

H. J. GAISMAN,
PHOTOGRAPHIC CAMERA.
APPLICATION FILED APR. 3, 1914.

1,184,941.

Patented May 30, 1916.

3 SHEETS—SHEET 1.

Fig. 1

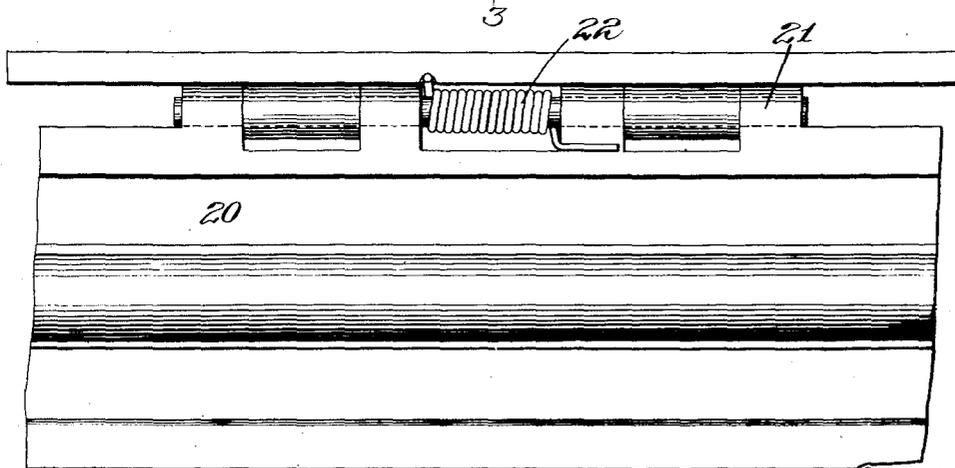
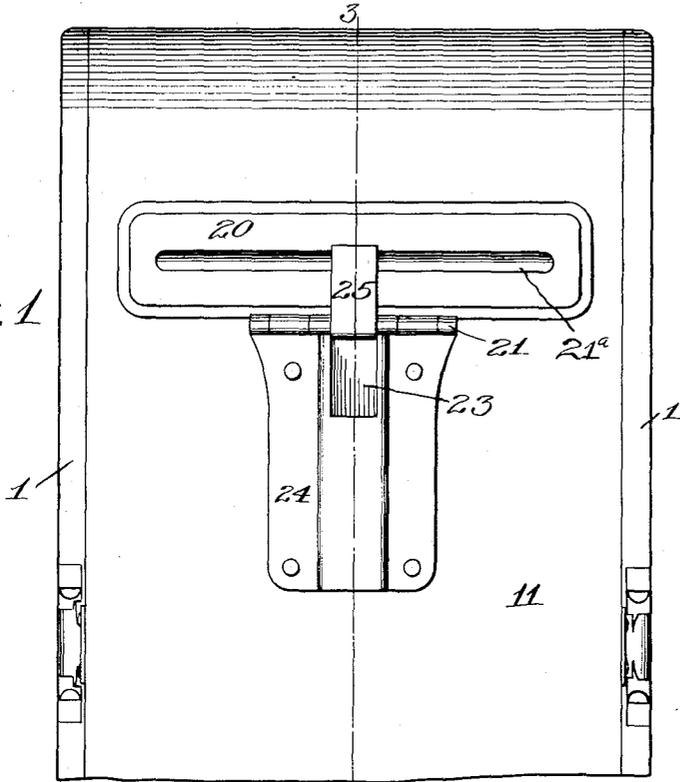


