar parts are denoted by the same reference numerals but primed. In this embodiment, however, movements of the adjuster 9' in its daylight range varies the aperture value and shutter speed of the camera but does not affect the focus condition of the objective lens 1', the latter being set to a suitable medium distance such as 5 metres. In order to achieve this function, the first portion 11' of the exposure control cam is made of varying configuration whereas the first portion of each focus control cam 4' is made of constant configuration. In addition, the control member 13' is provided with a lug 40 which operates a mechanical shutter speed control device 41, so that the shutter speed of the camera is controlled concomitantly with the aperture value of the main diaphragm 17', 18'.

The exposure settings which are obtained at various positions of the adjuster slide 9' in its daylight range are indicated by means of a series of indicia on the scale carrier 20a', these indicia being visible through a window 39' (see Figure 5) in the camera housing and being modified by movement of the scale carrier 20a' with respect to the window 39' in accordance with the film sensitivity (29 or 25 DIN) used. It will be manifest that the distance scale 19 is now dispensed with.

Figure 5 shows diagrammatically the exposure and focussing information which is provided on the camera housing. Figure 6 shows the shape of the cam surface 3' of each focus control cam 4'.

In the camera described above the reference in Figures 1 to 3, operation of the adjuster slide 9 in the daylight range is used exclusively to control focussing of the objective lens 1 and exposure is performed automatically by means of an electronically controlled shutter, whereas in the camera described with reference to Figures 4 to 6 such operation of the adjuster slide 9' is used exclusively for manual setting of exposure and the focus condition of the objective lens 1' is held constant. Thus, two completely different camera functions are obtained using many components which are common to both constructions.

CLAIMS

1. A camera comprising a single manually operable member movable selectively over first and second ranges corresponding respectively to daylight and flashlight operation of the camera, movement of the manually operable member in said first range causing at least one exposure parameter to be varied and/or effecting focussing of an objective lens of the camera, and movement of the manually operable member in said second range at least effecting focussing of said objective lens, a distance scale indicating the subject distances for which correct flashlight exposures can be obtained in the second range of movement of the manually operable member, and sensing means responsive to the sensitivity of the photographic film being used and arranged to modify the distance scale in accordance therewith.

2. A camera as claimed in claim 1, wherein the

sensing means is arranged to engage means on a container of photographic film inserted in the camera which indicates the sensitivity of said film.

3. A camera as claimed in claim 1 or 2, wherein at least part of the distance scale is provided on a slide which is moved beneath a window in a housing of the camera by the sensing means in accordance with the sensing film sensitivity.

4. A camera as claimed in claim 1, 2 or 3, wherein the distance scale is composed of fixed indicia indicating the smaller subject distances and movable indicia indicating the largest subject distances for which correct flashlight exposures can be obtained, the movable indicia being selectively visible through a window in a housing of the camera in accordance with the sensed film sensitivity.

5. A camera as claimed in any preceding claim, further comprising an exposure scale representing the exposure parameter or parameters which are varied by movement of the manually operable member in its said first range, the sensing means being arranged to modify the exposure scale in accordance with the sensed film sensitivity.

6. A camera as claimed in claim 5 when appended to claim 3, wherein the exposure scale is also provided on said slide and is moved beneath a further window in the camera housing in accordance with the film sensitivity.

7. A camera as claimed in any preceding claim, wherein the manually operable member is operatively coupled to an axially movable lens barrel of said objective lens by means of at least one cam and cam follower arrangement, movement of the manually operable member effecting relative rotation between the cam and cam follower of each such arrangement generally about the axis of the lens barrel.

8. A camera as claimed in claim 7, wherein a plurality of cams are provided in equi-angularly spaced relation about the lens barrel axis.

9. A camera as claimed in claim 7 or 8, wherein the manually operable member is operatively coupled to the lens barrel through the intermediary of a member rotatable generally about the lens barrel axis and having a control cam which controls said at least one exposure parameter.

10. A camera as claimed in any preceding claim, wherein the manually operable member has operatively connected thereto at least one first control cam arranged to control focussing of said objective lens and a second control cam arranged to control aperture size and/or shutter speed, each said cam having first and second portions which are operational respectively when the manually operable member is in its first and second ranges of movement.

11. A camera as claimed in claim 10, wherein the second control cam controls the aperture value of a diaphragm of the camera, and the first portion of the or each first control cam is of varying configuration whereas the first portion of the second control cam is of constant configuration so that movement of the manually operable member in its first range effects focussing of said objective lens but does not affect the aperture value of said diaphragm.



12. A camera as claimed in claim 10, wherein the second control cam controls the aperture value and/or the shutter speed of the camera, and the first portion of the or each first control cam is of constant configuration whereas the first portion of the second control cam is of varying configuration so that movement of the manually operable member in its first range varies said aperture value and/or said shutter speed but does not alter the focus of said objective lens.

13. A camera as claimed in claim 10, wherein the second control cam controls the aperture value of a diaphragm of the camera, and the second portion of the or each first control cam and the second portion of the second control cam are configured so that movement of the manually operable member in its second range effects focussing of said objective lens and also varies the aperture value of said diaphragm in dependence upon the focus condition of said objective lens, thereby conditioning the aperture value of said diaphragm to the subject distance.

14. A camera as claimed in claim 10, wherein the second control cam controls the aperture value of a diaphragm of the camera, and the first and second portions of the second control cam are of constant but different configurations so that the diaphragm is held at constant but different aperture values in the first and second ranges of movement of the manually operable member.

15. A camera as claimed in any preceding Claim, further comprising a built-in electronic flash unit and a switch which is actuated to connect the flash unit to a power source in use upon transition of the manually operable member from its first to its second range of movement.

16. A camera as claimed in Claim 15, wherein the flash unit includes a flash ready indicator, and cancelling means is arranged to render the indicator inoperative upon transition of the manually operable member from its second to its first range of movement.

17. A camera as claimed in Claim 16, wherein the cancelling means includes a flap which is movable so as to cover the flash ready indicator.

18. A camera as claimed in Claim 17, wherein the flap and an actuator for said switch are provided on a common member which is movable by the manually operable member.

19. A camera as claimed in Claim 16, 17 or 18, wherein the cancelling means includes switching means connected between the flash ready indicator and a supply capacitor of the flash unit.

20. A camera as claimed in any preceding Claim, wherein movement of the manually operable member controls the aperture value of a main diaphragm of the camera, and the sensing means is arranged to provide an auxiliary diaphragm on the optical axis of said objective lens when a film of high sensitivity is used, the main diaphragm being set to an aperture larger than that of the auxiliary diaphragm in the second range of movement of the manually operable member.

21. A camera as claimed in Claim 20, wherein the main diaphragm is used at an aperture or apertures smaller than that of the auxiliary diaphragm in the

first range of movement of the manually operable member, and the sensing means is arranged to reduce the exposure time of the camera when said film of high sensitivity is used.

22. A camera as claimed in Claim 20 or 21, wherein the auxiliary diaphragm is moved out of the optical axis of said objective lens during each shutter priming and film winding operation, and is returned to a position on said optical axis unless the sensing means senses a film of low sensitivity.

23. A camera substantially as hereinbefore described with reference to Figures 1 to 3 or Figures 4 to 6 of the accompanying drawings.