Feb. 9, 1926. 1,572,337

J. T. WACHTER

FILM HOLDER

Filed Feb. 21, 1925

Fig. 1.

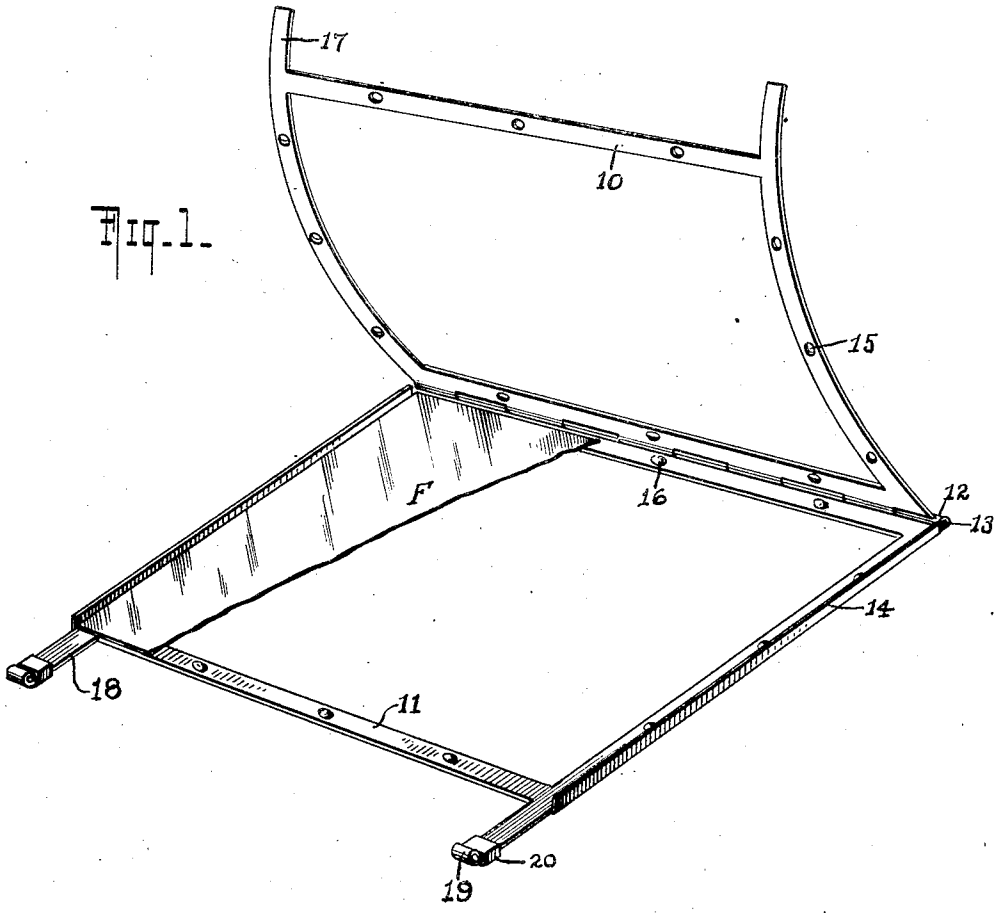


Fig. 2.

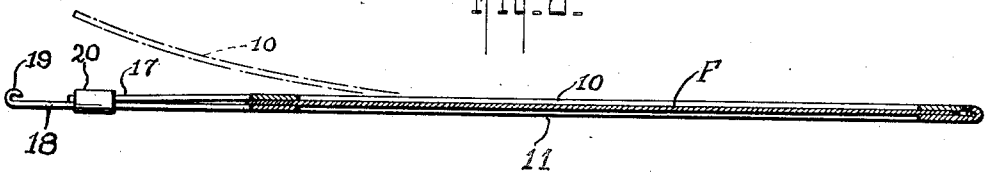
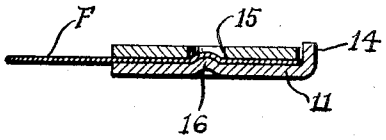


Fig. 3.



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JOSEF THEODORE WACHTER, OF WEST HOBOKEN, NEW JERSEY.

FILM HOLDER.

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To all whom it may concern:

Be it known that I, JOSEF T. WACHTER, a citizen of the United States, and resident of West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Film Holders, of which the following is a specification.

This invention relates to film holders such as used for the convenient handling of photographic films during the development thereof.

The principal object of the invention is to provide a new and improved construction of a film holder of an extremely simple and inexpensive but strong construction, and by means of which the film will be securely held in a smooth condition against accidental displacement during the manipulation of the film and holder.

Another object is to improve upon the construction of devices of this character by reducing and simplifying the number of parts required to be operated to set and clamp the film in position in the holder.

These and other objects will appear from the following more detailed description and by reference to the accompanying drawing forming a part hereof and wherein Fig. 1 is a perspective view of a film holder embodying my invention, the holder being shown in opened condition to illustrate more clearly the constructional details thereof; Fig. 2 is a central longitudinal section showing the frame in the closed or clamping position, and Fig. 3 is an enlarged sectional detail.

As shown in the drawings the holder is in the form of a rectangular open frame consisting of an upper member 10 and a lower member 11, said members preferably being pivotally connected along one of the ends thereof. For the purpose of illustration I have shown the pivotal connection of the frame members formed by projecting integral portions 12 of the frames bent to form small tubular bearings adapted to be brought into axial alinement to receive a hinge pin 13. It will be understood however that any suitable type of hinged or pivotal connection may be employed.

