

[54] **CAMERA PROVIDED WITH A DEVICE FOR AUTOMATICALLY PHOTOGRAPHING DATES OF PHOTOGRAPHING**

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Japan

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abandoned.

[30] **Foreign Application Priority Data**

Jan. 29, 1970 Japan..... 45-9496

[52] U.S. Cl. **354/106**

[51] Int. Cl. **G03b 17/24**

[58] **Field of Search**..... 95/1.1

[56] **References Cited**

UNITED STATES PATENTS

3,703,129	11/1972	Goshima	95/1.1
2,813,469	11/1957	Nerwin	95/1.1

Primary Examiner—John M. Horan

Attorney, Agent, or Firm—Fitzpatrick, Cella, Harper
& Scinto

[57] **ABSTRACT**

An adjustable device for photographing data, numbers or characters indicating the date of photo-taking is provided in a camera. An illumination lamp illuminates the selected numbers or characters in association with the releasing of the shutter and the illuminated numbers or characters are photographed on the film. The duration of illumination of the lamp is controlled by a time control device actuated in association with the releasing of the shutter.

10 Claims, 14 Drawing Figures

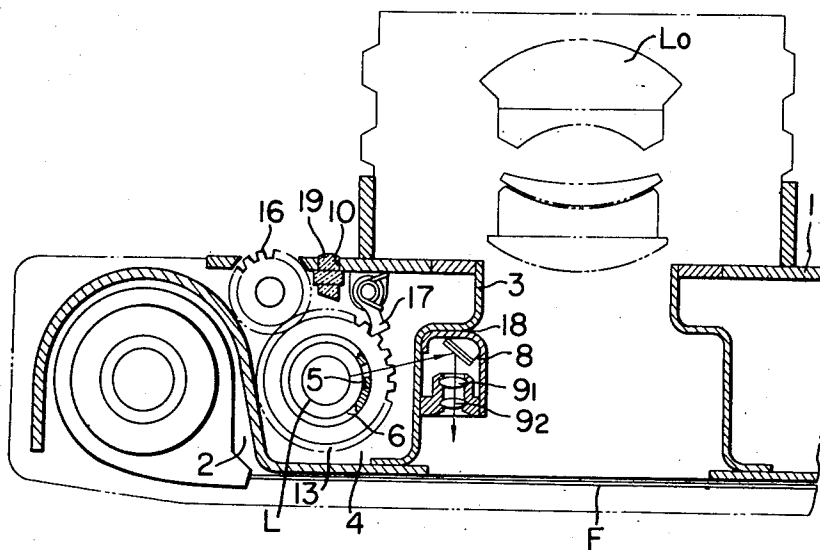


FIG. 2

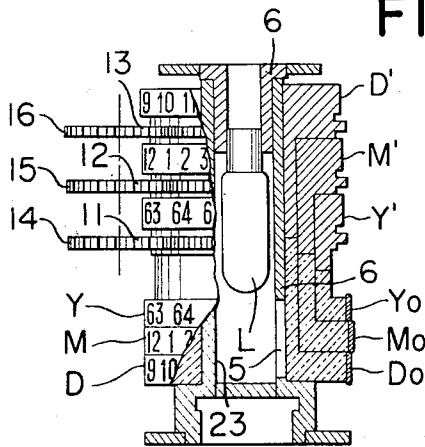


FIG. 1

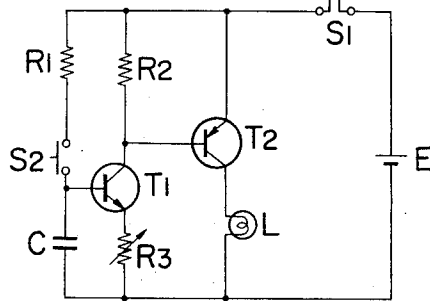
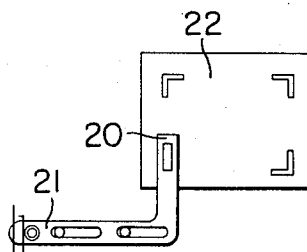