Fig. 2

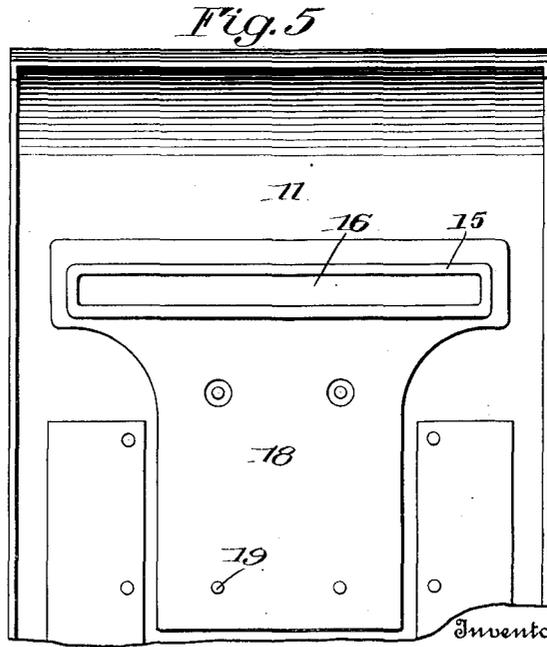
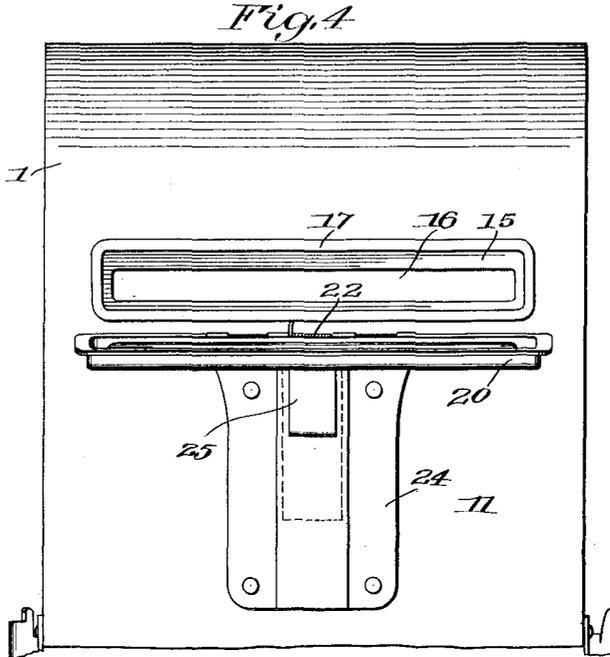
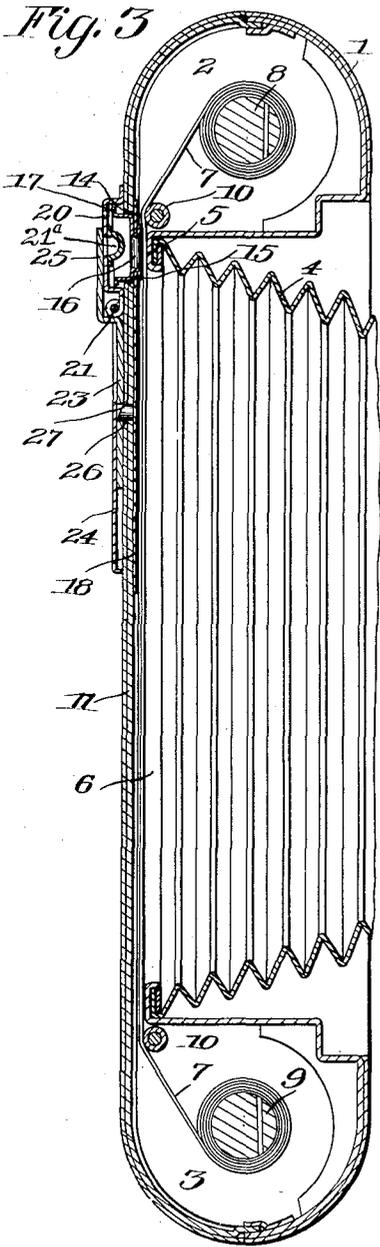
Witnesses

