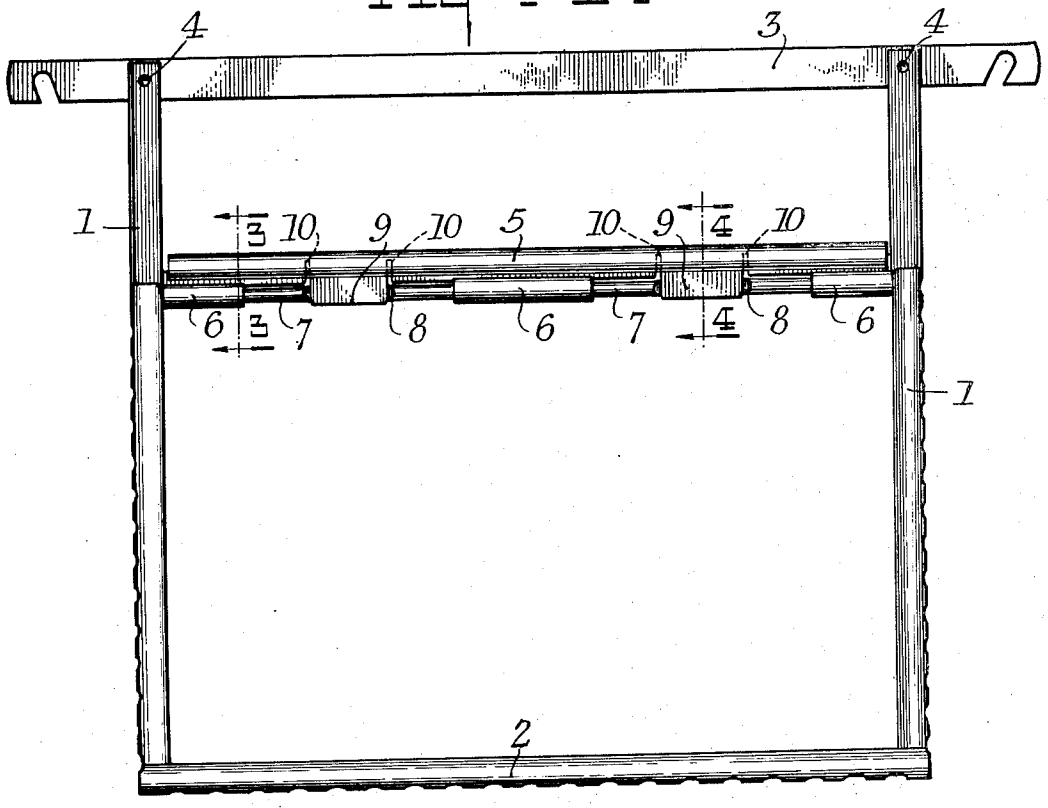
May 4, 1926. 1,583,708

A. J. VIKEN

FILM HANGER

Filed August 27, 1925

FIG - 1 -



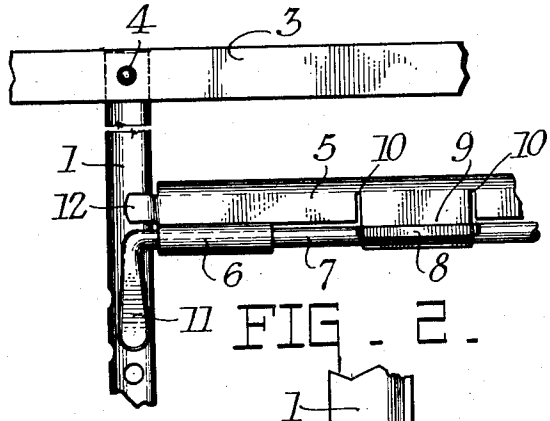


FIG - 2 -

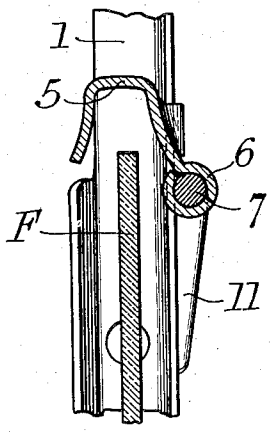


FIG - 3 -

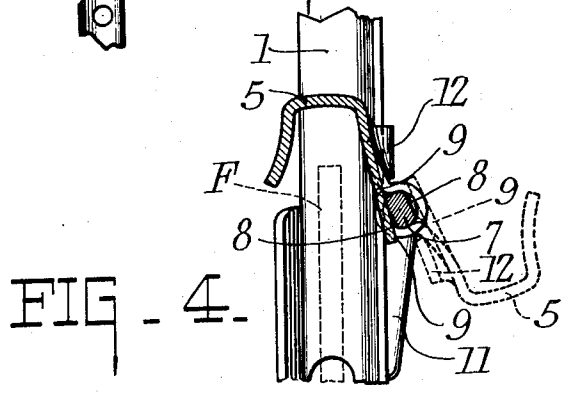


FIG - 4 -

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Patented May 4, 1926. 1,583,708

UNITED STATES PATENT OFFICE.

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FILM HANGER.

Application filed August 27, 1925. Serial No. 52,840.

To all whom it may concern:

Be it known that I, ANTONIUS J. VIKEN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Film Hangers, of which the following is a full, clear, and exact specification.

