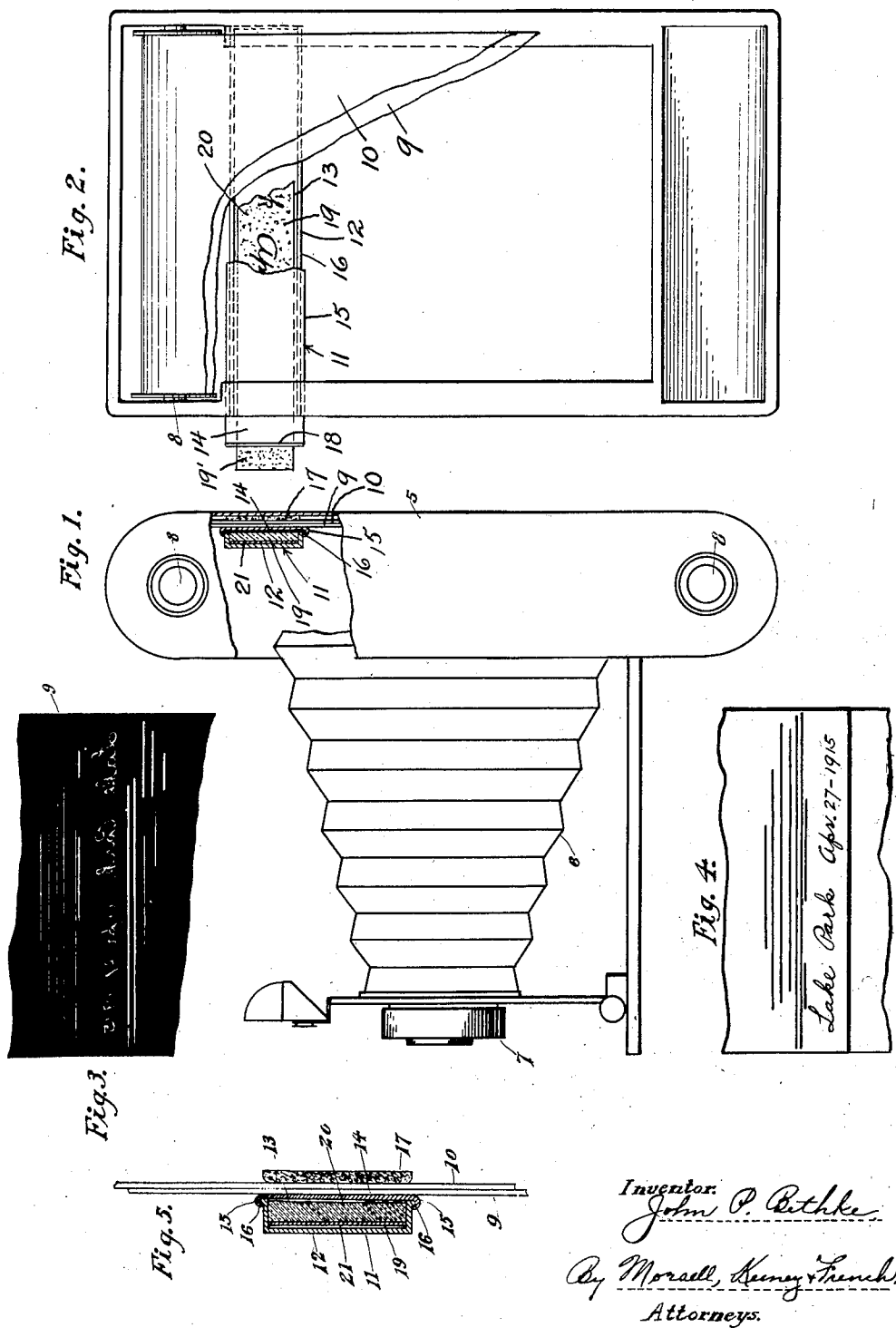


J. P. BETHKE.
 SENSITIVE MATERIAL MARKING DEVICE.
 APPLICATION FILED MAY 10, 1915.

1,374,875.

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UNITED STATES PATENT OFFICE.

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SENSITIVE-MATERIAL-MARKING DEVICE.

1,374,875.

Specification of Letters Patent. Patented Apr. 12, 1921.

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To all whom it may concern:

Be it known that I, JOHN P. BETHKE, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Sensitive-Material-Marking Devices, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to improvements in sensitive material marking devices.