Ralph H. Raphael
Maria S. Fairright

By

Inventor
Henry J. Gaisman
T. D. Bourne
his Attorney

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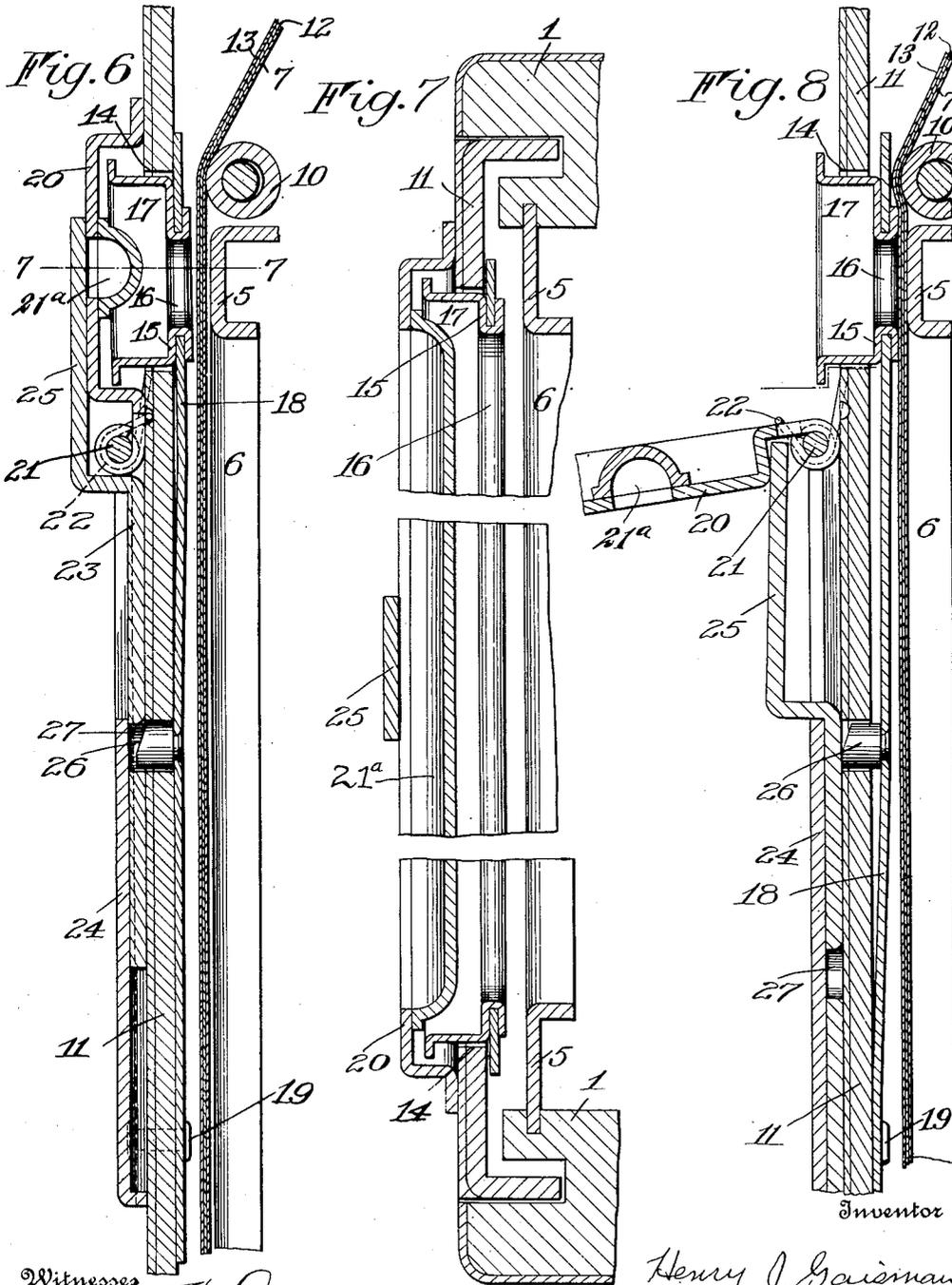


Witnesses
Ralph F. Fernald
Marie J. Wauwright

Henry J. Gaisman
By *T. F. Bourne*
his Attorney

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3 SHEETS—SHEET 3.



Witnesses
Salph H. Raphael
Marie J. Wainright

By

Inventor
Henry J. Gaisman
T. F. Bourne
his Attorney

ED STA S PA OFFICE.

HENRY J. GAISMAN, OF NEW YORK, N. Y., ASSIGNOR TO EASTMAN KODAK COMPANY,
OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

PHOTOGRAPHIC CAMERA.

1,184,941.

Specification of Letters Patent.

Patented May 30, 1916.

Application filed April 3, 1914. Serial No. 829,207.