This invention relates to photography, and more particularly to frames for holding film during the various fluid treatment baths and drying. One object of my invention is to provide a frame for holding film in which there is a hinged frame member for retaining the film in the frame. Another object is to provide such a frame in which the hinged frame member has a simple type of spring latch for holding the hinged member in an open or in a closed position. Another object is to provide a hinged frame member with suitable stops limiting the extent of movement of the hinged member, and to provide a spring arrangement tending to hold the hinged member at both extremities of its movement. Other objects will appear from the following specification, the novel features being pointed out in the claims at the end thereof.

This film holder is of the same general type as that shown in the U. S. Patent No. 1,363,184, granted December 21, 1920, to N. E. Luboschez.

Coming now to the drawings, wherein like reference characters denote like parts throughout:

Fig. 1 is a plan view of a film holder constructed in accordance with, and embodying a preferred form of my invention;

Fig. 2 is an enlarged fragmentary rear elevation of a portion of the holder shown in Fig. 1;

Fig. 3 is an enlarged detail section on line 3—3 of Fig. 1; and

Fig. 4 is an enlarged detail section on line 4—4 of Fig. 1.

In the illustrated embodiment of my invention, I have shown the film hanger as consisting of a pair of spaced channel members 1 which are joined together at the bottom by a channel member 2 and are provided at the top with a supporting bar 3 which may be attached to the channel members 1 by means of rivets 4.

In order to hold the films in the channel members, there is a channel member 5 having portions 6 encircling a bar 7 so as to form a hinged connection with the frame members 1, as the bar 7 is attached at 11 to these members. The bar 7 is provided with deformed portions 8. Portions 9 of the member 5 are adapted to contact with the deformed parts 8 of the pintle 7, and form spring members which tend to hold the channel member 5 in the operative position, shown in full lines Fig. 4, or in the inoperative position, shown in dotted lines in this figure. The spring member 9 is preferably formed by cutting the channel 5, as indicated at 10.

The extent of movement of bar 5 is limited by means of lugs 12 which are preferably provided at each end of the bar 5 so as to lie in the path of the side channel members 1, and in the path of the lugs 11 which are used to attach the pintle 7 to the channel members. By striking these two parts of the frame, the movement of bar 5 is limited. The deformed flat portions 8 of the pintle 7 are preferably made slightly at an angle to the normal positions of spring 9 so that there is a constant tendency for the stops 12 to be thrust against either the side members 1 or the lugs 11, the cooperating parts 8 and 9 thus forming a spring latch for holding the top bar in its set position.

When I refer to film in this specification and in the claims, it is to be understood that this term is intended to cover a photographically light sensitive emulsion coated on either a rigid or flexible base.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel bars for holding the edges of a film, a hinge pintle connected to channel bars and a channel member hinged to the frame by the pintle upon which it may turn to and from an operative position in which it is adapted to hold a film in the frame, and cooperating parts formed on the hinged channel and its pintle tending to hold the hinged channel in an operative position.

2. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel bars for holding the edges of a film, a hinge pintle connected to

channel bars and a channel member hinged to the frame by the pintle upon which it may turn to and from an operative position and cooperating parts formed on the hinged channel and its pintle tending to hold the hinged channel member at rest in either of its two extremities of movement.

3. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel members for holding the edges of a film, a member connecting two of the channel members and having deformed portions thereon, a channel member hinged to the connecting member, limiting stops on the hinged channel member adapted to define the extent of movement of the hinged member by striking parts of the frame, a spring member carried by the hinged member adapted to contact with the deformed portions of the connecting member and adapted to turn the hinged channel member in two directions, whereby the hinged member will be normally held with a limiting stop resting against a frame portion.

4. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel members for holding the edges of a film, a member connecting two of the channel members, a channel member hinged to the connecting member, parts of the connecting member and the hinged channel member cooperating to form a spring latch for holding the hinged member in a set position.

5. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel members for holding the edges of a film, a member connecting two of the channel members, a channel member hinged to the connecting member, a portion of the hinged channel member being adapted to strike one of the frame channel members when turned upon its hinge, and parts of the connecting member and hinged channel cooperating, tending to turn the channel member upon its hinge, whereby the stop portion of the hinged channel member may lie against a frame channel member and the hinged member may be held in a set position.

6. A frame for holding film during fluid treatment and drying, said frame comprising spaced channel members, a transverse bar connecting the lower part of the channel members, and a transverse rod connecting the upper parts of the channel members, said rod serving as a pintle and having deformed portions on the rod, an upper channel member mounted to turn upon the pintle rod, a portion of the upper channel member being adapted to engage a deformed portion of the pintle rod to form a latch therewith whereby the upper channel member may be retained in a set position.

7. A frame for holding film during fluid treatment and drying, said frame comprising spaced channel members, a transverse bar connecting the lower part of the channel members, and a transverse rod connecting the upper parts of the channel members, said rod serving as a pintle and having deformed portions on the rod, an upper channel member mounted to turn upon the pintle rod, a portion of the upper channel member being adapted to engage a deformed portion of the pintle rod to form a latch therewith, another portion of the channel member being adapted to lie against one of the spaced channel members to form a stop for limiting the movement of the hinged channel member.

8. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel members, a pintle having flat areas thereon, a channel member movably mounted on the pintle, spring members carried by the channel members adapted to engage the flat areas of the pintle, whereby the spring and flat areas of the pintle form a spring latch adapted to hold the hinged channel member in a set position.

9. A frame for holding film during fluid treatment and drying, said frame including a plurality of channel members, a pintle having flat areas thereon, a channel member movably mounted on the pintle, spring members carried by the channel members adapted to engage the flat areas of the pintle, whereby the spring and flat areas of the pintle cooperate to hold the movable member in open or closed position.

Signed at Chicago, Illinois this 24th day of August, 1925.

ANTONIUS J. VIKEN.