FIG. 3

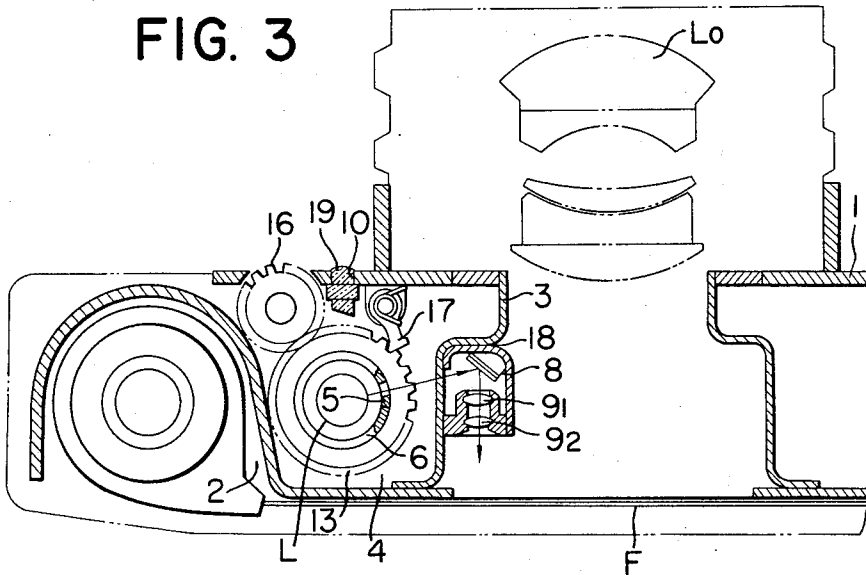


FIG. 4

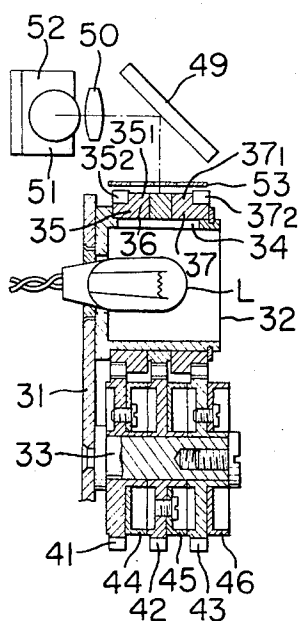


FIG. 5

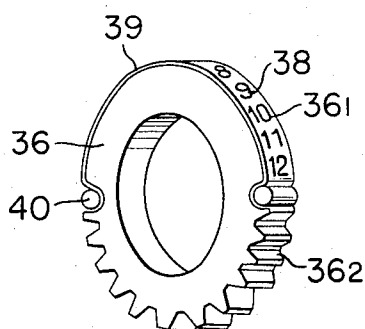


FIG. 6

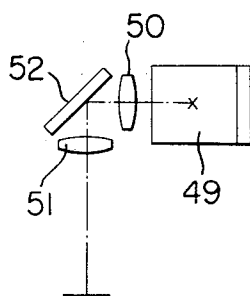


FIG. 7

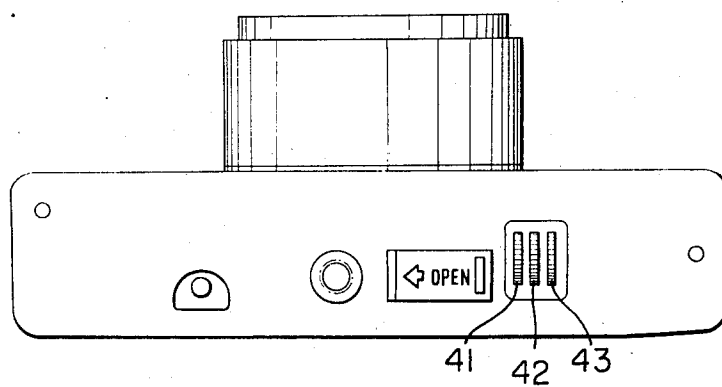


FIG. 8

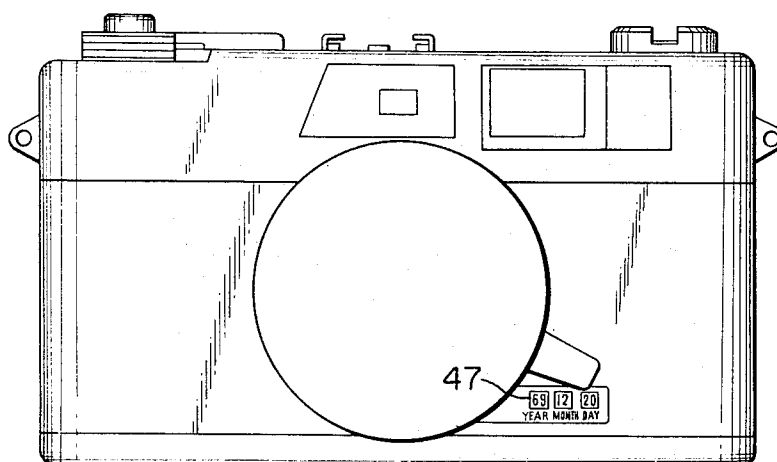


FIG. 9

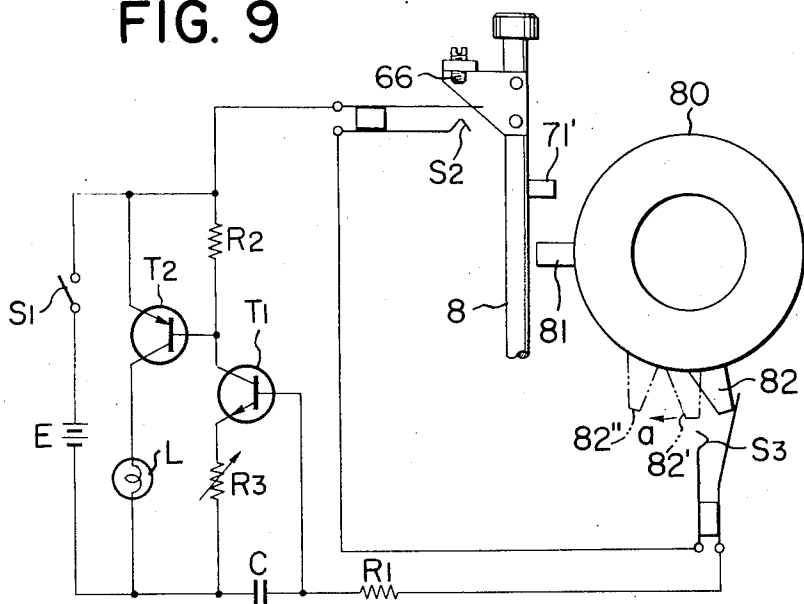


FIG. 10

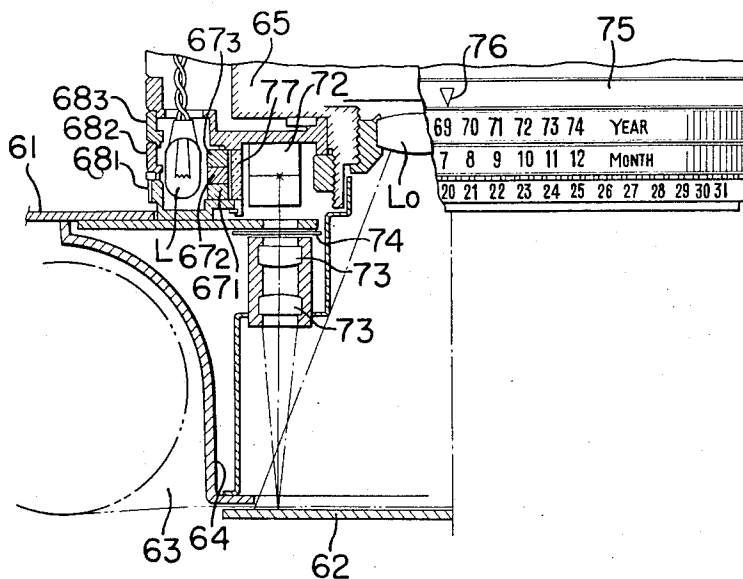


FIG. 11

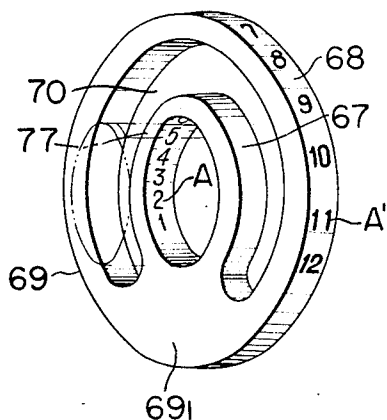


FIG. 14

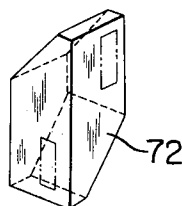


