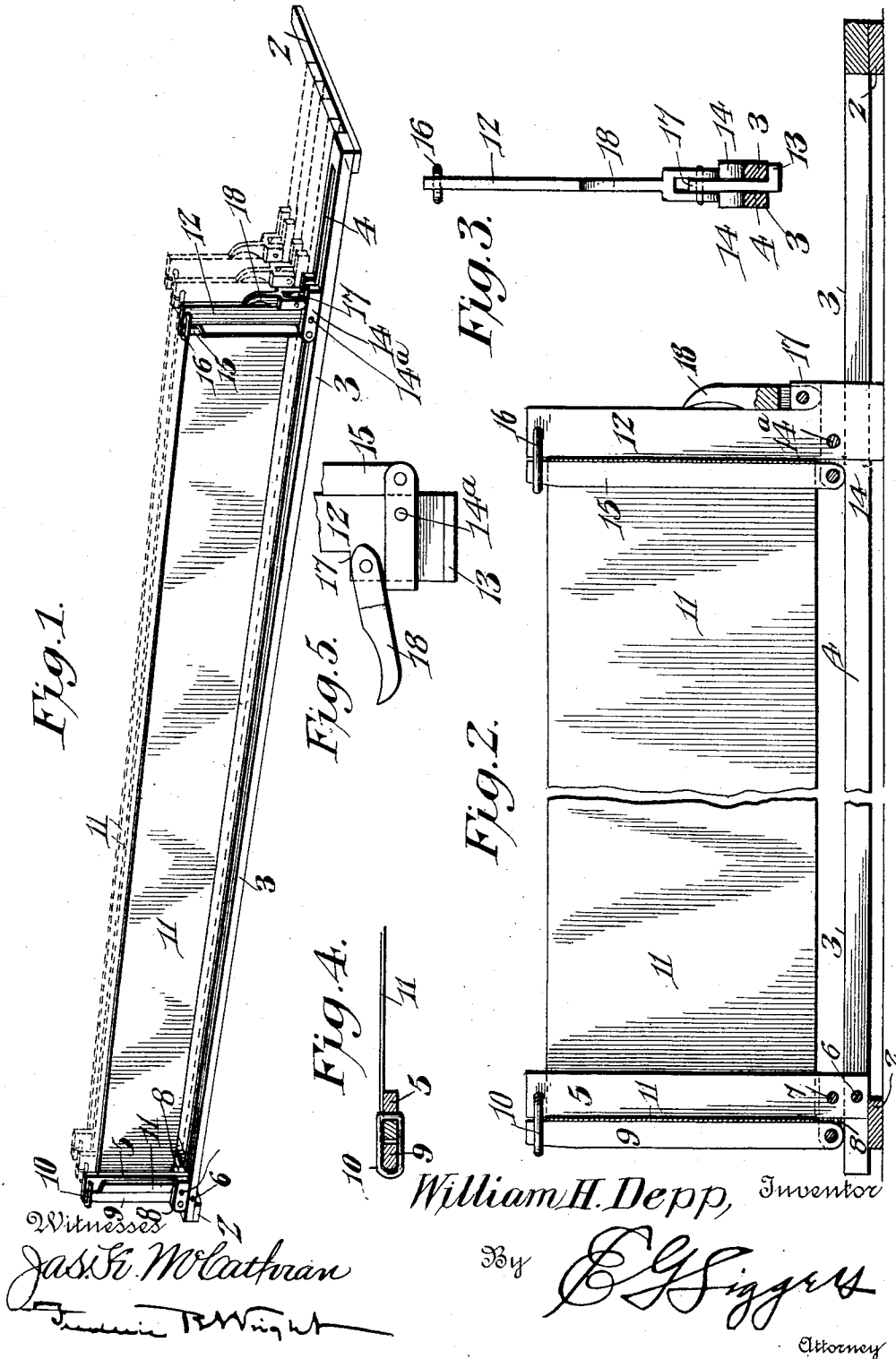


W. H. DEPP.
 PHOTOGRAPHIC DEVELOPING RACK.
 APPLICATION FILED DEC. 9, 1908.

967,114.

