Feb. 16, 1932. H. KREUDER 1,845,800

FILM HOLDER

Filed Oct. 11, 1930

Fig. 1.

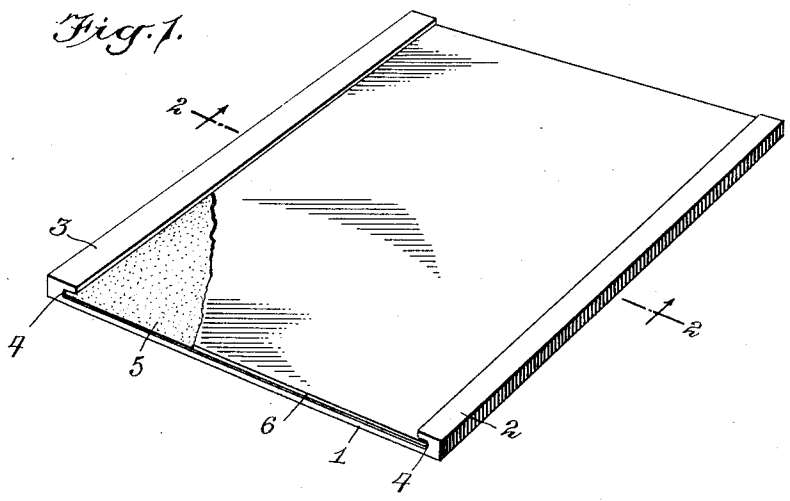


Fig. 2.

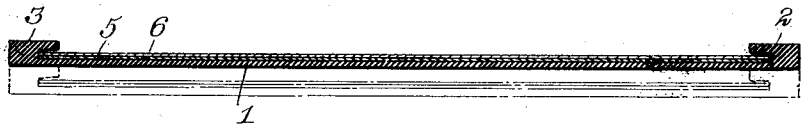
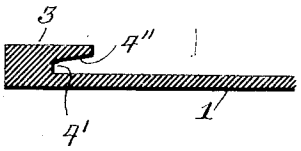


Fig. 3.



WITNESSES

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FILM HOLDER

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This invention relates to an improved film holder or septum wherein cut films may be readily mounted in the dark with ease and dispatch.

Another object of the invention is to provide a film holder of non-metallic material provided with facing film receiving members and a paper backing positioned to prevent the film from sticking to the back of the holder.

In the accompanying drawings—

Figure 1 is a perspective view of a holder disclosing an embodiment of the invention, a film being shown in connection therewith with a part thereof removed. Figure 2 is a sectional view through Figure 1 on the line 2—2, the same being on an enlarged scale. Figure 3 is a fragmentary sectional view of a modified form of holder.

In the accompanying drawings one embodiment of the invention is shown wherein the holder or septum is formed of a shape to receive the conventional film. As shown in the accompanying drawings the septum or holder is made from bakelite, although it may be made from other materials without departing from the spirit of the invention, bakelite, or other insulating material, however, being preferable. A single holder is adapted to receive one film and usually a number of the holders or septums are arranged together and stacked in a container having a developing or other treating fluid. In making the various septums a rectangular base or body 1 is provided which has thickened edges 2 and 3. Each of these edges has a longitudinally positioned groove 4, said grooves being shown in Figures 1 and 2 as being rectangular. These grooves are adapted to receive a protecting or backing paper 5 which may be made of any desired material and which acts to prevent the film 6 from sticking to the base 1. Also, this paper becomes saturated and consequently the film 6 is subjected to the liquid on all surfaces. If desired, the grooves 4 can be made of different shapes, as, for instance, that shown in Figure 3 where the groove 4′ is made with an upper beveled edge 4″.

