May 16, 1933. A BENDER ET AL 1,909,566

SUPPORTING RACK FOR FILM NEGATIVES

Filed Feb. 16, 1932

Fig. 1.

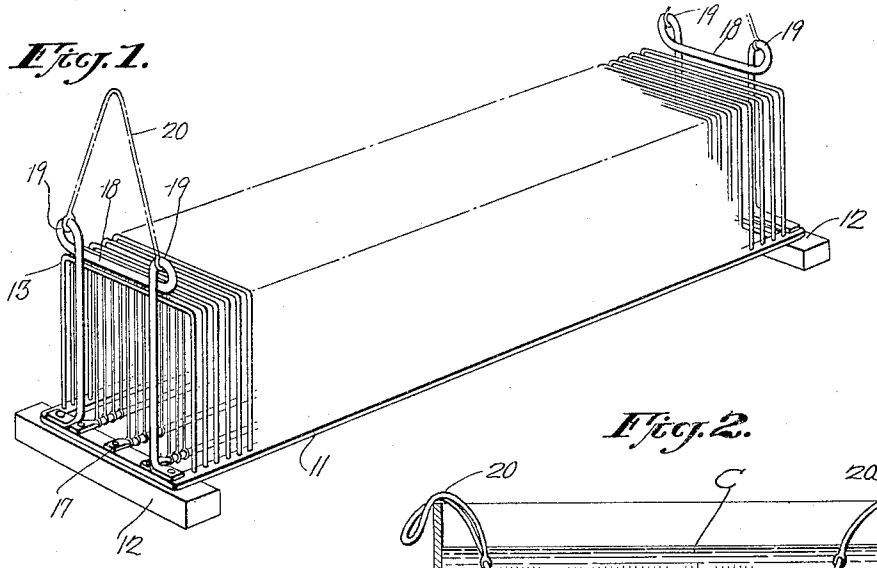


Fig. 2.

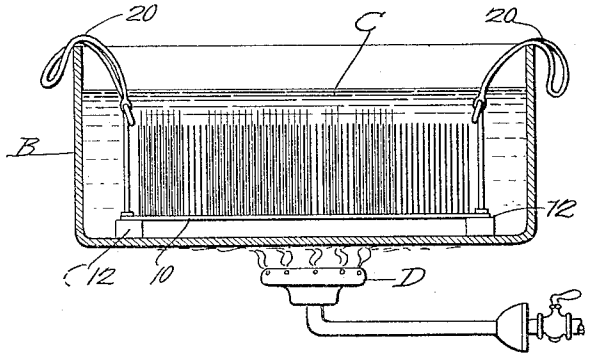


Fig. 3.

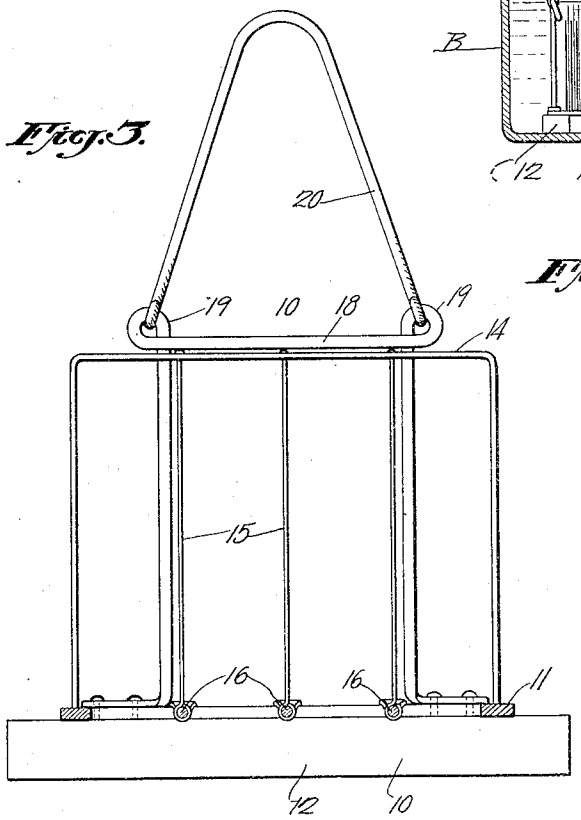


Fig. 4.

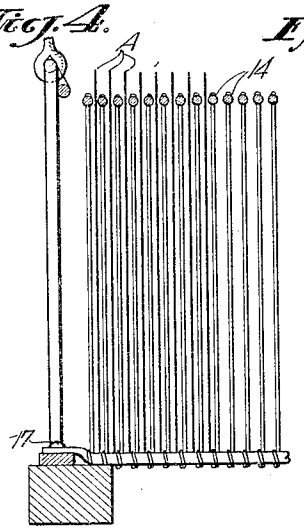
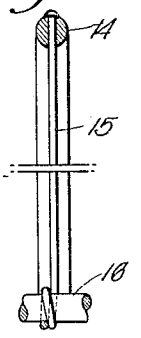


Fig. 5.