Patented Aug. 9, 1910.



UNITED STATES PATENT OFFICE.

WILLIAM H. DEPP, OF BROOKVILLE, PENNSYLVANIA.

PHOTOGRAPHIC DEVELOPING-RACK.

967,114.

Specification of Letters Patent.

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Application filed December 9, 1908. Serial No. 466,666.

To all whom it may concern:

Be it known that I, WILLIAM H. DEPP, a citizen of the United States, residing at Brookville, in the county of Jefferson and State of Pennsylvania, have invented a new and useful Photographic Developing-Rack, of which the following is a specification.

My invention relates to racks for supporting photographic films and particularly to racks which may be used for supporting films in the process of development, the object being to provide a rack or plurality thereof which is adapted to receive films of various lengths, to hold the same stretched and to permit the same to be held in this manner within a bath of developing material.

Other objects in this connection are to provide a rack wherein the film is very easily clamped at both ends and wherein one of these clamps is adjustable quickly and yet positively so that a film may be easily inserted, stretched and eventually taken out.

My invention consists in a rack formed with a base, this base being provided at one end with a fixed clamping post, and at the other end provided with a sliding clamping post, with a clamp adapted to fasten the post at any particular position desired on the rack.

In the practice of my invention I contemplate having a plurality of these racks mounted side-by-side upon transverse supporting bars.

In the drawings, Figure 1 is a perspective view of one of my racks, others of the racks being indicated in dotted lines; Fig. 2 is a side view of one rack with a film stretched thereon; Fig. 3 is an end elevation, partly in section, of the movable post and the rails which form the base of the rack; Fig. 4 is a transverse section of the upper end of one of the clamping posts showing the means whereby the two portions of the post are clamped together to hold a film; and Fig. 5 is an enlarged side elevation of the lower portion of the movable post.

In the drawings, 2 designates opposed transverse supporting bars of any desired width or length, upon which is mounted a pair or plurality of pairs of rails 3. These

are preferably formed by placing two bars parallel to each other so as to form in conjunction a slotted track, the slot of this track being indicated by the numeral 4. Attached to one end of the rail bars 3 is the vertical fixed post 5, which is attached between the rails 3 in any suitable manner as by the rivet 6. Attached to the base of the post 5 as by the rivet 7, are the opposed guide blocks 8, between which is pivoted a clamp bar 9. The clamp bar is of the same height as the post 5 and is adapted to be brought up tight against the post 5 in the position shown in Fig. 2 to clamp one end of the film between it and the post 5. It is held in this position by the ring 10 which is pivotally mounted in the upper end of the post 5 and is adapted to be forced over the beveled upper end of the bar 9. As the upper end of this bar is beveled, it will be obvious that the forcing down of the ring 10 will tend to draw the bar 9 up into close contact with the edge of the post 5, and that the film 11 will be clamped tightly between the two members. The other end of the film is held by a movable post, 12, which extends down through the slot 4, and has at its lower end the right-angular flange 13, which extends inwardly beneath the rail 3.

Attached to the lower end of the post 12 in any desired manner are the guide blocks 14, one on each side of the post 12. These are attached to the post by the pivot 14^a, and their rear edges are therefore somewhat free to move slightly. The forward ends of the guide blocks 14 are extended forward beyond the edge of the post 12, and have pivoted therebetween the clamping bar 15, which, at its upper end is slightly beveled. A clamping ring 16 is pivotally connected to the upper end of the post 12 and is adapted to be forced over the beveled edge of the bar 15, in the same manner as before described for the post 5. The film is, of course, adapted to be clamped between the members 12 and 15.