In order to handle cage 23 properly a bar 43 is soldered, welded, or otherwise secured to the top plate 44 and is provided with upturned ears for receiving the bail 45. From Figure 1 it will be noted that the top plate 44 is preferably identical with the bottom 28 and has a plate 46 of bakelite or other desirable nonmetallic material arranged therebeneath. It will thus be seen that the film is in contact only with bakelite or with bakelite and paper when being subjected to the developing, fixing or washing liquids. The grooves 40 are preferably sufficiently wide to allow the paper 41 and the film 42 to be easily removed therefrom.

It will be noted that by reason of the construction specified the holder or septum holds the films flat from first to last in all its processes of developing, fixing and washing, as the base or body 1 of the holder is unpierced. It will also be noted that the holder is not provided with projections or other means for holding the films from the holder. This causes the films to be held firmly in place by capillary attraction and, therefore, they cannot be dislodged by the current of a developing liquid in a developing container, which might happen in case the base or back 1 was foraminous.

In order that the films may be withdrawn while still wet and at the same time effectively preserved from abrasion of any kind and under the most favorable circumstances, there is introduced with the films into the septums or holders sheets of black paper which come packed between them by the makers.

It will be seen that the film is in contact only with bakelite or other insulating material, or with bakelite and paper, when being subjected to the developing, fixing, and washing liquid. The grooves 4 are preferably sufficiently wide to allow the paper 5 and the film 6 to be easily applied and removed. In the case of certain films, it is necessary to place the same in the holders in an absolutely dark room. Where this is the case the various holders are supplied with paper 5 and then the holders are arranged in a stack while the room is light when afterwards the light is turned off. The various films 6 may then be bowed and slid into the grooves 4.

After a holder has been filled it is placed in a container which is later to receive a developing solution, or is set one side for future handling. The next holder is loaded in the same way, and the second holder after being loaded, is placed on top of the first holder. This operation is carried out until all the holders to be used have been loaded. By reason of the structure set forth the holders may be loaded and stacked without danger of injuring any of the films, and the work done accurately and rapidly in a perfectly dark room. After the holders have been properly loaded they are then subjected to a suitable developing or treating solution in the usual way and the developed or treated films are held spaced apart and in a position for contacting with the solution in a desired manner.

It will be evident that various changes may be made without departing from the spirit of the invention, and also that the device may be made of other materials than those specified, although the specified structure set forth is considered the best structure.

I claim—

1. A film holder adapted to be stacked when not in use, said holder being formed of material having the characteristics of bakelite and provided with facing grooves for receiving a film, the material forming the grooves projecting above one face of the body of the holder whereby the films in the grooves will be spaced from the next adjacent holder, whereby when a plurality of holders with their films are stacked they may be subjected to different solutions without any danger of the films coming in contact with each other or with any object.

2. In a device of the character described, a film holder comprising flat rectangular plates of bakelite provided with an upstanding bead on two of its edges, each bead having a groove with the lower surface thereof coincident with one of the surfaces of said plate and upper surface thereof at an angle thereto and with said grooves facing, whereby a film may be placed in said grooves and have a protecting flange on each side.

3. A bakelite film holder comprising a body having thickened sides whereby said sides will contact and the remaining parts will be out of contact, said remaining parts acting to hold the films whereby the films will be held out of contact therefrom and against abrasion and in position to be acted upon by a flow of liquid through the cage.

4. A film holder comprising a base provided with thickened edges and a groove on each edge, said grooves being adapted to receive the edges of the film, said thickened edges projecting beyond the film whereby when a number of the holders are stacked there will be a space between the film and the next adjacent holder, said grooves being arranged with one wall flush with the base and the other spaced therefrom a sufficient distance to receive the edge of a film and a backing sheet.

5. A film holder for holding films during the developing thereof comprising a body of non-metallic material having a flat back and a pair of thickened edges, each of said edges having a longitudinally positioned groove with one wall flush with one surface of said back for receiving and holding a film, and a backing of paper positioned with its edges extending into said grooves, said paper being arranged between said back and said film whereby the film is prevented from sticking to said back, when the back of the film is subjected to liquid as said paper becomes saturated.

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