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UNITED STATES PATENT OFFICE

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SUPPORTING RACK FOR FILM NEGATIVES

Application filed February 16, 1932. Serial No. 593,392.

This invention relates to improvements in racks, and more particularly to racks for supporting negative photographic films during the developing operation of the same.

The primary object of the invention resides in a rack in which negative X-ray or other types of film may be supported to maintain the film sheets in spaced relation in a manner to allow the developing solution to envelop the entire area of the film when the rack is immersed therein during a developing operation.

Another feature of the invention is to provide a photograph film rack which will support the film above the bottom of the solution tank to prevent damage to the film negative which would result if the same were subjected to the direct heat from the bottom of the solution tank, it being understood that such tanks are supported above a lighted burner with the rack resting therein during a developing process.

A further object is the provision of a photographic rack embodying the above feature which is simple of construction, inexpensive of manufacture, and easy to handle.

With these and other objects in view, the invention resides in the certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the invention.

Figure 2 is a vertical sectional view through a film developing tank with the rack in position therein.

Figure 3 is a vertical transverse sectional view through the rack per se.

Figure 4 is a fragmentary vertical longitudinal sectional view.

Figure 5 is an enlarged detail vertical sectional view through one of the rack grilles.

Referring to the drawing by reference characters, the numeral 10 designates our improved photographic rack in its entirety which comprises a rectangular shaped horizontally disposed base frame 11 preferably constructed of metal and which is supported in an elevated position by transversely disposed cleats or feet 12 secured to the base frame 11 at opposite ends thereof. These cleats or feet 12 are of wood or other like non-conductor of heat for a purpose to be presently explained.

Supported by the base frame 11 and rising upwardly therefrom in even spaced relation are grille members 13, the same being disposed in longitudinal alinement and between which the film teeth A are inserted during use of the rack. Each of the grille members 13 comprises an inverted U-shaped frame 14, the legs of which are secured in the longitudinal sides of the base frame 11. Secured to the bight portion of the U-shaped frame 14 and extending downwardly therefrom are vertical wires or bars 15, the lower ends of which are fixedly connected to spaced bars 16 extending lengthwise of the base frame member 11, and secured at the opposite ends of the base member as at 17. The lower ends of the vertical wires or bars 15 may be twisted about the bars 16 or fastened in any other desired manner. If desired, the bars or rails 15 may extend horizontally instead of vertically, or the U-shaped frame member 14 may be considered a support for both vertical and horizontal wires which would provide a screen effect.

Fixed to opposite ends of the base frame 11 and rising upwardly therefrom at opposite ends thereof are handles 18, which are bent from a single length of material to provide eyes or loops 19 to which the ends of flexible lifting ropes or cords 20 may be connected.

In use, the negative films A to be developed are inserted in the rack 10 in the spaces between the grille members 13 and are held spaced from each other by reason of these grille members. After the film negatives A have been inserted into the rack, the rack is in turn lowered into a developing solution tank B filled with a developing solution C. Disposed beneath the bottom of the tank B is a burner or heating element D which is provided for heating the solution C within the tank. By reference to Figure 2

of the drawing, it will be seen that the lower edges of the film sheets A are supported above the bottom of the tank B by reason of the feet or cleats 12 which are of heat insulating material. This serves to position the film sheets out of direct contact with the bottom wall of the tank as the heat from the burner D would tend to scorch or burn the negative films. After the films supported by the rack have been subjected to the action of the solution C, the rack may be easily lifted from the tank by grasping the lifting cords 20.

When removed from the tank, the film may be left within the rack to dry. By providing a rack which is relatively open, the solution to which the films are subjected is free to act upon all surfaces of the film during a developing process, and when the rack is removed, there is a free circulation of air around the film sheet to effect a quick drying of the same.

While we have shown and described what we deem to be the most desirable embodiment of our invention, we wish it to be understood that various changes as come within the scope of the appended claims may be resorted to if desired.

Having thus described the invention, what we claim as new and desire to secure by Letters Patent is:—

1. A photographic rack comprising a rectangular shaped horizontally disposed base frame, including spaced and longitudinally and transversely extending members, feet on the under side of said base frame, inverted U-shaped frame members secured to and rising from said base frame and disposed in spaced relation, and handles at opposite ends of said base frame.

2. A photographic rack comprising a rectangular shaped horizontally disposed base frame, including spaced longitudinally and transversely extending members, feet disposed on the under side of the transversely extending members, spaced inverted U-shaped frame members secured to and rising from the longitudinally extending members of said base, and handles at opposite ends of the base frame.

In testimony whereof we affix our signatures.

HERMAN S. BENDER.
A. BENDER.