FIG. 12

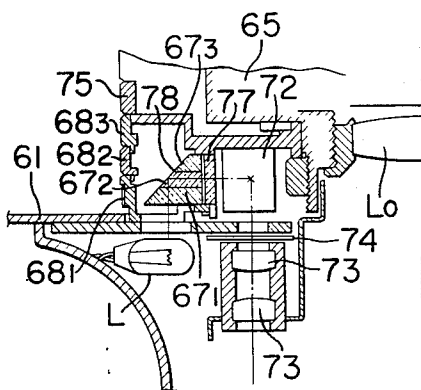
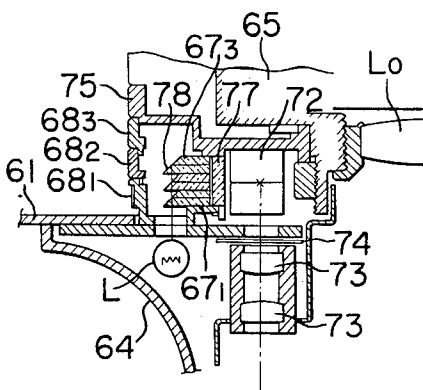


FIG. 13



CAMERA PROVIDED WITH A DEVICE FOR AUTOMATICALLY PHOTOGRAPHING DATES OF PHOTOGRAPHING

This is a continuation, of application Ser. No. 110,814, filed Jan 29, 1971 now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention generally relates to a camera, and more particularly to a camera provided with a device for automatically photographing the data such as dates of photographing.