As before stated, the rear ends of the guide blocks 14 are free and therefore slightly resilient relative to the post 12. Pivoted in an ear 17 projecting from the post 12 above the level of the guide blocks

14 is the lever 18, rounded at its lower end to form a cam engaging with the upper faces of the guide blocks and forcing them downward. As will be seen in Fig. 3, this lever 18 is bifurcated and fits over the ear 17 and thus has two cam-like ends which engage with the opposed upper faces of the guide blocks 14. When it is desired to clamp the post 12 upon the rails 3, the clamping lever 18 is thrown into the position shown in Fig. 2 which acts to slightly depress the free ends of the guide blocks and thereby clamp the rails 3 between the lower edge of the guide blocks and the upper faces of the flange 13. By turning down the clamping lever 18, the guide blocks are free to raise slightly and thus permit the post 12 to be shifted along the rails 3 to any position desired.

While I have illustrated only one of my racks, I have indicated two others in dotted lines in Fig. 1, and it is to be understood that I intend to mount a plurality of these racks, preferably ten or twelve, upon the bars 2, this set of racks being, of course, used with a developing tray or pan large enough to contain them and the developing fluid.

It will be seen that my device is extremely simple, that it permits of either long or short films being supported between the posts and drawn outward until they are stretched tightly for developing, and that with a plurality of these racks, a large number of films may be accommodated in a relatively small developing tray, it being obvious that very little space is needed between the separate racks, and that the whole series of racks may be manipulated as if only one film were being handled at a time, thus saving a great deal of time and trouble. Of course, my device is equally adaptable to other purposes, as, for instance, the drying of films or other processes in photography demanding that films be supported.

While I have shown my device as applied to the supporting of one length of film between each pair of supporting posts 5 and 12, it will be obvious that a plurality of these posts arranged in a series as shown in Fig. 1, would be entirely adapted to supporting a continuous film, the end of which could be clamped to the first post, carried to the second post, then across to the movable post of the next in series, then to the fixed post of that pair of rails, then to the fixed post of the next pair of rails, and so on throughout the whole series of supporting posts. It will also be obvious that various sizes of film might readily be carried in my supporting racks at the same time, and also that it would be possible to provide additional supporting posts on each pair of rails,

whereby a number of short films might be carried upon each pair of rails. I do not wish to be limited in this respect to the actual details shown in the drawings, as it is obvious that these changes in the application of my invention could take place without departing from the spirit thereof.

The device is simple, compact, economical of time and labor, and has been found in practice to be perfectly adapted to the purpose for which it is designed.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportions and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

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

1. A developing rack comprising a support, means thereon for receiving one end of a film, a movable element on the support for receiving the other end of the film, a member on the said element for frictionally gripping the support, and a clamp for locking the member in gripping position.

2. The combination of a support, a slidable member thereon, a block mounted on the member to grip the support, a cam device acting through the block for locking the member in engagement with the support, and a film-engaging clamp mounted on the block in coöperative relation with the member.

3. In a film support, a longitudinally slotted base, a fixed post at one end of said base, a movable post having a portion projecting down into the slot, means mounted on the movable post at a point above the base for clamping the movable post at any position along the base, and means on the posts for clamping the opposed ends of a film.

4. A rack for supporting films, comprising spaced rails, a post at one end of said rails, another post mounted on said rails, and having a portion extending down between the same and engaging beneath the rails, a member and a cam lever adapted to clamp the rails between the member and said rail-engaging portion, and means on the posts for engaging the opposed ends of a film.

5. A developing rack including spaced rails, a fixed post at one end of said rails having means for clamping one end of a photographic film, a movable post extending down between said rails and having a flange projecting beneath the same, a projecting member on the post contacting with

the upper face of a rail, and a clamping lever arranged to clamp the rail between said member and said flange, said movable post being provided with means for clamping a photographic film.

6. A developing rack having a pair of spaced rails, a post attached to one end of said rails, a clamp thereon for engaging a film, a post shiftable along the rails, a pivoted clamping element thereon for gripping the latter post to the rails, a pivoted film clamp adapted to cooperate with each post to engage the end of a film, and means for holding the clamp in its engaged position.