To all whom it may concern:

Be it known that I, HENRY J. GAISMAN, of New York city, in the county and State of New York, have invented certain new and useful Improvements in Photographic Cameras; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to photography and more particularly to photographic cameras of a kind in which an opening is provided in the covering wall next adjacent to the sensitized surface or its support whereby indicia may be applied to the sensitized surface either by writing or by light exposure or similar means for the purpose of identifying various exposures.

The invention contemplates an improvement in roll holders and cameras of the general type mentioned, wherein the indicia are applied through the medium of a flexible sheet covering the sensitized surface and upon which covering sheet the writing is done and transmitted, photographically, through to the sensitized surface and it has for its object to provide such a camera with means whereby a stable writing surface is created and the sheet and sensitized surface are held firmly in register for the purpose of preventing the outline communicated to the sensitized surface from becoming blurred as a result of one element creeping upon the other while being inscribed, or subsequently.

A further object of the invention is to provide an arrangement whereby those portions of the sensitized surface surrounding the limited area that receives the marking and is exposed through the opening, may be masked off against possible exposure to actinic rays.

To these and other ends the invention consists of certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings: Figure 1 is a fragmentary rear elevation of a camera constructed in accordance with and illustrating one embodiment of my invention, the view showing in plan the cover for the opening in the back of the camera in closed position; Fig.

2 is an enlarged detail fragmentary view of the pintle arrangements of the cover, the latter being in open position; Fig. 3 is a longitudinal central section through the camera taken substantially on the line 3—3 of Fig. 1; Fig. 4 is a rear elevation of the camera back corresponding somewhat to Fig. 1 but showing the cover in open position; Fig. 5 is a fragmentary elevation of the interior of the back; Fig. 6 is a fragmentary enlargement of certain parts as shown in section in Fig. 3; Fig. 7 is an enlarged section taken substantially on the line 7—7 of Fig. 6, and Fig. 8 is a section corresponding to that of Fig. 6, but showing the cover for the exposure opening in open position.

Similar reference numerals in the several figures indicate the same parts.

My improvements are particularly adapted to roll holding or film cameras and such a camera of a well-known general design is illustrated in the drawings as comprising a body 1 having film winding and film feed chambers 2 and 3, respectively, at opposite ends thereof together with an intermediate bellows chamber 4, at the rear of which is the frame 5 defining the exposure opening 6 of the camera at the rear. The film supporting and feeding mechanism may be substantially the same as usual, the film strip 7 being wound onto the spool 8 from the spool 9 after passing over rollers 10 and the frame 5 past the exposure opening 6. The rear wall of the camera is constituted by a displaceable or separately removable back 11 spanning and covering that portion of the film strip which is in the focal plane.

In one construction of camera of the general type here concerned, the film strip 7 that passes next adjacent to exposure opening frame 5 is prepared with a co-extensive and superposed strip of carbon paper 12 (Fig. 6) upon which in turn is superposed a protective strip of paper or other suitable material 13 that is next adjacent to the back 11. The latter has an opening 14 therein opposite one side of the frame 5 so that by means of a stylus or other suitable implement inserted through this opening a writing or tracing may be made on the outer superposed strip at the margin of each exposure, the said strips being supported against the frame 5 during this operation. The carbon coating is displaced by the stylus along

the outline traveled and with a subsequent exposure to the light admitted through the opening 14 a negative reproduction of the outline is photographically transmitted through to and recorded upon the sensitized surface. In explanation of this process, it may be said that the protecting paper backing 13 and the carbon strip 12 taken together are sufficient to protect the sensitized surface from being exposed when light of ordinary intensity is admitted for a brief space of time, but the outer strip 13 is of such a nature that when the opacity of the carbon strip 12 beneath it is impaired, sufficient light will be transmitted to effect the sensitized material directly beneath.