2. Description of the Prior Art

U.S. Pat. No. 2,813,469 shows a camera comprising a casing, a window in the casing, an exposure frame in the casing and having a principal aperture for framing the picture to be taken and an auxiliary aperture through which an identifying numeral may be photographed on the film exposed, and a rotary graduated dial having identifying numerals thereon, with this structure, the dial is advanced a step each time the film is advanced to bring successively identifying numerals of the dial successively into position to register on the film through said auxiliary aperture. As other prior arts, U.S. Pat. No. 3,185,054 is mentioned.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a camera with which signals representing the data such as dates of photographing can be distinctly photographed in a portion of a photographing film irrespective of various photographing conditions such as film sensitivity, filter factor, f-value of the objective lens, shutter time, photographing distance and so forth.

It is a further object of the present invention to provide a camera of the described type in which a data photographing button is operable in response to the movement of a shutter button to control the time for starting to turn on a data illuminator lamp and accordingly control the time during which the lamp is maintained turned on.

According to a feature of the present invention, the surface of the data carrier members and a photographing film are disposed in conjugate relationship with respect to a data projection lens so that data signals on the data carrier members illuminated by an illuminator lamp may be projected on the surface of the photographing film and that an image light flux passing through an objective lens and the light flux carrying the data signals may overlap each other in the field of view defined on the photographing film by the aforesaid image light flux. In addition, means having a time constant circuit available for various photographing information inputs is provided to automatically control the quantity of light to which the data signals are exposed, thereby automatically controlling the quantity of light from the aforesaid illuminator lamp.

The above and other objects and features of the present invention will be fully understood from the following detailed description of various embodiments thereof when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 schematically shows an example of the control circuit for controlling the lighting-up time of the lamp

used as light source for illuminating the data carrier members.

FIG. 2 is a partly sectional front elevation of the data illuminator unit.

FIG. 3 is a schematic representation of a camera incorporating the data illuminator unit of FIG. 2, and showing the essential part thereof in horizontal cross section.

FIG. 4 is a vertical cross-sectional view showing a modified form of the data illuminator unit.

FIG. 5 is a perspective view of a data ring forming a part of the data illuminator unit shown in FIG. 4.

FIG. 6 is a schematic illustration of an optical system for directing the data image to the photographing film surface.

FIG. 7 is a bottom plan view of a camera incorporating the data illuminator unit of FIG. 4.

FIG. 8 is a front view of the same camera.

FIG. 9 schematically shows another example of the electric circuit in the device for turning on the data illuminator lamp according to the present invention.

FIG. 10 is a fragmentary plan view, partly in horizontal section, of the data photographing mechanism incorporating the device of FIG. 9.

FIG. 11 is a perspective view of a data ring used in FIG. 10.

FIGS. 12 and 13 are horizontal cross-sectional views showing further modifications of the data photographing mechanism which employ data rings having reflective surfaces.

FIG. 14 is a perspective view of a prism used in FIGS. 10, 12 and 13 to direct the data image to the photographing film surface.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring first to FIG. 1, there is shown a specific example of the circuit arrangement for controlling the lighting-up time of a lamp for illuminating data carrier members. The circuit is very much simplified in arrangement and compact in dimensions as well as improved in performance and economical in manufacturing cost. The circuit illustrated in FIG. 1 is directed to turn on the illuminator lamp for a predetermined length of time and includes a time constant circuit comprising a resistor R1 and a capacitor C, a first transistor T1 having its base connected with the output of the time constant circuit through a start S2, a second transistor T2 having its base connected with the collector of the first transistor T1, and a lamp L as a load connected with the collector of the second transistor T2. The circuit is such that power is supplied from a power source such as battery E to the circuit when a main switch S1 is closed.

The start switch S2 is such that it is short-circuited for a short time (say, 10 milli-seconds) in response to the depression of a shutter button (not shown) so as to charge the capacitor C in accordance with the small time constant of the time constant circuit R1-C. A resistor R2 is provided as the output resistor of the transistor T1.

In operation, if the main switch S1 is first closed, the transistor T1 and accordingly the transistor T2 will be rendered non-conductive since the capacitor C is not charged then, and thereby the lamp L will not turn on. Thus, the power consumption of the power source may be extremely minimized.

