

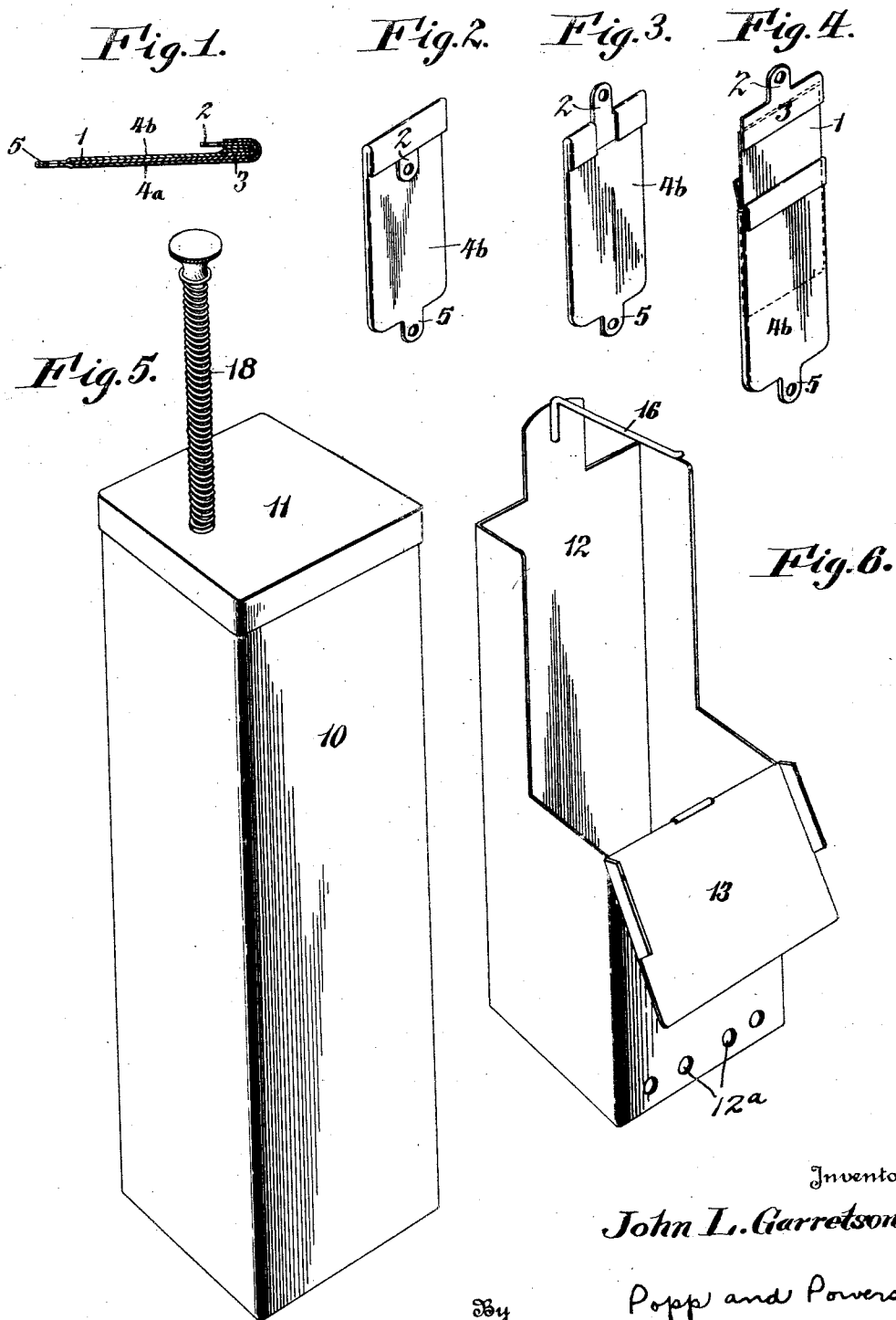
June 24, 1930.