7. A developing rack including a pair of spaced rails, a post at one end of said rails and a post shiftable along said rails having its lower end extending down between the rails and formed with a flange projecting beneath the same, guide blocks attached to the shiftable post above the rails, a clamping lever pivoted to the post and having its lower end rounded to engage with the guide blocks and force them downward into engagement with the rails, and clamps on both posts for engaging a photographic film.

8. A developing rack including a pair of spaced rails, a post at one end of said rails and a post shiftable along the rails having its lower end extending down between the rails and formed with a flange projecting beneath the same, guide blocks attached to the shiftable post to have movement thereon, a bifurcated clamping lever pivoted to the shiftable post and having its lower ends rounded to engage with the upper edges of the guide blocks and force them down into engagement with the rails, and a clamp on both posts adapted to engage a photographic film.

9. A developing rack comprising a base, relatively movable upright posts having their lower ends attached to the base, a vertical clamping bar pivotally connected at its lower end to the lower end of each post and cooperating with the latter to form a pair of vertically-disposed clamping jaws, and a fastening connecting the upper ends of each post and clamping bar detachably together.

10. A developing rack including a base, clamp supporting posts mounted on and rising from the base and relatively movable to and from each other, each post being provided with a clamping bar disposed parallel to the post and pivoted at its lower end thereto, the free end of said bar being beveled, the upper end of each post being provided with a pivoted ring adapted to engage over the beveled end of the clamping bar to hold the same in parallelism with the post, and clamp a photographic film therebetween.

11. A developing rack including a pair of spaced rails, a post at one end of said rails having a downwardly-projecting portion rigidly attached between the rails, guide blocks on said post above the rails and projecting beyond the post, a clamping lever pivoted between the guide blocks and beveled at its free upper end, a ring on the upper end of the post adapted to engage over the free end of the clamping bar, a post shiftable along said rails having its lower end extending down between the same and there formed with a flange projecting beneath one of said rails, opposed guide blocks attached near one end to the post above the rails and having their free ends slightly movable, a bifurcated clamping lever pivoted on the post and having its end rounded to engage with the guide blocks to force their free ends into engagement with the rails, and a clamping bar pivoted between the projecting ends of the guide blocks, the free end of this bar being beveled and a ring pivotally mounted upon the upper end of the said post adapted to engage over the beveled end of the clamping bar.

12. A developing rack including spaced supporting bars, a plurality of pairs of spaced rails mounted upon said supporting bars, and spaced relatively-movable film supporting posts mounted on and rising from the rails, each having a clamp adapted to engage with a photographic film.

13. A developing rack including spaced supporting bars adapted to rest on the bottom of a developing tray, a plurality of bars extending between the supporting bars, and film supporting members mounted upon and rising from the last-named bars, the supporting members on each bar being relatively adjustable toward and from each other and each supporting member being provided with a clamp adapted to engage a photographic film.

14. A developing rack comprising a plurality of pairs of film-supporting members movable toward and away from each other, and a common support for each pair of members, each pair of members being arranged to separately hold a film in parallel spaced relation to the films in the adjacent pairs of supporting members, each member being provided with a clamp for engaging the end of a film.

15. The combination of a base, a supporting element mounted thereon, a pivoted block carried by the element and arranged to engage the base, a device carried by the element and arranged to clamp the block in engagement with the base, and a clamping jaw pivotally mounted on the block and cooperating with the element to grip an object.

16. The combination of a bar, means at
one end thereof for receiving the extremity
of a film, a post slidably mounted on the
bar, a movable block carried by the post and
5 arranged to frictionally grip the bar, a
pivoted cam lever mounted on the post to
lock the block in gripping relation to the
bar, a clamping member mounted on the
block and cooperating with the post to grip
10 the other extremity of the film, and means

for holding the clamping member in grip-
ping position.

In testimony, that I claim the foregoing
as my own, I have hereto affixed my signa-
ture in the presence of two witnesses.

WILLIAM H. DEPP.

Witnesses:

JOHN J. NYLAND,
HOMER B. MEANS.