April 20, 1937. P. G. HOOD 2,078,078

DRYING FRAME

Filed Sept. 20, 1935

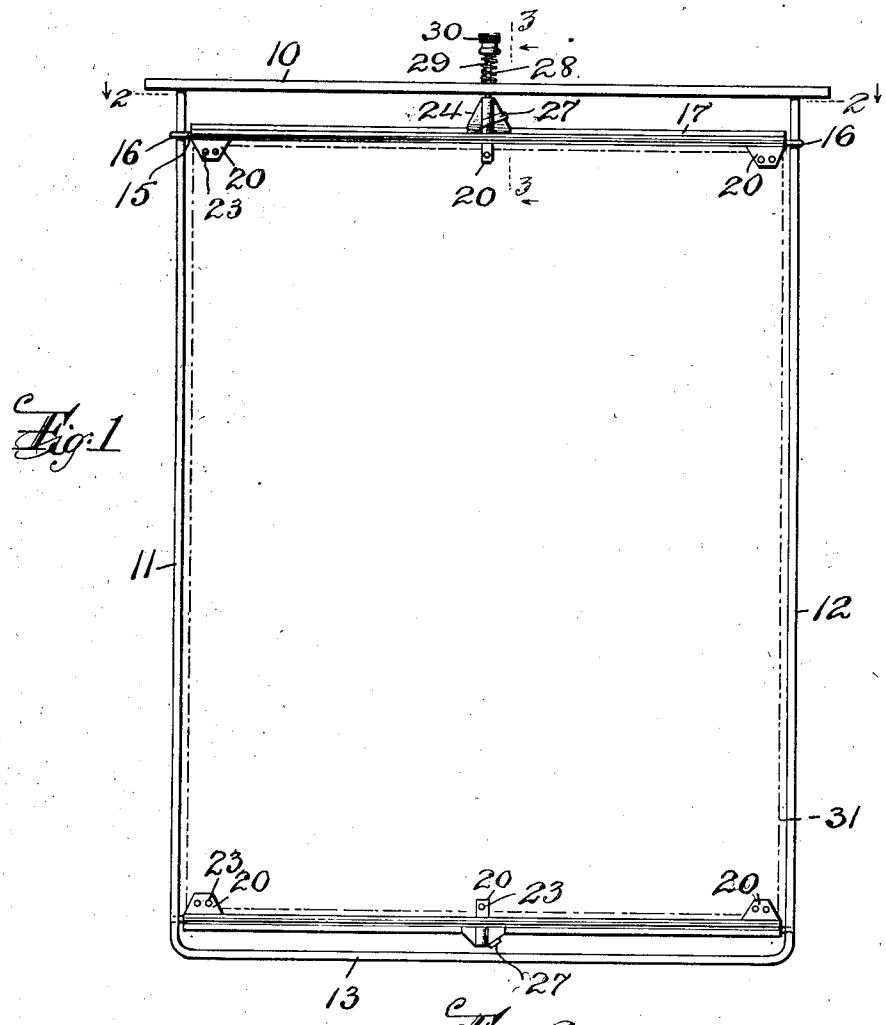
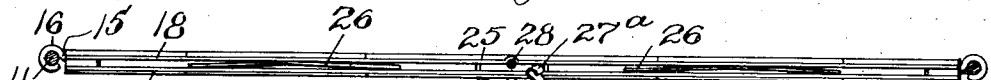


Fig. 2



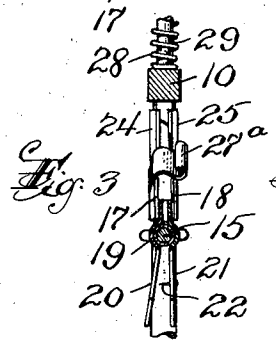


Fig. 3

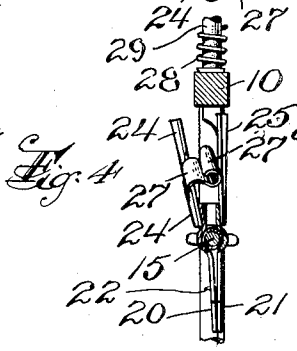


Fig. 4

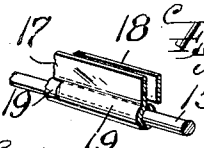


Fig. 5

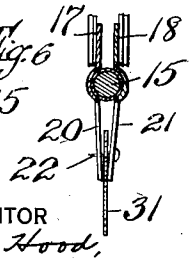


Fig. 6

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DRYING FRAME

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Application September 20, 1935, Serial No. 41,396

2 Claims. (Cl. 95—100)

This invention relates to an improved frame for drying sheets and is particularly adapted for developing and drying photographic films. The particular articles for which it is designed are X-ray films.