In the practice of the present invention, I clamp down smoothly and securely that limited area of the sensitized material and its superposed coverings which is opposite the opening 14 through the operation of a clamping device which holds the three plies of material, 13, 12 and 7 that are within the boundaries of such area, and upon which the writing or marking is done, tightly pressed together against the relative movement that would ordinarily be provoked by the pressure and travel of the stylus. Thus a smooth, flat and immobile writing surface is created with the several contacting surfaces so held beneath the stylus that the trace of the latter upon one remains in perfect register with that upon the other and a clear cut print of the legend produced is inevitable. To these ends, I arrange in or at least opposite to the opening 14 a frame 15 having a limited movement into and out of contact with the strips 13, 12 and 7 and provided with a central aperture 16 through which the marking is done and the light transmitted, said frame being also preferably provided with a flanged collar 17 closely fitting the opening 14. The frame may be formed as part of a resilient plate 18 (Fig. 5) secured to the back 11 at a far point 19 from the frame 15 to allow the latter the limited movement aforesaid.

The openings 14 and 15 are normally closed by a door 20 hinged at 21 on a pintle having a spring 22 that seeks to raise the door to the open position of Fig. 8. The door is held closed by a sliding latch 23 guided in the cover plate 24 and having an offset engaging portion 25 that coöperates with the said cover as shown in Fig. 6 to hold it down or which may be withdrawn to the position of Fig. 8 allowing the cover to raise. When the latch is so withdrawn, a cam-face pin 26 on the frame-carrying resilient plate 18, which pin normally occupies a registering opening 27 in the latch, is depressed and by deflecting the plate 18, carries the frame 15 from a retracted position close against the back 6 to an extended position in which it bears upon the strips

13, 12 and 7 and holds them closely compressed against the frame 5. This not only flattens the writing surface as described above, but with a firm light-excluding pressure along the margins of the area that is to receive the indicia, it entirely and effectively prevents the light from being communicated beyond that area and the picture-receiving portions of the film can therefore not possibly be damaged as a result of the inscribing process that the otherwise blank separating strips between the successive exposures undergo. The said area alone is exposed to the light and adjacent portions of the sensitized surface surrounding such area are absolutely masked or protected and need not rely entirely for their protection upon the covering strips wound with the film. A depression or recess 21^a is preferably formed in the door 20 to receive a removable stylus that is held in position when the door is held closed, by the latch 21. It will be noted that this safety frame 15 is normally held out of contact with the strips so that it cannot possibly interfere with or injure them during their usual manipulation, but said frame is at the same time instantly and automatically rendered effective when the cover 20 is released or opened for any purpose whatever.

It is obvious that the present improvement may be utilized in connection with any method of marking the sensitized surface in the general manner outlined, that is, through an opening in the covering wall and the invention as herein described in a particular embodiment in which association is shown with a roll-holding or film camera is applicable to film holders generally whether separate from a camera or built in as a part of the general construction thereof.

While I have referred to the strip 12 as of carbon paper, it will be understood that my invention contemplates the use for the same purpose, of any other suitable strip having a suitable displacement or transferable surface or character whereby, after writing or marking upon or against the same, light may pass through the marked or written against portions of the strip to photographically affect the sensitized element correspondingly.

It will be understood that while I have illustrated a protecting strip 13 over the strip 12, yet the strip 13 may be dispensed with when the strip 12 is of itself sufficiently opaque to stop light passing therethrough until portions thereof or of its displaceable surface have been displaced or rendered less opaque by reason of the marking thereagainst.

I prefer in practice that the carbon coating on the strip 12 be arranged on the outer side or next to the strip 13, in order to prevent carbon particles from being pressed

on the film and thereby find their way into the developing solution, but it will be understood that this specific arrangement is not necessary to the practice of my invention.

I claim as my invention:

1. In a photographic camera adapted to hold sensitized material, and a flexible protective sheet superposed thereon the combination with a covering wall provided with an opening through which a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia transmitted through the covering sheet, of a frame arranged to surround the said limited area of the sensitized material and adapted to clamp the latter and the covering sheet together in intimate contact along the margins of the area.

2. In a photographic camera adapted to hold sensitized material, and a flexible protective sheet superposed thereon the combination with a covering wall provided with an opening through which a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia transmitted through the covering sheet, of a member on the covering wall arranged to engage with the protective sheet and to clamp the latter in intimate contact with the sensitized material along the margins of the said limited area thereof, and a rigid support beneath the sensitized surface.