With the switch S1 closed, the unshown shutter button is then depressed to short-circuit the start switch S2 for a short time in response thereto. The time during which such short-circuiting continues is set to a sufficiently smaller value than the time constant provided by the combined resistance of the input impedance of transistor T1 and resistor R3 and the capacitor C. Of course, the time constant of the time constant circuit R1-C is selected to a sufficiently smaller value than the short-circuiting time of the start switch S2. Thus, the short-circuiting of the start switch S2 causes the capacitor C to be charged through the resistor R1, and the charging voltage renders both transistors T1 and T2 conductive to thereby turn on the lamp L. During the short-circuiting of the start switch S2, which is opened after a short time, the charge in the capacitor C has begun to be discharged through the base-emitter of the transistor T1 in accordance with the time constant provided by the combined resistance of the input impedance of transistor T1 and resistor R3 and the capacitor C. During that while the transistors T1 and T2 both remain conductive to maintain the lamp L turned on for a predetermined length of time, whereafter both transistors turn off so as to be ready for the next cycle of operation.

With the circuit arrangement described above, the lighting-up time of the lamp L may be made substantially constant irrespective of the possible irregular operation of the start switch resulting from the manual actuation, by selecting the time constant of the capacitor C and the aforesaid combined resistance to a greater value than the short-circuiting time of the start switch S2.

In addition, by employing a variable resistor as resistor R3 so that it can be controlled in accordance with the film sensitivity or like factor, the lighting-up time of the lamp as automatic data-carrier illuminator may be automatically controlled so as to ensure desired data to be properly projected upon the surface of a photographing film.

To stabilize the operation of the start switch S2, use may be made of such means as reed switch, no-contact switch or the like. The switch may advantageously be a positively operating switch to prevent chattering or like phenomenon.

In FIG. 2, there is shown a partly sectioned front view of the data illuminator unit which may be applied to the camera of the present invention as schematically shown in FIG. 3, where the essential part thereof is shown in cross section.

Referring to FIGS. 2 and 3, a camera body 1 includes therein a film chamber 2, a light-proof frame 3, a space 4 defined between the film chamber 2 and the light-proof frame 3, and a cylindrical hollow shaft 6 disposed in the space 4 in parallelism to the width of a film F and having a slit 5 formed in the side wall thereof. Rotatably mounted around the shaft 6 at one end thereof are data rings such as year representing ring Y, month representing ring M and day representing ring D, which are all formed of light-transmitting material and disposed in end-to-end relationship for movement relative to each other. The outer side wall surfaces of these data rings carry various numbers representing years, months and days, respectively. If desired, the numbers representing the months may be replaced by alphabetical characters representing the names of the months. The shaft 6 has the illuminator lamp L disposed within the

hollow cylindrical space therein so that one of the numbers on each ring Y, M and D which is then confronting the slit 5 of the shaft 6 may be illuminated by the lamp L from within the shaft. The particular numbers on the rings Y, M and D thus illuminated may be optically directed via mirror 8 and lenses 9₁ and 9₂ to a photographing lens L₀ in superposed relationship with one another, so that these numbers may be projected upon the photographing film F at a side edge portion thereof.

At the opposite end portion of the shaft 6 there are also rotatably mounted viewing rings Y', M' and D', which are interconnected to the respective data rings Y, M and D by reduced connecting portions as clearly shown in FIG. 2. The viewing rings Y', M' and D' also carry the same numbers at the same locations as those on the data rings Y, M and D, so that the numbers on the respective viewing rings Y', M' and D' which correspond to the particular numbers on the data rings Y, M and D which are then confronting the slit 5 may be viewed through a front window 10 formed in the camera body 1. The respective ring pairs Y-Y', M-M', and D-D' may be rotated for setting independently of one another by rotating setting gears 14, 15 and 16 which are partly projected outwardly of the camera body so as to be manually operable exteriorly of the camera.

In the illustrated embodiment, the rings Y-Y', M-M' and D-D' are of the end-to-end connected construction, whereas they may alternatively be of a unitary construction formed of a light-transmitting material. To enable the rings Y', M' and D' to be rotated from outside the camera body, gears 11, 12 and 13 may be provided integrally with these respective viewing rings so as to engage the projected setting gears 14, 15 and 16 respectively.

A ratchet pawl 17 is provided in opposed relationship with each of the gears 11, 12 and 13 for engagement therewith, and a window 18 is formed in the light-proof frame 2. A magnifier 19 is disposed across the window 10.

Turning again to FIG. 1, reference numeral 20 designates an arm extending from a main switch operating button 21 and adapted to shift a data field display board 22 from and into the field of view of a finder in response to the closing and opening of the main switch S1. The data field display board 20 displays in the field of view of the finder whether the data photographing can be effected or not, and if formed of transparent material, the data field display board 22 can transmit the photographing field of view, and this will be useful to define a photographing surface. Instead of such a data field display board, either a data display lamp may be disposed in the field of view of the finder or use may be made of such an arrangement that the data signals per se may be directed to the field of view of the finder through optical fiber or like means.