In cameras now on the market which are provided with sensitive material marking devices it is necessary to provide special film rolls having extra rolls of prepared paper and to use special pencils in marking the portions of the film or sensitive material.

As only three or four inches of the five foot lengths of film are actually used for writing it will be seen that the greater part of the prepared paper is wasted.

It is one of the objects of the present invention to overcome the before mentioned objectionable features and provide a sensitive material marking device which may be used in connection with the ordinary photographic film rolls without requiring any special preparation thereof.

A further object of the invention is to provide a sensitive material marking device in which a phosphorescent or luminous material is utilized for printing writing directly upon the film while the film is in the camera.

A further object of the invention is to provide a sensitive material marking device in which the writing, when printed from the negative, is in dark lines upon a light surface.

A further object of the invention is to provide a sensitive material marking device which may be easily attached to cameras now on the market.

A further object of the invention is to provide a sensitive material marking device which is of simple construction, is strong and durable and is well adapted for the purpose desired.

With the above and other objects in view the invention consists of the improved sensitive material marking device and its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawing in which

the same reference characters indicate the same parts in all of the views:

Figure 1 is a side view of a camera provided with the improved sensitive material marking device, portions of the camera being broken away to show interior construction;

Fig. 2 is a rear view of a portion thereof, parts broken away to show interior construction and portions of the device being shown as partly withdrawn from the camera;

Fig. 3 is a side view of a piece of developed film or negative made with the improved device;

Fig. 4 is a side view of a portion of a print made from the improved negative; and

Fig. 5 is an enlarged transverse sectional detail view of the device shown in connection with a portion of the film.

Referring to the drawing the numeral 5 indicates the camera case of an ordinary folding camera, 6 the bellows, 7 the lens casing, 8 the spools, and 9 the sensitive material film or negative sheet which is unrolled from one spool and wound on the other. The spools are also provided with a protecting roll of black paper 10 which is mounted on the spools and moves with the film on the outer side thereof. The sensitive material or film marking device 11 consists of an elongated box or casing 12 having an open side 13 covered by a slidable cover 14. The cover has its side edge portions 15 bent over to engage the flanged side edge portions 16 of the box and form a light proof closure therefor.

The elongated box is mounted within the lower portion of the camera casing and extends transversely across and adjacent to the inner face of the rear wall of the camera casing, with the side opening facing the rear wall of the camera casing. The sensitized film 9 and its backing of black paper 10 travel between the box 12 and the rear wall of the camera casing, and a bed of material 17 mounted on the rear camera wall adjacent the box serves to cause the film to travel closely to the cover of the box. One end of the cover 14 of the box projects through one side portion of the camera case and is provided with a bent end portion 18 so that said cover may be easily engaged and pulled outwardly to open the box.

Within the box is positioned an elongated

piece of transparent or translucent material 19 which may be written upon as indicated in Fig. 2 with a lead pencil or other marking device. Preferably I use a strip of glass 5 having its outer face 20 ground or frosted as indicated in Fig. 2 to permit writing thereon with an ordinary lead pencil, and which writing may be easily removed with a rubber eraser. While I preferably use 10 ground glass the same results may be obtained by the use of celluloid or other like material.

The inner face of the glass is coated with a luminous paint 21 or other material which 15 will give or radiate light and act upon the sensitized film or material when within the box and the box cover is in open position.

The elongated writing strip, or in substance a positive, occupies substantially the 20 entire space within the box and one end 19' projects from the same side of the camera casing as the box cover and may be pulled outwardly from the box and the casing as indicated in Fig. 2.

25 While no special means have been shown or described for forming light proof joints between the camera casing and the slidable box cover and writing medium it is to be understood that all joints may be made 30 light proof in any manner desired.

In operation the picture is taken in the ordinary manner and as the lower portion of the film is covered by the marking device the said portion will not be exposed. After the 35 picture has been taken the ground glass or positive is withdrawn from the side of the camera casing a sufficient distance to permit the user to write the name and date or other data upon the ground surface of the glass 40 or other material with an ordinary lead pencil and while writing, the luminous paint on the opposite side of the glass will be exposed to and absorb light. When the writing is completed the positive is pushed into 45 the camera casing again and the box cover is pulled out a sufficient distance to uncover the writing for two or three seconds. While the cover is in open position the light from the luminous paint will shine through the glass 50 and upon the portion of the film in front of the glass which is not covered by the writing. This exposure will, after the film is developed, reproduce the writing in transparent lines on a dark back ground as shown in 55 Fig. 3 and in printing from the film or negative the writing will be reproduced in positive form or black upon a white back ground as shown in Fig. 4.