The lower frame member 11 has its side edges provided with upwardly extending flanges 14 which serve to position the film F and to prevent lateral movement thereof when the upper frame is being brought into clamping engagement with the film in a manner presently to be described. The flat or horizontal faces of the strips which form the clamping portions of the frame members are provided with recesses 15 and projections 16 adapted to be brought into register when the frame members are clamped together, the projections 15 entering the recesses and slightly distorting the film to hold it securely against movement.

The side members of both the upper and lower frames are extended beyond the rectangular clamping portions thereof to form the legs 17 and 18 respectively. The legs 18 are slightly longer than the legs 17 and have their ends bent backwardly to form limiting stops 19 for the sleeves 20 which are adapted to be slid longitudinally of said legs to engage the upper frame legs 17 and hold the parts securely clamped together.

The frame members are shown as constructed of sheet metal and the upper member is preferably spring metal, curved to a shape approximately as shown in Fig. 1, so that when it is brought downwardly upon the pivotal connection, it will engage the film with a rolling contact which will naturally tend to effect a smoothing or straightening action thereon. In addition due to the curvature of the upper member and the fact that it is constructed of spring metal, a clamping action is exerted on the film along the entire lengths of the opposed clamping faces of the frame members. Furthermore, the resiliency of the upper member insures a sufficient pressure between the legs 17, 18, and sleeve 20, when the sleeve is slid into engagement with said legs, to prevent accidental releasing of said sleeve during the manipulation of the film and holder.

The operation of the device will be readily understood, the film being placed on the lower frame member 11 between the flanges 14, the upper frame member 10 is swung downwardly on its pivotal or hinge connection, and the sleeve 20 is slid longitudinally over the legs 17 to hold the frame members securely clamped together. As the upper frame is brought downwardly, the rolling contact will tend to smooth out or straighten the film while at the same time the projections 15 will press the film slightly into the aligning recesses 16, thereby holding the film securely within the frame.

It will be understood that the details of construction shown and described are merely

illustrative and that many changes, variations and modifications of the specific embodiment therein disclosed may be resorted to without departing from the spirit of my invention, for example, the shape and arrangement of the projections and recesses, the clamping means for holding the frame members together, the hinge construction and the size and shape of the frame may all be varied as desired.

I claim:

1. A film holder comprising a pair of frame members, means for pivotally connecting said frame members and means to hold said frame members in clamped engagement with a film, one of said frame members being provided with spaced projections and the other with similarly spaced recesses adapted to be brought into co-operating alignment to produce slight distortions at spaced intervals along said film adjacent to the side edges thereof when said frame members are clamped together.

2. A film holder comprising a pair of frame members, means for pivotally connecting said frame members and means to hold said frame members in clamped engagement with a film, one of said frame members being substantially flat and non-elastic and the other frame member being constructed of spring metal curved to cause a gradual rolling contact between said member and film as said frame members are swung upon their pivotal connection into engagement with said film.

3. A film holder comprising a pair of frame members, means for pivotally connecting said frame members, means to hold said frame members in clamped engagement with a film, one of said frame members being constructed of spring metal curved to cause a gradual rolling contact between said member and film as said frame members are swung upon their pivotal connection into engagement with said film, and said frame members being provided with co-operating projections and recesses adapted to be brought into co-operating alignment to produce slight distortions at spaced intervals along said film adjacent to the side edges thereof when said members are in clamping relationship.

4. A film holder comprising a pair of frame members, means to pivotally connect said frame members, each of said frame members being provided with a pair of projecting legs, and sleeves slidable longitudinally of said legs to hold said frame members in clamping relationship.

5. A film holder comprising a pair of frame members, means to pivotally connect said frame members, each of said frame members being provided with a pair of projecting legs, and sleeves slidable longitudinally of said legs to hold said frame members in clamping relationship, one of said frame members being provided with recesses and the other with projections adapted to penetrate said recesses and produce slight distortions of said film at spaced points adjacent to the edges thereof when said frame members are in clamping relationship.

6. A film holder comprising a pair of sheet metal frame members, consisting of side and end strips arranged to form a rectangular open frame work, means to connect said frame members pivotally together along one of said end strips, said side strips being extended beyond the other of said end strips, and sleeves slidably mounted on the extensions of said side strips to clamp said members together.

7. A film holder comprising a pair of sheet metal frame members, consisting of side and end strips arranged to form a rectangular open frame work, means to connect said frame members pivotally together along one of said end strips, said side strips being extended beyond the other of said end strips, and sleeves slidably mounted on the extensions of said side strips to clamp said members together, the side strips of one of said frame members being provided with upwardly extending flanges between which the film is adapted to be placed and the side strips of said other member being constructed of spring metal curved to produce a rolling contact with a film mounted between said flanges as said members are brought into clamping relationship.

8. A film holder comprising a pair of sheet metal frame members consisting of side and end strips arranged to form a rectangular open frame work, means to connect said frame members pivotally together along one of said end strips, said side strips being extended beyond the other of said end strips, and sleeves slidably mounted on the extensions of said side strips to clamp said members together, the side strips of one of said frame members being provided with upwardly extending flanges and the side strips of said other member being constructed of spring metal curved to produce a rolling contact with a film mounted between said flanges as said members are brought into clamping relationship, the strips of one of said frame members being provided at spaced intervals with recesses and the strips of the other of said frame members being provided with similarly spaced projections adapted to penetrate slightly into said recesses for clamping the film securely against displacement.

In testimony whereof I have hereunto set my hand.

JOSEF THEODORE WACHTER.