The lamp L may advantageously be disposed within the hollow shaft 6 in axially offset relationship with the slit 5 of the shaft as shown in FIG. 2 so that light from the lamp may effectively reach the slit 5. When predetermined numbers on the data rings Y, M and D are illuminated by the lamp L disposed within the hollow shaft 6, the light from the lamp will pass through the slit 5 with a substantially uniform distribution of intensity, which will in turn result in a substantially uniform intensity of data signals representing predetermined numbers on the data rings Y, M and D illuminated by the lamp L through the slit 5, and such data signals of

uniform intensity will be projected as a secondary light source upon the surface of the photographing film. The inner wall surface of the hollow shaft 6 serves as a reflective surface 23, which, together with the axially offset relationship between the lamp L and the slit 5, is useful to eliminate and adverse effect which may result from the particular configuration of the lamp filament, thereby achieving the described uniform distribution of light intensity with a high efficiency.

In the embodiment now under discussion, the year, month and day representing rings Y, M and D are formed of diffusive plastic ring members Y₁, M₁ and D₁ and sensitized photographic film layers Y₀, M₀ and D₀ bonded around the respective ring members, the film layers having thereon positively printed numbers representing years, months and days. As shown, the film layers Y₀, M₀ and D₀ on the rings Y, M and D are disposed in partly overlapping relationship with one another so as to prevent leakage of the light from the lamp through the gaps between adjoining rings. It is of course desirable that the inner wall surfaces of the light-proof frame 3 be pre-treated for non-reflection so as to eliminate any undesirable phenomenon such as secondary reflection of the photographing light.

Thus, the present invention enables the film sensitivity to be corrected by correcting the lighting-up time of the illuminator lamp L with its light maintained at a substantially uniform color and temperature, and this is highly effective and practical for industrial purposes.

FIGS. 4 to 8 show a modification of the above-described data illuminator unit. In this alternative form of the present invention, a base plate 31 is provided in a space between the light-proof frame and the film chamber disposed in the camera body, the base plate being parallel to the width of the photographing film (not shown). Two cylindrical shafts 32 and 33 are securely mounted on the base plate 31 in such a manner that their respective axes are parallel to the length of the photographing film.

The shaft 32 has an axially extending slit 34 formed through the side wall thereof. Around the shaft 32 are rotatably fitted transparent data rings 35, 36 and 37 representing days, months and years and having their outer wall surfaces flush with one another. The day ring 35 and year ring 37 comprise data portions 35₁ and 37₁ and gear portions 35₂ and 37₂, respectively, and these data and gear portions are disposed to form individual complete circumferences, respectively. Unlike these two rings, the month ring 36 comprises a data portion 36₁ and a gear portion each forming a half of a complete circle, as particularly shown in FIG. 5. Such formation of the three data rings 35 to 37 leads to the advantage such as a reduced total width of the data ring assembly and accordingly to the compactness of the camera.

Data 38 may be impressed on the side wall of each data ring, but it is also possible to attach a corresponding length of data film 39 to the side wall of the ring by wedging the opposite ends the film at 40 as shown in FIG. 5 so that the data 38 may be replaced with ease.

The shaft 33 has gears 41, 42 and 43 rotatably mounted thereon and engaging the gear portions 35₂, 36₂ and 37₂ of the data rings 35, 36 and 37, respectively. As shown, the gears 41 to 43 are partly projected outwardly of the camera body so that they may be op-

erated from the exterior of the camera. Data display rings 44, 45 and 46 are detachably secured to the gears 41, 42 and 43 respectively, and these rings carry thereon the same data as those on the data rings 35 to 37. The data on the display rings 44-46 are located so that they may be viewed from the exterior of the camera through a display window 47 (FIG. 8). The detachable connection between the gears 41-43 and the display rings 44-46 as shown in FIG. 4 facilitates the assemblage of the entire data illuminator unit with the data both on the respective data rings 35-37 and display rings 44-46 kept in coincidence with each other.

The data to be photographed may be readily changed simply by rotating the gears 41-43 while viewing the data appearing at the display window 47 provided in the front wall of the camera, as shown in FIG. 8. The window 47 may alternatively be formed in the rear wall of the camera.

As shown in FIG. 4, an illuminator lamp L is disposed within the hollow shaft 32, and there is further provided an optical system 49-52 comprising a combination of prism, mirror and lenses for directing the data illuminated by the lamp L to the photographing film.

The optical system may be made compact by disposing a mirror 52 between two lenses 50 and 51 in the manner as shown in FIG. 6. A mask 53 may be provided closely adjacent to the data rings 35-37 so as to prevent any lamp light from leaking through the gaps between adjoining data rings.

Thus, when the lamp L is turned on in response to a shutter release, those of the data on the respective data rings 35, 36 and 37 which are then confronting the slit 34 of the shaft 32 may be illuminated by the lamp and the images thereof are directed through the optical system 49-52 so as to be formed on a side edge of the photographing film.

