July 1, 1924. 1,500,025

A. L. MAYER

LANTERN SLIDE

Filed April 9, 1923

Fig. 4.

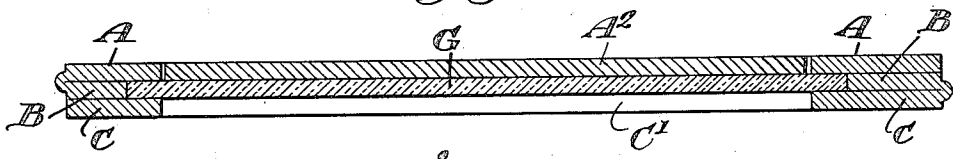


Fig. 1.

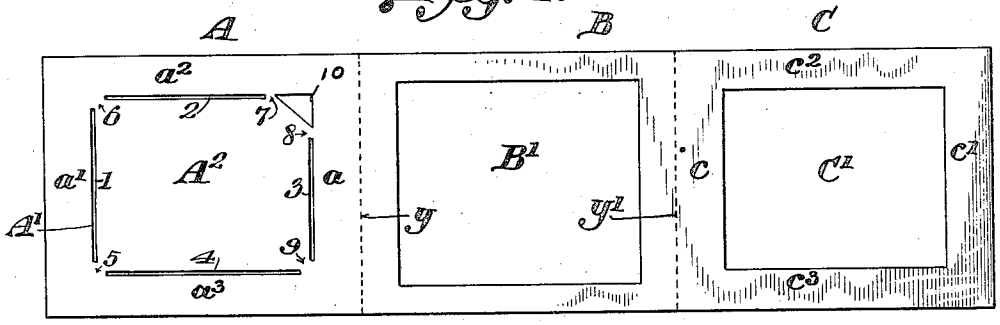


Fig. 2.

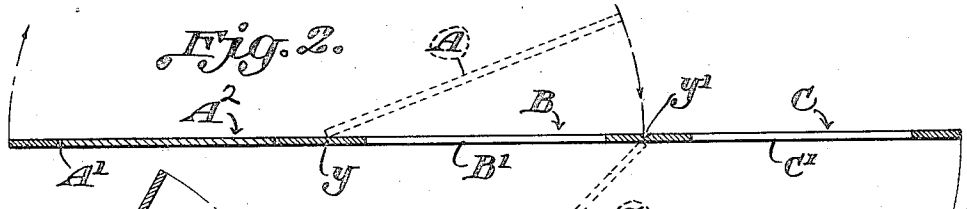


Fig. 3.

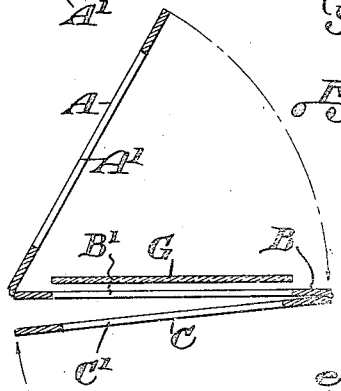
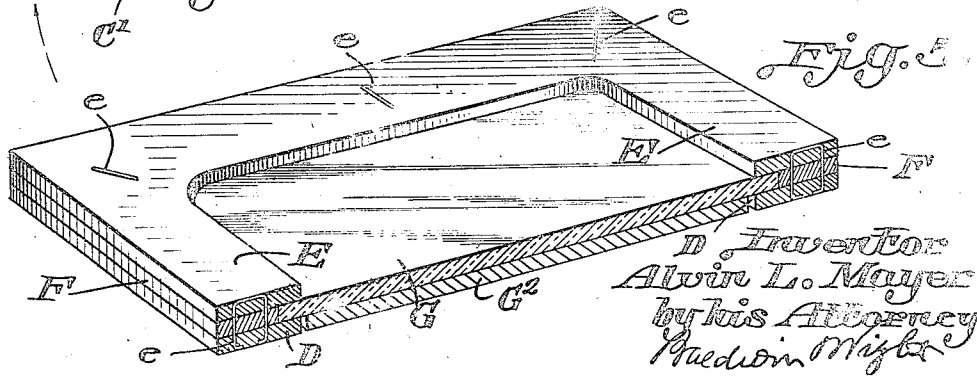


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALVIN L. MAYER, OF LONG ISLAND CITY, NEW YORK.

LANTERN SLIDE.

Application filed April 9, 1923. Serial No. 631,025.