J. L. GARRETSON  
PHOTOGRAPHIC FILM PACKAGE

1,767,972

Filed March 23, 1929

2 Sheets-Sheet 1



Inventor  
*John L. Garretson*

By

*Popp and Powers*

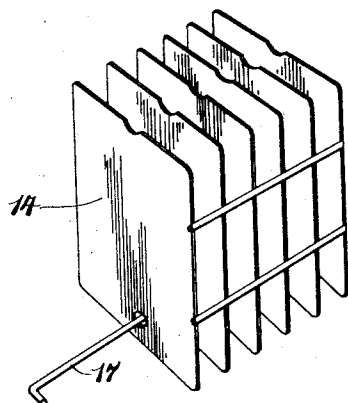
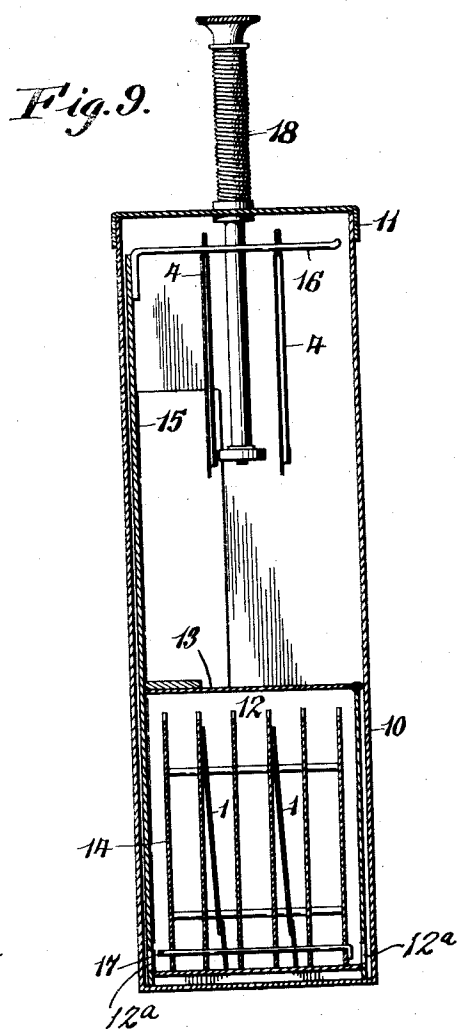
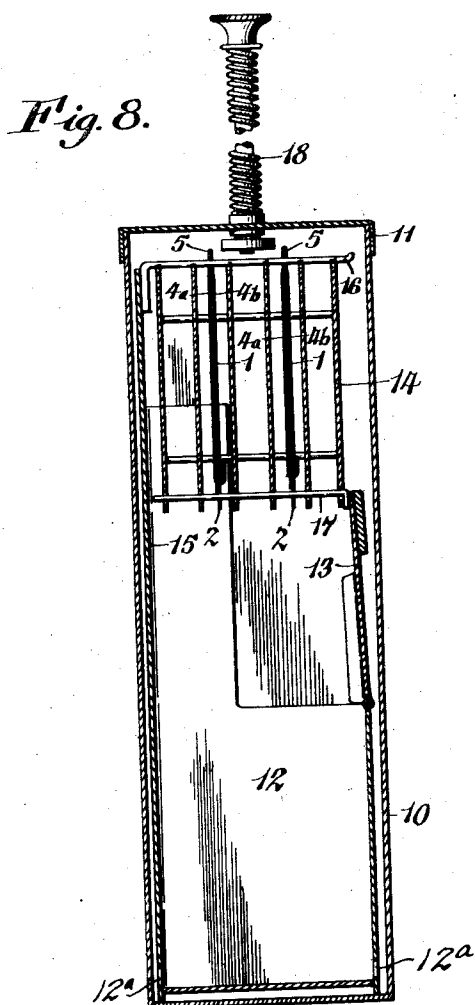
Attorney

June 24, 1930.

J. L. GARRETSON  
 PHOTOGRAPHIC FILM PACKAGE  
 Filed March 23, 1929

1,767,972

2 Sheets-Sheet 2



334

Inventor  
*John L. Garretson*  
 Popp and Powers  
 Attorneys

## UNITED STATES PATENT OFFICE

JOHN L. GARRETSON, OF BUFFALO, NEW YORK

## PHOTOGRAPHIC-FILM PACKAGE

Application filed March 23, 1929. Serial No. 349,365.

This invention relates to improvements in the construction of photographic film packages having particular reference to film packages of the type intended for X-ray use. X-ray photographic elements or films, as now manufactured, are individually packed in separate containers or envelopes by which they are protected against exposure to light. In making X-ray photographs, the photographic elements are left in their containers while the photographs are being taken and removed therefrom only when they are to be developed. The construction of the film package ordinarily is such as to require the envelope to be torn away manually in order to remove the element. Since the element must be protected against exposure to light, its removal in this manner necessitates the use of a dark room.