In the embodiment described just above, the data rings and associated display rings are disposed in the space between the light-proof frame and the film chamber within the camera body in such a manner that the axes of these rings are parallel to the length of the photographing film, and the data rings surround the illuminator lamp while the display rings are disposed so as to be operable exteriorly of the camera. This arrangement permits the width of the data ring assembly to be considerably smaller than the outer diameter thereof, as compared with the previous embodiment wherein the data rings are disposed with their axes parallel to the width of the photographing film, and this in turn leads to a reduced thickness of the camera body and accordingly to the compactness of the entire camera.

FIGS. 9 to 11 show a further embodiment of the present invention in which transparent data rings and operating rings for operating these data rings exteriorly of the camera are all rotatably mounted around the body tube of the camera.

In FIG. 10, there are seen a camera body 61, a pressurized plate 62, a film chamber 63, a light-proof frame 64, a body tube 65 for supporting a lens L₀, and transparent data rings 67₁-67₃ rotatably mounted around the body tube 65. It should be noted that data A to be photographed are provided on the inner wall surface of the data rings as shown in FIG. 11. Operating rings 68₁-68₃ for operating the respective data rings 67₁-67₃ exteriorly of the camera carry display data A' on the outer wall surface thereof, the display data A' corre-

sponding to the data A on the data rings 67₁-67₃ respectively. As seen in FIG. 11, each data ring 67 and each operating ring 68 may be provided by forming a transparent ring member 69 into two concentric inner and outer rings integrally connected together at a connecting portion 69₁ with a discontinuous annular groove 70 defined therebetween, so that the inner and outer rings may provide the data ring 67 and the operating ring 68 respectively. Alternatively, the data and operating rings 67 and 68 may be formed of separate members, and in this case the operating members 68 need not be of transparent material. An illuminator lamp L is disposed in the groove 70 and secured to the camera body, and as shown in FIG. 9, the lamp L may be turned on for a predetermined length of time in response to a shutter release. An optical system for forming the images of data on the surface of a photographing film (not shown) is provided by a prism 72 (FIG. 14) and a photographing lens 73. In the light path of the optical system there is provided a light-leakage preventive member 74 adapted to open and close in response to a shutter release. Coaxially and coextensively with the data rings, there is mounted a fixed ring 75 having a reference mark 76 provided on the outer wall surface thereof (FIG. 10).

In operation, the illuminator lamp circuit is closed in response to a shutter release to thereby turn on the lamp L while opening the light-leakage preventive member 74. Thus, those of the data on the data rings which are then confronting the slit 77 are illuminated by the lamp L and their images are formed through the optical system 72-73 on the photographing film at one side edge thereof. If the data to be photographed are to be changed, the operating rings 68 may be manually rotated so as to register any desired data thereon with the reference mark 76 on the fixed ring 75.

FIG. 12 illustrates a modification of the FIG. 10 data illuminator unit, in which the illuminator lamp L is disposed in the space between the film chamber 63 and the light-proof frame 64 so that data on the data rings 67 may be illuminated through a reflective surface provided over the outer surfaces of the data rings.

FIG. 13 shows a further modification of the data illuminator unit in which discrete reflective surfaces 78 are formed on the respective data rings 67₁, 67₂ and 67₃ representing days, months and years, so that the data on the respective data rings 67₁-67₃ may be uniformly illuminated.

The illuminator lamp circuit will now be described with reference to FIG. 9. A capacitor C and a resistor R3 are provided as time constant elements, R3 being a variable resistor whose resistance value is variable in accordance with the selected film sensitivity. Also provided are a main switch S1 and a normally open switch S2 which is adapted to close just prior to the shutter release in response to the depression of a shutter button 71. A switch S3 is adapted to open in response to the shutter release but it is normally closed during film winding operation. The shutter button 71 has a pin 71' adapted to engage a release lever 8 outwardly extending from a shutter driving ring 80 to thereby release the shutter. The shutter driving ring 80 has a shutter charge lever 82 outwardly extending therefrom and is rotatable so that the charge lever 82 comes through a final charge position as indicated by imaginary lines 82' to a maximum charge position as indicated by imaginary lines 82''. The shutter charge lever 82 can return from

the position 82'' to the position 82' in response to the movement of an unshown film winding lever. The shutter button 71 is provided with an adjust screw for adjusting the closing position of the switch S2. Transistors T1 and T2 and power source E are provided in the manner as shown.

In operation, when the shutter is charged, the driving ring 80 is rotated in the direction indicated by arrow a until the charge lever 82 comes to the position 82'', whereafter the ring 80 is rotated back to stop the charge lever at the position 82'. At this time the switch S3 is closed. When the shutter button 71 is depressed to effect photographing, the switch S2 is closed just before the shutter is released, thereby allowing the capacitor C to be charged through the resistor R1. When the shutter is then closed, the switch S3 is opened by the charge lever 82 which has been moved from the position 82' to the solid-line position, thereby stopping the charge to the capacitor C. The switch S1 is preadjusted by means of the adjust screw 13 so that the described switching cycle may range from approximately 10 to 20 milli-seconds.