3. In a photographic camera, the combination with a support for the sensitized material and a displaceable camera back constituting a covering wall for the latter and provided with an opening through which a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia, of a member on the back normally held in a retracted position in which it is withdrawn away from sensitized material on the support but adapted to be extended from the back to an operative position toward such material to act as means for clamping it against its support.

4. In a photographic camera, the combination with a support for the sensitized material and a covering wall for the latter provided with an opening through a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia, of a member on the covering wall normally held in a retracted position in which it is withdrawn away from sensitized material on the support but adapted to be extended from the back to an operative position toward such material to act as a means for clamping it against its support, means for sealing the opening in the covering wall and means under the control of said last mentioned means

for automatically actuating the clamping device to an operative position when the sealing means is in inoperative position.

5. In a photographic camera, the combination with a support for the sensitized material and a covering wall for the latter provided with an opening through which a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia, of a member on the covering wall normally held in a retracted position in which it is withdrawn away from sensitized material on the support but adapted to be extended from the back to an operative position toward such material to act as a means for clamping it against its support, means for sealing the opening in the covering wall, comprising a closure and a latch for holding it in closed position and means for automatically actuating the clamping device to an operative position when the latch is withdrawn from the closure.

6. A holder for film embodying a casing having an aperture therein, a clamping member surrounding the aperture and movable toward the film, a cover for the aperture and connections between said cover and the member for moving the latter toward the film when the cover is removed.

7. A holder for film embodying a casing having an aperture, a film support beneath the aperture, a clamping member surrounding the aperture and movable toward and from the film and support, a cover for said aperture and connections for operating the member to engage the film when the cover is removed.

8. A holder for film embodying the casing having an aperture, a film support beneath the aperture, a clamping frame surrounding the aperture and automatically movable away from the film, a cover for the aperture, means for securing the cover and connections between the cover securing means and the frame for moving the latter toward the film when the cover securing means is released.

9. A holder for film, embodying a casing having an aperture, a frame surrounding the aperture and a spring for operating it away from the film, an automatically removable cover for the aperture, a locking device for the cover and connections between the locking device and frame for operating the frame toward the film when the cover is unlocked.

10. In a photographic camera, the combination with a support for the sensitized material and a covering wall therefor provided with an opening through which a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia, of means mounted on said covering wall and movable at the will

of the operator toward and from the sensitized material for masking off portions of the sensitized material adjacent to said limited area from exposure to actinic light admitted through the opening.

11. In a photographic camera, the combination with a support for the sensitized material and a covering wall therefor provided with an opening through which a limited area of the sensitized material is made accessible from the exterior of the camera for the application of indicia, of means arranged to exert light excluding pressure continuously along the margin of said area to mask off portions of the sensitized material adjacent to said limited area from exposure to actinic light admitted through the opening and means operable from the exterior of the holder for applying and removing pressure at will.

12. A holder for photographic film embodying a casing having an aperture therein, a rigid support beneath the aperture, a removable cover for the aperture and means for clamping the film to prevent movement thereof when the cover is removed.

13. A holder for photographic film embodying a casing having an aperture therein, a rigid support beneath the aperture, a spring arm secured to the casing and adapted at its free end to engage and clamp the film and a movable slide on the casing cooperating with the arm to cause it to clamp the film.

14. A holder for photographic film embodying a casing having an aperture and a support beneath the aperture, a resilient plate, a frame secured to the free end of the latter extending through the aperture, and a cover for the aperture.

15. A holder for photographic film embodying a casing having an aperture, a hinged cover for the aperture having a recess in its outer side and a movable arm for securing the cover and adapted to extend over the recess.

16. A holder for photographic film embodying a casing having an aperture therein, a movable frame located in the aperture, and a cover for the aperture pivoted to the casing and recessed in its inner side to receive the frame when in position over the aperture.

17. A holder for photographic film embodying a casing having an aperture, a spring arm secured at one end to the casing, a frame extending through the aperture and secured to the free end of the arm and a cover for closing the aperture and recessed at the inner side to receive the frame when the cover is closed.

Signed at New York city, in the county of New York, and State of New York, this 2nd day of April, A. D. 1914.

HENRY J. GAISMAN.

Witnesses:

T. F. BOURNE,
MARIE F. WAINWRIGHT.