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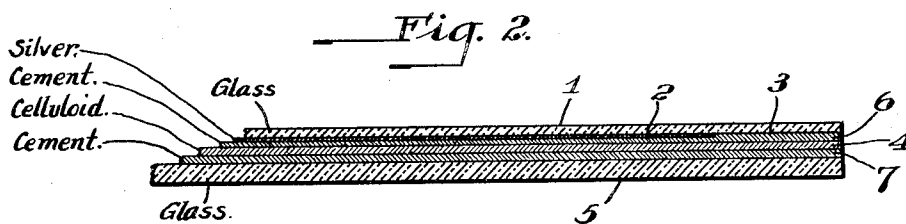
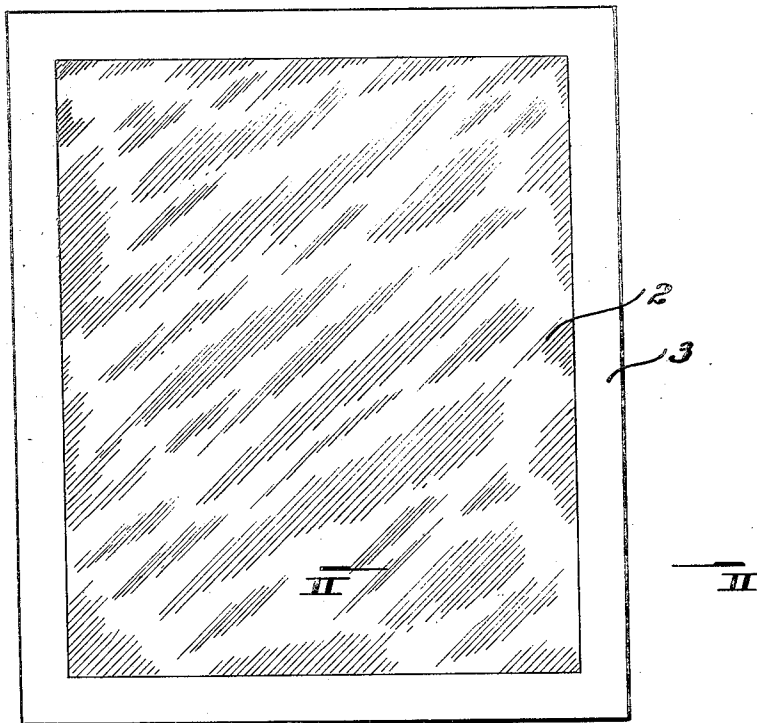
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1,934,802

MOVING PICTURE SCREEN AND METHOD OF MAKING IT

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Fig. 1.



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MOVING PICTURE SCREEN AND METHOD
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3 Claims. (Cl. 88—24)

The invention relates to a moving picture screen and a method of making it. The invention has for its primary object the provision of an improved screen having a very uniform reflecting, and one which has a greater reflecting capacity than those heretofore employed, thus resulting in a brighter, more distinct image than has heretofore been secured in screens heretofore used. A further object is the provision of a screen of improved appearance, easily cleaned and not subject to surface deterioration upon repeated cleaning. A still further object is the provision of a method of producing the screen so as to secure permanency, permit the use of a front sheet of glass of minimum thickness, and reduce the cost of breakage in manufacture to a minimum. One embodiment of the invention is shown in the accompanying drawing, wherein:

Figure 1 is a face view of the screen. And
Fig. 2 is a section on the line II—II of Fig. 1.

In making the shield, a front sheet of glass 1 is silvered upon its rear face with a film or coating 2. This coating does not extend entirely over the back of the sheet, a border portion 3 being left which is free from the silvering. The sheet 1 is then incorporated into a composite plate, which includes a sheet 4 of pyroxylin plastic, such as celluloid, and a back sheet 5 of glass. The three sheets are secured together by means of the layers of cement 6 and 7, the cement used being preferably gelatin, although any other suitable cement may be substituted. The compositing is preferably accomplished in the usual way under heat and pressure, so that the three sheets are secured together permanently in the form of a composite plate. The use of the unsilvered border portion 3 adds to the security with which the front sheet 1 is attached to the sheet 4, as the silver 2 does not have anything like the adherence to the glass as does the cement. The border portion, therefore, insures that the front plate 1 shall be held with the necessary degree of security during the grinding operation, as later described. The border portion thus securely attaches the thin silvered sheet to the reinforcing back, holding it firmly in position and insuring it against movement with respect to the backing during the grinding operation, as later described. If desired the layers of cement might be dispensed with and the celluloid secured to the border 3 of glass and to the back sheet 5 by making the celluloid tacky or sticky by the use of a solvent or plasticiser for the celluloid, such as diethylglycol or acetone. The sheet might also be reduced to the proper

thickness by the use of a sand blast instead of by grinding, although the latter method is preferable.

After the plate has been composited, as above described, it is placed upon a grinding table and the sheet 1 is ground as thin as possible, preferably to a thickness of $\frac{1}{32}$ of an inch or less since the effectiveness of the screen depends upon having a very thin body of glass between the ground surface and the silvering. This grinding operation completes the screen. The screen has a high degree of permanence, since the silvering is protected by the glass sheet 1 and because of the hardness of glass, the front face of the sheet 1 can be cleaned repeatedly and thoroughly without in any way injuring such surface. The cleaning of such a glass surface is also much more easily accomplished than is the case with a metal surface, such as that of the aluminum screens heretofore used extensively with small moving picture outfits. The term "silvering" is used in its broad sense to cover either a coating with silver or quick silver, the coating with silver, however, being preferred and constituting the modern method of silvering. It will be understood that the showing of the layers of material in Fig. 2 is much exaggerated, particularly as to the layers of cement and silver. These are actually mere films of such extreme thinness that it is very difficult to even measure such thickness.

What I claim is:

1. A picture screen comprising a front sheet of very thin glass having its front surface ground and having its rear surface silvered with the exception of a border portion extending around the surface at its edge, a back sheet of glass, and an interposed sheet of pyroxylin plastic extending into said border portion to which both sheets of glass are attached.

2. A reflecting screen comprising a sheet of glass partially coated upon one side with a reflecting material and a sheet of impervious material secured thereto by means of a reinforcing material which encloses the reflecting material.

3. A reflecting screen comprising a sheet of glass ground partially on one side and partially coated upon the other side with a reflecting material and a sheet of glass secured thereto by means of reinforcing plastic material which encloses the reflecting material.

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