Upon stoppage of the charge to the capacitor C, the capacitor discharges through the base-emitter of the transistor T1, and until the transistor T1 is rendered non-conductive after a length of time determined by the time constant of the time constant circuit C-R, the transistor T2 remains conductive to turn on the lamp L. If it is desired to vary the lighting-up time of the lamp L in accordance with the film sensitivity, the variable resistor 3 may be adjusted to vary the time constant of C-R.

We claim:

1. A camera provided with a device for photographing the date of photo-taking comprising:
 - data rings of transparent material carrying indicia thereon,
 - display rings connected to said data rings for operating them exteriorly of said camera, said display rings carrying thereon indicia identical with those on said data rings to enable an operator to observe them exteriorly of said camera,
 - said camera having a lens tube and said data rings and said display rings being rotatably mounted around said lens tube, said data rings carrying indicia on the inner wall surfaces thereof,
 - a lamp for illuminating said indicia on said data rings,
 - an optical system for directing the images of said indicia on said data rings illuminated by said lamp to a part of a focal plane of an objective lens,
 - a slit provided between said data rings and said optical system for directing a selected set of said indicia to said optical system,
 - a shutter mechanism, and
 - a time control device actuated by releasing said shutter for turning said lamp on for a predetermined length of time.
2. A camera as defined in claim 1, wherein said lamp is interposed between said data rings and said display rings so as to illuminate said indicia on said data rings from the exterior thereof.
3. A camera as defined in claim 1, wherein said data rings have their outer wall surfaces serving as reflective surfaces of a prism for directing light from said lamp to said indicia.

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4. A camera provided with a device for photographing the data of photo-taking comprising:
 data rings of transparent material carrying indicia thereon,
 said camera having a film chamber and a light-proof frame, said data rings being disposed between the film chamber and the light-proof frame,
 display rings connected to said data rings for operating them exteriorly of said camera, said display rings carrying thereon indicia identical with those on said data rings to enable an operator to observe them exteriorly of said camera,
 a lamp for illuminating said indicia on said data rings,
 an optical system for directing the images of said indicia on said data rings illuminated by said lamp to a part of a focal plane of an objective lens,
 a slit provided between said data rings and said optical system for directing a selected set of said indicia to said optical system,
 a shutter mechanism, and
 a time control device actuated by releasing said shutter for turning said lamp on for a predetermined length of time, said time control device being adjustable in accordance with the sensitivity of a film used in said camera, and having a main switch for preparing said camera for data photographing,
 a data field display member capable of shifting from and into a field of a finder of said camera, said data field display member shifting in response to the closing and opening of said main switch, thereby indicating whether data photographing can be effected or not.
5. A camera as defined in claim 4, wherein said time control device is adjustable in accordance with the sensitivity of a film used in said camera.
6. A camera as defined in claim 4, wherein said time control device comprises a time constant circuit actuated by a start switch which in turn is short-circuited in association with releasing of said shutter.
7. A camera as defined in claim 4, wherein said data rings have their outer wall surfaces wrapped with films having printed indicia thereon.
8. A camera as defined in claim 4, wherein said lamp is disposed within said data rings, and said data rings and said display rings are in engagement with each

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other by means of gears provided along the outer circumferences thereof, both of said rings having their axes of rotation disposed parallel to the length of the film charged in said camera.

9. A camera as defined in claim 4, wherein each of said data rings has its entire circumference comprising a data carrier portion and a gear portion, said data carrier portion being wrapped with a film having printed indicia thereon, said film being secured to said data carrier portion by wedging the opposite ends of the film into recesses provided by said gear portion.

10. A camera provided with a device for photographing the date of photo-taking comprising:

data rings of transparent material carrying indicia thereon,

said camera having a film chamber and a light-proof frame, said data rings being disposed between the film chamber and the light-proof frame,

display rings connected to said data rings for operating them exteriorly of said camera, and carrying thereon indicia identical with those on said data rings, said display ring being disposed at the bottom of said camera and said indicia being observed from the front of said camera,

a lamp for illuminating said indicia on said data rings,

an optical system for directing the images of said indicia on said data rings illuminated by said lamp to a part of a focal plane of an objective lens,

a slit provided between said data rings and said optical system for directing a selected set of said indicia to said optical system,

a shutter mechanism, and

a time control device actuated by releasing said shutter for turning said lamp on for a predetermined length of time, said time control device being adjustable in accordance with the sensitivity of a film used in said camera, and having a main switch for preparing said camera for data photographing,

a data field display member capable of shifting from and into a field of a finder of said camera, said data field display member shifting in response to the closing and opening of said main switch, thereby indicating whether data photographing can be effected or not.

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