The principal object of this invention is to provide a construction in which the container is arranged to afford full protection to the photographic element contained therein while readily permitting the endwise withdrawal of the element from the envelope.

Another object is to provide a construction in which the element is connected to an external member which may be readily engaged, either manually or mechanically, to effect the withdrawal of the element.

A further object is to provide a construction which is particularly adapted for use in connection with the daylight developing apparatus described and claimed in my co-pending application, Serial Number 349,364, filed March 23, 1929. In this apparatus a photographic element is mechanically removed from its container and transferred to a receptacle in which it may be subjected to the various baths of the developing process, the arrangement being such as to protect the element at all times against exposure to light.

An embodiment of the invention is illustrated in the accompanying drawings wherein:

Figure 1 is a longitudinal section of the package.

Figure 2 is a perspective of the same.

Figure 3 is a similar perspective showing

the package when arranged to permit the withdrawal of the photographic element.

Figure 4 is a similar perspective showing the element partly withdrawn.

Figure 5 is a perspective of a suitable tank which forms a part of the developing apparatus.

Figure 6 is a perspective of the casing with its hinged door swung open.

Figure 7 is a perspective of the carriage frame.

Figures 8 and 9 are sectional views respectively showing the apparatus as it appears immediately before and after the mechanical withdrawal of the element.

In accordance with the invention, the photographic element 1 of a film package is provided with a tab 2 which projects from a strip 3 preferably composed of a light proof material and cemented or otherwise secured to the back or unemulsified side of the element. The element 1 is suitably placed within an envelope 4 having a front or exposure face 4<sup>a</sup> and a rear face 4<sup>b</sup>. The element is arranged to have its tab 2 project from one end of the envelope through which the element may be withdrawn, the opposite end of the envelope being formed or otherwise provided with a tab 5.

For the purpose of insuring a light tight seal at the withdrawal end of the envelope and at the same time preventing the accidental withdrawal of the element, the element tab 2 and an extended portion of the front or exposure face 4<sup>a</sup> of the envelope are bent over and cemented to the outer surface of the rear face 4<sup>b</sup> of the envelope. The tab 2 preferably is made of such length as to extend beyond the end of the envelope exposure face 4<sup>a</sup> to facilitate the removal of the element.

In effecting the removal of the photographic element 1, the tab 2 is disengaged from the rear face 4<sup>b</sup> and pulled back so as to tear a breach in the overturned portion of the front face 4<sup>a</sup> of the envelope. This operation may be performed in daylight with perfect safety to the element inasmuch as the light proof strip 3 protects the element at the breach while the rest of the element is completely covered by the envelope. The ele-

ment may now be withdrawn merely by engaging the tabs 2 and 5 and pulling them in opposite directions. This operation, when manually performed, must, of course, take place in a dark room.

The provision of the tabs 2 and 5, however, permits the mechanical withdrawal of the film by the developing apparatus disclosed in the copending application noted. This apparatus includes a tank 10 having a removable cover 11, a casing 12 insertable into the tank and provided with an opening which is adapted to be closed by a hinged cover 13, and a carriage frame 14 composed of a series of plates symmetrically arranged and secured in spaced parallel relation to delimit a series of separate chambers each of which is adapted to receive a film package.

The casing 12 is also provided with a vertical extension 15 which is formed to delimit a vertical guideway leading into the casing 12. The upper end of the extension 15 carries a bail 16 in the form of a pin which projects over the casing 12.