To all whom it may concern:

Be it known that I, ALVIN L. MAYER, a citizen of the United States, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Lantern Slides, of which the following is a specification.

This invention relates to slides for projecting machines, such as magic lanterns, sterescopes, motion picture machines and the like, in which pictures, advertisements, announcements, etc., are printed or otherwise formed on plates of glass or other suitable transparent material of proper size for use in the machines. Such slides are now very largely used in motion picture machines, and commonly the glass plates are assembled for the purpose of handling them while in use, or during packing or transportation.

My invention involves frames for the plates which may be quickly made at small cost, may be easily applied to the plates and when so applied will protect them from breakage or injury.

In carrying out my invention, I form the frame of a plurality of layers of paper or pulp board so formed and so assembled as to hold the picture plate securely in place and to protect it from injury. The plate is of a size considerably less than that of the slide as a whole, thus saving glass and reducing the weight of the slide.

In one form of the invention a blank is employed, scored to form three sections of equal size, each of the sections having a projection opening, the two openings in the end sections being of the same size, while the opening in the middle section is of larger area. The plate is fitted or located in the opening of the middle section and the end sections are folded in opposite directions and brought into contact with opposite sides of the middle section. Inasmuch as the openings in the end sections are smaller than the opening in the middle section and the plate which it contains, the marginal portions of the end frame sections overlap the edges of the plate and thus securely hold it in place.

The frame sections when folded may be secured together in any suitable way.

In order that the emulsion or film side of the plate may be further protected during transportation, the opening in one of the end sections may be temporarily closed by a shield which is easily detached before the plate is exposed.

In another form of the invention the three-part frame is made of three separate pieces instead of being made from a single integral blank.

In the accompanying drawings:—

Figure 1 is a plan view of a frame blank constructed in accordance with my invention.

Figure 2 shows a section of the blank illustrated in Figure 1 and illustrates how the end sections are folded upon the middle section.

Figure 3 is a sectional view, indicating how the glass plate is located in the middle section and how the end sections are folded upon and brought into contact with the middle section.

Figure 4 is a view on an enlarged scale, showing in section the completed slide with a glass plate held and protected in the frame.

Figure 5 is a perspective view of a section of a slide consisting of a transparent plate and a frame made up of three separate sections secured together.

The blank shown in Figure 1 is scored on opposite sides, as indicated at y, y' to form the three frame sections A, B and C which are all of substantially the same size. These sections are formed with projection openings A′, B′, C′; the openings A′ and C′ in the end sections being of the same dimensions, while the opening B′ in the middle section is of greater area. The marginal portions a, a', a^2, a^3 of section A are adapted to register with the marginal portions c, c', c^2, c^3 of the section C when the blank is folded, as indicated in Figure 4.

Figure 2 illustrates the manner in which the end sections are folded upon the middle section, and Figure 3 indicates how the plate is located just before it enters the opening B′. One of the end sections, such as C, may be folded upon the middle section so that its inner marginal portions may form a rest for the plate and then the plate may be located and positioned in the opening of the middle section. The other frame section, such as A, may then be folded upon the

middle section and then the marginal portions of the several sections may be secured together by cement or in other suitable ways.

In order to protect the emulsion or film side of the plate during transportation I may provide a shield marked A^2 in Figures 1, 2 and 4. This shield completely covers the emulsion or film side of the plate and is an additional protection during transportation, making it unnecessary to place protecting layers between the slides during transportation. Such a shield may be formed in the blank shown in Figure 1 in either or both of the sections but only one such shield is necessary. As indicated at the left hand side of Figure 1, the blank is slit or slotted on the lines 1, 2, 3 4, leaving uncut parts 5, 6, 7, 8, and 9 which attach the shield A^2 to the marginal portions of the end section. I also preferably cut out a small part of the shield at 10 so that a tool or the thumb nail may be inserted in this opening and by this means the shield may be detached from the frame before the slide is used for projection purposes. While the shield A^2 is not essential it is really a useful device. It is shown in Figures 1, 2 and 4, but is not shown in Figure 3, indicating that the shield may or may not be used.

The completed slide, shown in Figure 4, is of lantern slide size for standard machines. A single piece of glass is used and this is much smaller than the glass ordinarily employed, thus saving the more expensive glass and reducing the weight of the slide. The slide thus formed has the glass protected on all four edges and in the use of the slide the glass is not apt to come in contact with any object which would injure it. The slides may be conveniently packed for transportation, with the glass plates properly separated and minimum space is occupied by the slides when packed.