While the invention for convenience is 60 illustrated and described in the manner shown, it is to be understood that the construction may be modified in many ways without departing from the spirit and scope of the invention.

65 From the foregoing description it will be

seen that the invention is of very simple construction and is well adapted for the purpose described.

What I claim as my invention is:

1. The combination with a camera, of a 70 sensitive material marking device therefor, comprising a medium positioned adjacent to the sensitive material in the camera and having a writing surface and a luminous portion, said writing surface being interposed 75 between the sensitive material and the luminous portion, and means for controlling the exposure of the sensitive material to the action of rays emanating from the luminous portion of said medium. 80

2. The combination with a camera, of a sensitive material marking device therefor, comprising a medium positioned within the camera and adjacent to the sensitive material in the camera and having a writing 85 surface and a luminous portion, said writing surface being interposed between the sensitive material and the luminous portion, and means for controlling the exposure of the sensitive material to the action of rays emanating from the luminous portion of said medium. 90

3. The combination with a camera, of a sensitive material marking device therefor, comprising an inclosing casing within the camera and having an open side with a movable cover, said casing having its open side 95 facing the sensitive material, and a removable medium positioned within the casing and having a writing surface and luminous portion for reproducing the writing on the medium upon the sensitive material within the camera, the writing surface being interposed between the luminous material and the sensitive material. 100

4. The combination with a camera, of a sensitive material marking device therefor, comprising a member removably positioned within the camera and adjacent to the sensitized face of the sensitive material and 11 having a luminous portion and a surface adapted to have characters written thereon, and means for controlling the exposure of the portion of the sensitive material adjacent the removable member, while said member is within the camera, to the action of rays of light other than the rays passing through the lens proper of the camera for reproducing on the sensitive material the characters written upon the member. 12

5. The combination with a camera, of a sensitive material marking device therefor, comprising a member removably positioned within the camera and adjacent to the sensitized face of the sensitive material and having a luminous portion and surface adapted to have characters written thereon while said member is withdrawn from the camera, and means for controlling the exposure of the writing surface, while within the camera, 13

and the sensitive material adjacent thereto to rays of light, other than the rays passing through the lens proper of the camera, emanating from a source of supply to reproduce on the negative the characters written upon the member.

6. The combination with a camera, of a sensitive material marking device therefor, comprising a casing within the camera having an open side adjacent to the face of the sensitive material, a cover for said open side which may be withdrawn through the camera to open position, a member within the casing and removable therefrom through the camera, said member having a luminous portion and a surface between the luminous portion and the sensitive material which may be written upon when withdrawn from the casing and also having a luminous portion the rays of light of which will cause a change in the sensitive material and reproduce thereon the written characters on the member when said member is within the casing and the cover thereof has been moved to open position for a predetermined length of time.

7. The combination with a camera, of a sensitive material marking device therefor, comprising a casing within the camera having an open side adjacent to the face of the sensitive material, a cover for said open side which may be withdrawn through the camera to open position, a member within the casing and removable therefrom through the camera, said member having a surface on one side which may be written upon when withdrawn from the casing and also having a luminous coating upon its opposite side the rays of light of which will shine through the member and cause a change in the sensitive material and reproduce thereon the written characters on the member when said member is within the casing and the cover thereof has been moved to open position for a predetermined length of time.

8. A sensitive material marking device, comprising a casing having an open side and a cover, and a writing member within the casing and having a writing surface and a luminous portion, the writing surface facing the open side of the casing.

9. A sensitive material marking device, comprising a casing having an open side and a slidable cover therefor, and a combined writing and printing member within the casing and having a writing surface and another surface provided with a luminous material, the writing surface facing the open side of the casing.

10. A sensitive material marking device, comprising a box like casing having an open side and a slidable cover therefor, and a strip of glass having one of its sides ground and a coating of luminous material upon

another side, the ground side of the glass facing the open side of the casing.

11. The combination with a camera, of a sensitive material marking device therefor, comprising a member positioned adjacent to the sensitive material in the camera and provided with a writing surface, a luminous means positioned adjacent to the member the rays of light of which will cause a change in the sensitive material and reproduce thereon the characters written on the surface of the member interposed between the luminous means and the sensitive material, and means controlling the exposure of the sensitive material to the light rays of the luminous means.

12. A sensitive material marking device, comprising a casing having an open side and a movable cover; a member within the casing and provided with a writing surface facing the open side of the casing, and a luminous means positioned within the casing and between the writing surface member and the casing.