In the use of the apparatus, a film package having its photographic element tab 2 pulled back, is placed into a chamber of the carriage frame 14. The tab 2 of the package is secured to the carriage frame by passing a pin 17 transversely through suitable apertures in the frame adjacent one end thereof, the pin 17 being, at the same time, passed through the tab 2 which preferably is perforated for this purpose. With the packages thus attached to the carriage frame, the latter is supported from the bail 16 which overlies the casing 12, by threading the envelope tab 5 over the bail, this tab also being perforated. By proceeding in this manner it is evident that the frame is supported from the bail 16 by virtue of the binding action between the photographic element and the envelope and also by the overturned end of the envelope. The casing 12 is now placed within the tank 10 with the hinged door 13 held in its open position through contact with the frame 14. The tank cover 11 which carries a plunger 18 is thereafter fitted to render the tank dark and to position the plunger 18 over the carriage frame 14. By pressing the plunger 18 inward, it is brought into engagement with the carriage frame 14 forcing the latter downward. In moving downward, the carriage frame carries the element 1 with it, thereby effecting a withdrawal of the element from its envelope, this action continuing until the element is completely disengaged whereupon the carriage frame drops by gravity and, in dropping, is guided into the casing 12. The casing door 13 is now free to move by gravity to its closed position thereby completely enclosing the carriage frame and photographic elements. Since the casing 12 affords full protection to the element 1 contained therein, it is ob-

vious that the element may be subjected to the various developing baths either within or without the tank 10. It may be pointed out that these baths may also be utilized to remove a tab 2 from its element by dissolving the binder used to hold the tab to the element.

To facilitate the flow of the various baths into and out of the casing 12, the latter is provided with apertures 12<sup>a</sup> which are formed in such of its sides as extend parallel to the plates of the frame 14. By so doing, the plates of the frame prevent any light which may pass through the apertures—when the casing is withdrawn from the tank and subjected to light—from striking the photographic element.

Having described my invention, I claim:

1. A photographic film package comprising an envelope, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a member substantially impervious to daylight secured to said element at its withdrawal end and affording a means of withdrawing said element from said envelope, said member being arranged to protect the withdrawal end of the element from exposure to light prior to its withdrawal.

2. A photographic film package comprising an envelope, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a member substantially impervious to daylight secured to the back of said element and projecting through the withdrawal end of the envelope to afford a means of withdrawing said element from said envelope, said member being arranged to protect the withdrawal end of the element from exposure to light prior to its withdrawal.

3. A photographic film package comprising an envelope, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a strip connected to said element adjacent its withdrawal end, and a tab connected to said strip and providing a means of withdrawing said element from said envelope.

4. A photographic film package comprising an envelope, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a strip substantially impervious to daylight secured to said element adjacent its withdrawal end, and a tab connected to said strip and projecting from said envelope to provide a means of withdrawing said element from said envelope, said strip being arranged to protect the withdrawal end of the element from exposure to light prior to its withdrawal.

5. A photographic film package comprising an envelope, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a strip

substantially impervious to daylight cemented to the back of said element adjacent its withdrawal end, and a tab connected to said strip and projecting from said envelope to provide a means of withdrawing said element from said envelope, said strip being arranged to protect the withdrawal end of the element from exposure to light prior to its withdrawal.

drawal end of the element from exposure to light prior to its withdrawal.

In testimony whereof I hereby affix my signature.

JOHN L. GARRETSON. 70

6. A photographic film package comprising an envelope having a front exposure face and a rear face, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a member connected to said element and extending through the withdrawal end of said envelope, said member being bent over so as to extend along an outer face of the envelope, the opposite face of the envelope being similarly bent to cover the withdrawal end of the envelope.

75

7. A photographic film package comprising an envelope having a front exposure face and a rear face, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a member connected to said element and extending through the withdrawal end of said envelope, said member being bent over so as to extend along the rear face of the envelope, the front face thereof being similarly bent to cover the withdrawal end of the envelope.

80

85

8. A photographic film package comprising an envelope having a front exposure face and a rear face, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a member connected to said element and extending through the withdrawal end of said envelope, said member being bent over and detachably secured to the rear face of the envelope, the front face thereof having an extension which is similarly bent to cover the withdrawal end of the envelope.

90

95

9. A photographic film package comprising an envelope having a front exposure face and a rear face, a photographic element arranged within said envelope and adapted for withdrawal from one end thereof, a member connected to said element and extending through the withdrawal end of said envelope, said member impervious to daylight secured to the back of said element adjacent the withdrawal end of said envelope, a tab connected to said member and extending through the withdrawal end, said member being bent over and secured to the rear face of the envelope, and an extension connected to the front face of the envelope and bent so as to cover the withdrawal end of the envelope, the tab being arranged for detachment from the rear face of said envelope whereby it is available as a means for effecting the withdrawal of said element from said envelope and said member being arranged to protect the with-

100

105

110

115

120

125

130