A. C. FISHER.

FILM DEVELOPING AND DRYING SUPPORT.

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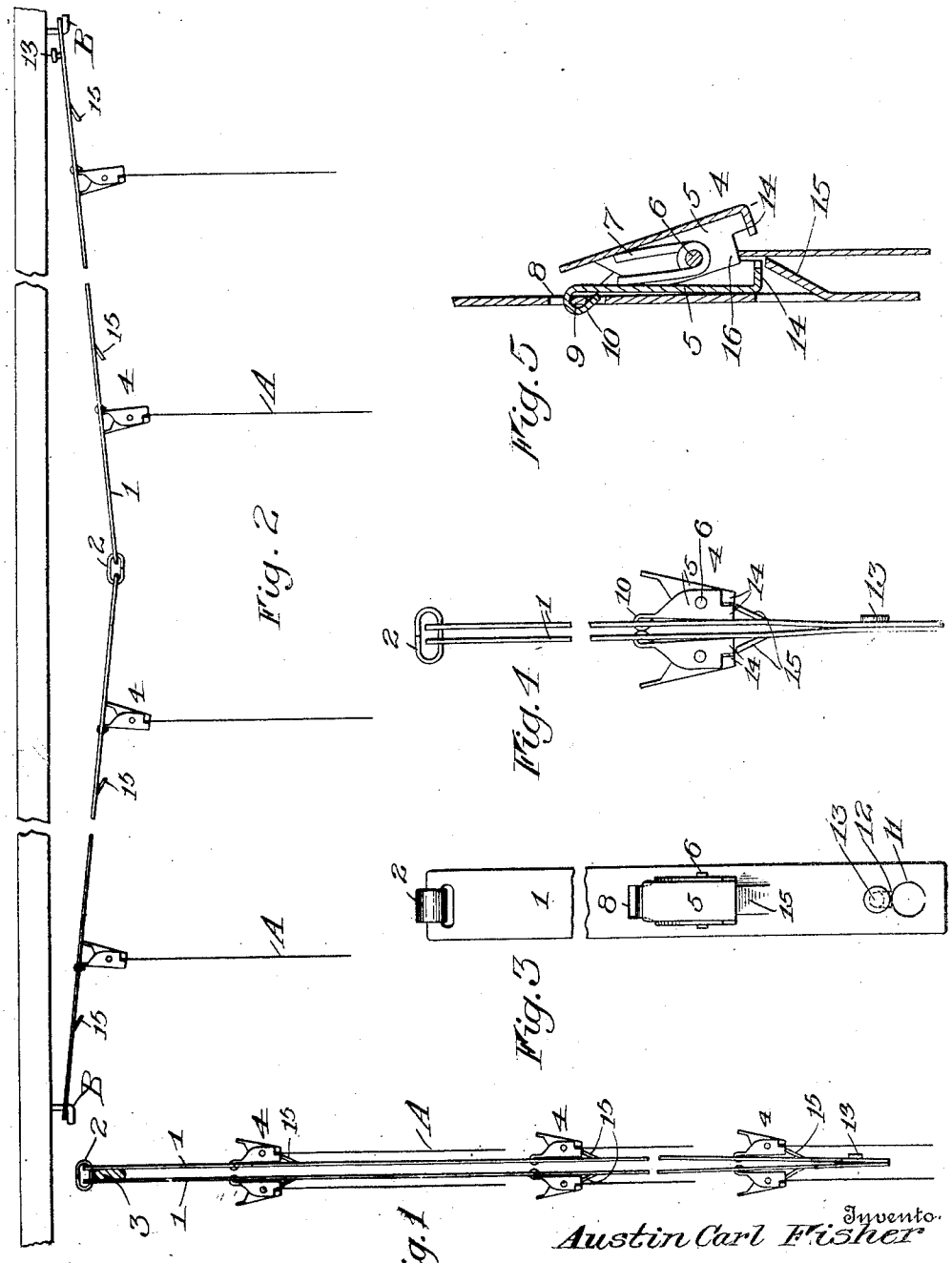


Fig. 2

Fig. 5

Fig. 4

Fig. 3

Fig. 1

Witnesses

Walter B. Payne

Russell B. Ruffick

Inventor

Austin Carl Fisher

By Church & Rich

his Attorneys

UNITED STATES PATENT OFFICE.

AUSTIN CARL FISHER, OF ROCHESTER, NEW YORK, ASSIGNOR TO EASTMAN KODAK COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

FILM DEVELOPING AND DRYING SUPPORT.

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To all whom it may concern:

Be it known that I, AUSTIN CARL FISHER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Film Developing and Drying Supports; 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 dipping and drying racks and it has for its object to provide a simple, cheap and convenient rack adapted more particularly for developing and drying cut photographic films, the device being of a convertible nature whereby in one position of adjustment it is capable of supporting and hanging the films in a compact manner within a developing tank or bath while in the other position it is adapted to dispose of them in such manner as is best for the drying operation.

To these and other ends the invention consists in certain improvements and combination 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 side elevation of a sheet suspending device constructed in accordance with and illustrating one embodiment of my invention, the same being shown in that position wherein it is used for immersing the films in the developing or other bath, an intermediate portion of the device being broken away; Fig. 2 is a side elevation of the device disposed to support the films for drying purposes, parts thereof and of the support being also shown broken away in this figure; Fig. 3 is an enlarged face view of a portion of the device, other portions being broken away, showing the manner in which the free ends of the two supporting members are locked together; Fig. 4 is a similar enlarged side view also broken away, and Fig. 5 is a central section through one of the sheet gripping clips and the adjacent supporting member on an enlarged scale.