The frame is designed to provide a means for readily attaching and detaching the film by fasteners operated simultaneously at one end of the film. The fastening or clamping means at each end are distributed in a manner to give an even tension on the film or other sheet held in the frame. This insures an article which is dried without buckling.

The invention also resides in certain details of construction to be hereinafter more fully described and finally embodied in the claims.

The invention is illustrated in the accompanying drawing in which Figure 1 is a front view of a frame embodying my invention. Figure 2 is a section on line 2—2 in Figure 1. Figure 3 is a section on an enlarged scale taken on line 3—3 in Figure 1. Figure 4 is a view similar to Figure 3 with the clamping means closed. Figure 5 is a detail sectional perspective of part of the clamping device. Figure 6 is a detail section illustrating in more detail the preferred form of means for engaging the film.

The device comprises a frame having a top bar 10, side bars 11 and 12 and a bottom bar 13. The frame supports two clamping units at least one of which is movable. The one that is fixed is shown as mounted on a rod 14 at the bottom of the frame but it can be attached directly to the bottom bar 13.

The rod 15 at the top is the slidable rod, being preferably looped around the side bars as at 16.

The clamping means are secured to the bars and are duplicates in their main parts. They consist of two blades 17 and 18 which have looped parts or knuckles 19 to enable them to rock slightly. The blades extend practically from side to side of the frame and have inwardly extending ears 20 and 21 which are adapted to grasp the sheet between them. The preferred form consists of pins 22 on the ear 21 which pass through the holes 23 in the ear 20 and these penetrate the film to hold it firmly in place and prevent slipping. The ears are spaced apart laterally, usually at each end of the blades and in the center. The blades have finger pieces 24 and 25 which extend from the side opposite the ears so that when the finger pieces are squeezed together the clamping ears are spread apart and when the finger pieces are released the ears snap together. This is due to springs which yieldingly hold the clamps in clamping position. The form shown comprises flat springs 26 seated between the blades 17 and 18. To hold the clamps open I provide spring clips 27 which are fastened to one blade and snap over the other blade and have a turned end 28 which snaps over the opposed fingerpiece. This end also provides a ready means for release when it is sprung out of engagement with the other blade by a flip of the finger.

The top rod 15 is secured to the post 28 which is slidable in the top bar 10 and is influenced by a spring 29 to yieldingly hold the top bar in position. I show the post 28 as soldered to the finger piece 27a of the top bar. The top of the post 28 is screw-threaded to receive a nut 30 whereby the pressure of the spring can be adjusted.

In using the frame the clamps are opened by squeezing the finger pieces together and they are held open by the clips 27. The sheet shown in dotted outline at 31 is placed with its bottom edge between the clamps and the ears 20 and 21 of the bottom bar grasp the sheet when the clip 27 is released. The clamps work in unison and grasp the sheet at the bottom corners and at the center.

The frame is then turned upside down and the frame pushed down with the nut 30 resting on a table or other support. The top edge of the sheet 31, now at the bottom, is placed between the ears at that end and the clip 27 released. This allows the clamps to close in unison on this end of the sheet and when the frame is lifted the spring 29 which was compressed now functions to slide the bar 15 with its ears to stretch the sheet or at least hold it taut. The sheet is now held at its center line and the four corners and is firmly in place for developing and drying.

Various changes can be made in the size and shape of the parts without departing from the scope of the invention.

I claim:—

1. A drying frame comprising a rectangular frame having side bars in parallel relation, clamps at one end of the frame, said clamps being spaced to engage the corners and central part of one end of a sheet, a bar at the other end of the frame slidably arranged on the side bars, a post extending from said slidable bar through the end bar at said other end of the frame, an adjusting nut on the post, a spring between the end bar and the nut clamping de-

vices on the slidable bar to engage the corners of the sheet, and a connection between the devices including finger pieces opposite said post whereby the clamps and post can be operated simultaneously.

2. A drying frame comprising side bars and end bars, fixed clamps at one end of the frame for engaging the ends of a sheet, a slidable bar at the other end of the frame and movable on the side bars, clamps on said movable bar for engaging a sheet, a post extending from the slidable bar and through the end bar adjacent thereto, a spring for yieldingly holding the bar in its normal position, said post extending beyond the frame to serve as a means for pressing said slidable bar for engagement with the film.

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