In Figure 5 a slide is shown which is similiar to that shown in Figure 4 except that the frame sections are made separately instead of being formed from a single blank. The sections or layers D and E are of the same size and shape, while the middle section F, although of the same exterior dimensions, has a projection opening of larger size to receive the plate G which is of the same size as the opening in the middle layer. When the parts are assembled the edges of the plate are completely enclosed and when the sections are fastened by suitable devices, as indicated at *e*, the plate will be securely held in place.

In Figure 5 I have shown a shield G^2 similiar to that shown in Figure 1 and I prefer to use such a shield.

Lantern slides as usually constructed contain two glass plates, one bearing the picture or other object to be projected and the other being employed to protect the picture plate. Each of these plates is of standard lantern slide size and the two plates are commonly bound together by passepartout or similar material. Slides made in this way are expensive. A large amount of glass in each slide is used and the slides are heavy to handle and make transportation charges large.

By my improvements a single piece of glass is used, thus affording a considerable saving in the material and this expense is still further decreased by reason of the fact that the glass is of materially less area than the slide as a whole. The single glass plate is completely protected from breakage or injury in handling, packing or transportation and is adapted for use in standard machines.

The transparency shield employed is also an important feature of the invention. As before stated, a single shield may be used to protect one side of the transparency or shields may be employed to protect both sides thereof.

I claim as my invention:—

1. A lantern slide comprising three permanently joined sections or layers folded the one upon the other formed from a single piece of material and each having a projection opening in it, the opening in the middle section being of greater area than the openings in the other sections and a transparent member closely fitted in the opening of the middle section and which is overlapped on opposite sides by the marginal parts of the other sections.

2. A lantern slide comprising three permanently joined sections formed from a single piece of material, the two outer sections being folded flat-wise on the middle section, each section having a projection opening in it, the opening in the middle section being of greater area than the openings in the other sections and a transparent member closely fitted in the opening of the middle section and which is overlapped on opposite sides by the marginal portions of the other sections.

3. A frame blank for a lantern slide plate or transparency consisting of three permanently joined foldable sections or layers formed from a single piece of material and each having a projection opening in it, the opening in the middle section being of greater area than the opening in the other sections.

4. A lantern slide comprising three sections each having a projection opening in it, the opening in the middle section being of greater area than those in the outer sections, a transparent member fitted in the middle sections and which is overlapped by the marginal portions of the outer sections and a shield held temporarily in the opening of one of the outer sections.

5. A lantern slide comprising three sections formed from a single piece of material and each having a projection opening in it, the opening in the middle section being of greater area than those in the outer sections, a transparent member fitted in the opening of a middle section and which is overlapped on opposite sides by the marginal portions of the outer sections and a shield temporarily held in the opening of one of the outer sections.

6. A lantern slide transparency frame comprising sections or layers having projection openings in them for exposing the transparency and supporting a removable protecting shield detachably connected with the frame and having a cut away portion for the insertion of a finger or tool to facilitate in withdrawing the shield from the frame.

7. A lantern slide transparency frame comprising sections or layers having projection openings in them for exposing the transparency and supporting a removable protecting shield connected with the margin of the frame by readily breakable parts and thus detachably connected with the frame and having a cut away portion for the insertion of finger or tool to facilitate in withdrawing the shield from the frame.

8. A lantern slide comprising a frame consisting of a plurality of layers having projection openings in them, a transparent member for projection purposes within the frame, and a shield for protecting the transparent member during transportation which is supported in the frame, covers one side of the transparent member and is bodily removable from the frame to expose the transparent member for projection purposes.

9. A lantern slide comprising a frame consisting of a plurality of layers having projection openings in them, a transparent member for projection purposes within the frame, and shields for protecting both sides of the transparent member during transportation which are supported in the frame and are bodily removable from the frame to expose the transparent member for projection purposes.

10. A lantern slide comprising three sections or layers each having a projection opening in it, the opening in the middle layer being of greater area than the opening in the outer layers, a transparent member for projection purposes fitted in the opening of the middle layer, and a shield to protect the transparent member during transportation which is supported in one of the outer layers and is bodily removable therefrom to expose the transparent member for projection purposes.

11. A frame for a lantern slide comprising three layers each having a projection opening in it, the opening in the middle layer being of greater area than the opening in the outer layer to receive a transparent member and a shield temporarily supported in the opening of one of the layers adapted to cover and protect the transparent member during transportation but which is bodily removed from the frame for projection purposes.

In testimony whereof, I have hereunto subscribed my name.

ALVIN L. MAYER.