13. The combination with a camera, of a sensitive material marking device therefor, comprising means within the camera for confining a portion of the sensitive material from the rays of light admitted through the lens of the camera, other means for emitting and exposing the confined portion of the sensitive material to rays of light, and a writing surface member movable to a position to permit writing on the surface thereof and also movable to a position within the casing of the camera and adjacent to the sensitive material to have writing thereon intercept the rays of light from the light-emitting means to which the confined portion of the sensitive material is exposed.

14. The combination of a container for sensitized sheets and means for marking a contained sensitized sheet with desired data, said means comprising a member having a data-receiving position and a data-imparting position and adapted to be written on when in receiving position by the operator and adapted when in imparting position to affect said sensitized sheet, said member being provided with a medium which, when said member is in data-receiving position, will store potential radiant energy to be later used to produce luminosity when in imparting position.

15. The combination with a camera having a sensitized element therein, of a luminous composition element mounted within said camera, and means for holding the same in operative relationship with said sensitized element to expose the latter to said luminous composition element, the combination including an element provided with a surface for the reception of opaque charac-

ters for intercepting certain rays of light from said luminous composition element to said sensitized element to autograph the latter.

5 16. The combination with a camera having a sensitized element therein, of a luminous composition element mounted within said camera, means for holding the same in operative relationship with said sensitized
10 element to expose the latter to said luminous composition element, said luminous element including a light transmitting element adapted for the reception of opaque characters to block the transmission of certain of
15 the emitted rays of light to said sensitized element.

17. The combination with a camera having a sensitized element therein, of a luminous composition element removably mounted
20 within said camera, and means for holding the same in operative relationship with said sensitized element to expose the latter to said luminous composition element, the combination including an element provided
25 with a surface for the reception of opaque characters for intercepting certain rays of light from said luminous composition element to said sensitized element to autograph the latter.

30 18. The combination with a camera having a sensitized element therein, of a support within said camera provided with an opening adjacent said sensitized element, and a luminous element removably mounted
35 in said support opposite the position of said opening so as to expose said sensitized element to said luminous element.

19. The combination with a camera provided with a sensitized element therein, of
40 a support within said camera provided with an opening adjacent said sensitized element, a luminous element removably mounted in said support at the side thereof having said opening to expose said sensitized element to
45 said luminous element, and a removable slide for preventing such exposure.

20. As an article of manufacture, for use in a camera, a carrier containing a luminous substance, said carrier being provided with
50 a light transmitting surface adapted for the reception of erasable opaque characters to block the transmission of certain rays of light from said luminous substance.

21. In an autographic camera, the combination with a camera having a sensitized
55 element therein and an opening in one of its walls adjacent said element, of a luminous element, and means permitting of the projection of the luminous element through

said opening directly into printing position adjacent said sensitized element. 60

22. In an autographic camera, the combination, with a camera having a sensitized element therein and an opening in one of its walls adjacent said element, of supporting
65 guide means, and a luminous element slidably mounted in said opening and upon said guide means and movable into and out of printing position adjacent said sensitized element. 70

23. In an autographic camera, the combination, with a camera having a sensitized element therein and an opening in one of the walls of the camera in line with the space in the camera in front of the sensitized element, of a luminous element slidably mounted in said opening and movable
75 directly into printing position in said space to expose said sensitized element to said luminous element, and means for guiding
80 said luminous element into and out of printing position.

24. In an autographic camera, the combination, with a camera having a sensitized
85 element therein and an opening in one of its walls in a plane parallel to the plane of the sensitized element and adjacent thereto, of a guide means, and a slide having a translucent writing surface adapted to be disposed adjacent the sensitized element and
90 a luminous surface behind said translucent surface to expose said sensitized element to the data upon said writing surface, said slide being movable in said opening and upon said guide means into and out of printing position. 95

25. The combination with a camera having a sensitized element therein, of a support within said camera, and a luminous inscription bearing element movable in said
100 support into a position to expose said sensitized element to said luminous element.

26. The combination with a camera having a sensitized element therein, of a support within said camera, and a luminous inscription bearing element movable relatively
105 to said support into a position to expose said sensitized element to the luminosity of said luminous element.

27. In a camera having a sensitized element therein, the combination with a supporting guide, of a luminous inscription bearing member movable relatively to said
110 guide, to be brought into and out of cooperative relation with respect to the sensitized element aforesaid. 115

In testimony whereof, I affix my signature.
JOHN P. BETHKE.