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

Referring more particularly to the drawings, the device constituting the present embodiment of my invention comprises a pair of supporting members 1 preferably formed of flat metal strips that are relatively stiff but at the same time possess that degree of flexibility or elasticity inherent in such material. They are pivotally connected together at their upper ends in the present instance by means of a connecting link 2. Other forms of hinge connections may be employed, but the link shown lessens the cost of manufacture and at the same time allows enough separation of the ends of the supports to permit them to be hung over a supporting rod 3 that is accommodated between them when they are in vertical parallel relationship, as shown in Fig. 1. The link 2 permits the two members to thus assume either the position of Fig. 1 or the position of Fig. 2.

Disposed at intervals along the outer sides of the members are a plurality of clips or grippers 4. These preferably consist of two sheet metal jaws 5 pivoted at 6 and normally held closed by a spring 7 housed between them. Each clip is pivotally connected to its supporting member 1, the connection being preferably effected by providing an opening 8 in the supporting member with a bar 9 spanning it with which bar coöperates an offset eye 10 formed integrally with the under jaw 5 by providing an extension at the rear end thereof.

The free ends of the supporting members 1 are provided with means for temporarily locking them together, which means comprises in the present instance, registering openings 11 in the respective members, one of which has a communicating slot 12 disposed longitudinally of the strip while the other has a correspondingly located headed projection 13. By bowing the member carrying the latter and hence shortening it a little in case the pivotal connection at 2 does not give sufficient play, or by taking advantage of the play allowed at the opposite end by the provision of the link 2, the head of the projection may be inserted through the opening 11 in the opposite member and then slipped into the slot 12, as shown in Fig. 3.

As before stated, the present device is designed more particularly for the purpose of handling photographic film sheets and particularly the separate or cut sheets such as come from the ordinary "film pack". To first develop the films or submit them to a bath of any kind, one is inserted in each

clip 4 and the whole device is then suspended in the developing tank by dropping it over the rod 3 or any similar form of hanger with the supporting members 1 vertical and parallel, as shown in Fig. 1. The lower ends of the members may be locked together in this position if desired, although the locking means is chiefly useful for holding the device in a folded position when not in use. The films hang down flat against the support or substantially so, as shown in Fig. 1, and are held out of contact with each other though accessible to the developing agent on all sides. After the developing or washing operation, the supporting members 1 are spread to substantially horizontal position in alinement with each other, as shown in Fig. 2, and supported in this manner at each end. For this purpose, the openings 11 may be conveniently employed to engage over supporting hooks or equivalent devices B. In this position of the device, the clips 4 hang down at right angles to the supports as shown, and suspend the films in such manner that there are greater spaces between them whereby they are free to quickly dry out of possible contact with each other.

To aid in inserting the edges of the film sheets between the jaws 5 of the clips and prevent them from abutting the lips 14 thereof, I provide inclined guiding surfaces 15 on the supports, one for each clip, and so disposed as to be closely adjacent to and to rise slightly above the lip 14 of the lower jaw or that one which is disposed against the support in the position of Fig. 1. Thus by holding the film sheet against the supporting member and sliding it toward the jaws, it will automatically find its way between them. An angular shoulder 16 formed in rear of the lip of the upper jaw 5 on its side flange prevents the film from being inserted too far.

While I have described my device as used in connection with the developing and drying of photographic films, it will be recognized that the invention has application in other connections where sheets require analogous treatment.

I claim as my invention:

1. In a sheet suspending device, the combination with a pair of relatively stiff supporting members pivotally connected at one end to permit them, selectively, to hang in vertical parallelism or to be extended in substantially horizontal alinement with each other, of a plurality of sheet holding clips mounted on the members.

2. In a sheet suspending device, the combination with a pair of relatively stiff supporting members pivotally connected at one end to permit them, selectively, to hang in vertical parallelism or to be extended in substantially horizontal alinement with each other, of a plurality of sheet holding clips pivotally mounted upon the outer sides of the members and adapted to assume vertical positions while the supporting members are in either position.

3. In a sheet suspending device, the combination with a pair of relatively stiff supporting members pivotally connected at one end to permit them, selectively, to hang in vertical parallelism or to be extended in substantially horizontal alinement with each other and a plurality of sheet holding clips mounted on the members, of a fastening device for temporarily locking together the other ends of the members.

4. In a sheet suspending device, the combination with a pair of relatively stiff supporting members loosely pivoted together at one end to permit them, selectively, to hang in vertical parallelism or to be extended in substantially horizontal alinement with each other and a plurality of sheet holding clips mounted on the members, of means for temporarily locking together the other ends of the members comprising an opening and a longitudinally disposed communicating slot in one member and a headed projection and an adjacent opening in the other member, said openings constituting attaching eyes when the members are hung up in the said horizontal position.

5. In a sheet suspending device, the combination with a supporting member comprising a plate or strip having an opening and a bar spanning the opening, of a sheet holding clip carried by the support and comprising two pivoted jaws, the extremity of one of which is formed into an offset eye coöperating with the beforementioned bar as a pivot.

6. In a sheet suspending device, the combination with a supporting member, of a sheet holding clip carried thereby and comprising relatively movable jaws, one of which has a position against the face of the support and an inclined guiding surface on the latter arranged to prevent an inserted sheet from engaging the lip of the said jaw and to guide it between the jaws when open.

AUSTIN CARL FISHER.

Witnesses:
RUSSELL B. GRIFFITH,
GENEVA A. BISSELL.