

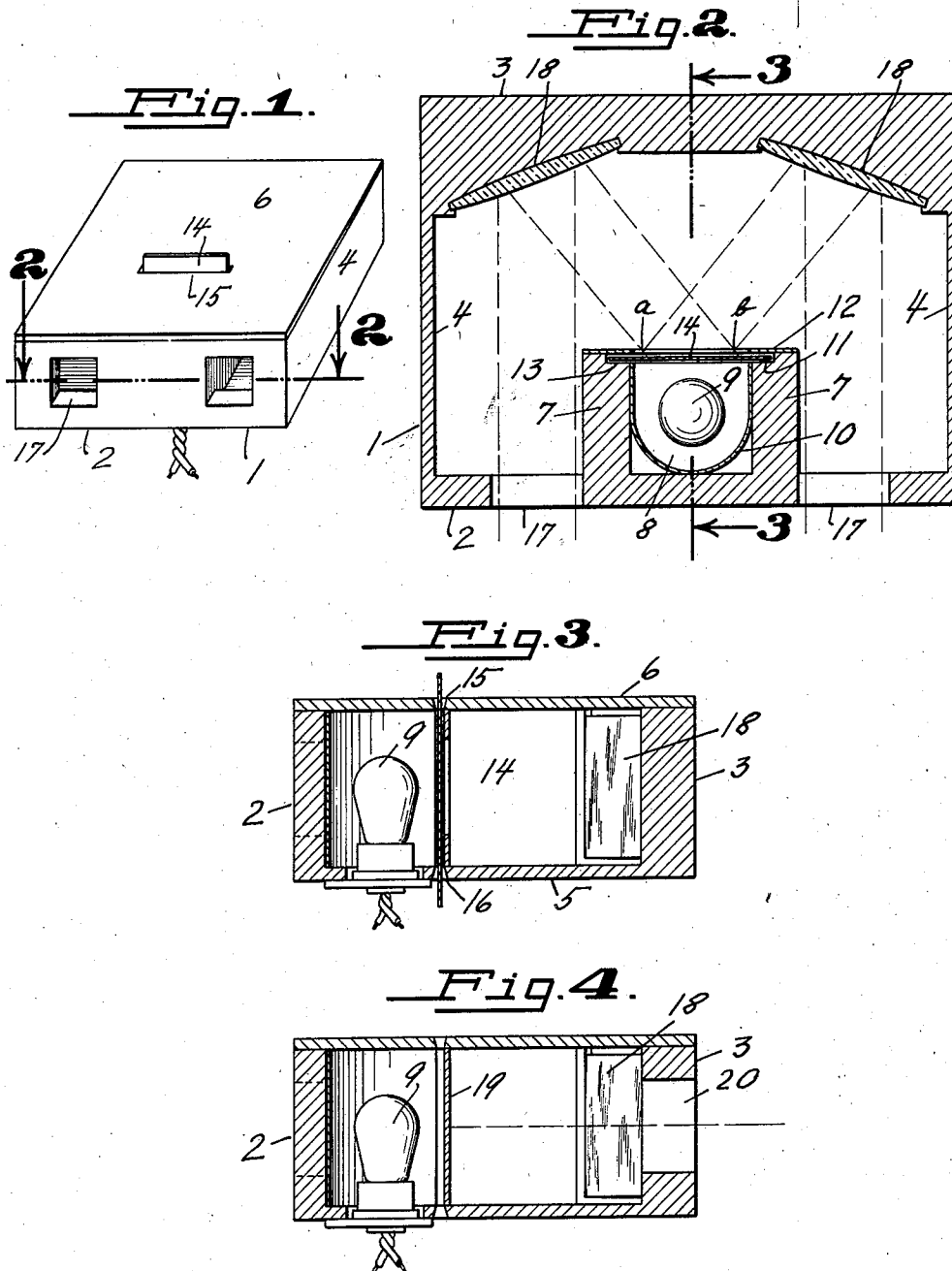
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C. A. RASCO

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STEREOSCOPIC APPARATUS

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INVENTOR,
CHARLES A. RASCO.

BY

A. Schnapp
ATTORNEY.

UNITED STATES PATENT OFFICE

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STEREOSCOPIC APPARATUS

Charles A. Rasco, Oakland, Calif., assignor of
one-half to Rozelle L. Williams, Oakland, Calif.

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4 Claims. (Cl. 88—29)

The present invention relates to improvements in a stereoscopic apparatus, and its principal object is to provide an apparatus of the character described in which a stereoscopic effect is produced by the use of a single image.

A further object of my invention is to provide an apparatus of the character described that is very simple in construction, and easy to use.

A still further object of the invention is to provide an apparatus of the character described that lends itself readily to use in connection with a continuous film as well as in connection with individual slides.

A further object of the invention is to provide a stereoscopic apparatus that is adapted for home use, and also readily adaptable for use in connection with coin-controlled machines, particularly of the type in which a comparatively short continuous film is used by a spectator upon the insertion of a small coin.

It is further proposed to provide a stereoscopic apparatus that is readily convertible into an apparatus adapted for use in motion picture houses, allowing individual spectators equipped with the device to view a motion picture there-through for obtaining a stereoscopic effect.

And finally it is proposed to provide an apparatus of the character described, that is so simple in construction as to be portable, and adapted for carrying around and for use in the same easy manner as a pair of opera glasses.

Further objects and advantages of my invention will appear as the specification proceeds, and the novel features thereof will be fully set forth in the claims hereto appended.

The preferred forms of my invention are illustrated in the accompanying drawing, forming part of this application, in which:

Figure 1 shows a perspective view of my stereoscopic apparatus;

Figure 2, a horizontal section taken along line 2—2 of Figure 1;

Figure 3, a vertical section taken along line 3—3 of Figure 2; and

Figure 4, a similar section, showing a slightly modified form of the invention.

While I have shown only the preferred forms of my invention I wish to have it understood that various changes or modifications may be made within the scope of the claims hereto attached, without departing from the spirit of the invention.

In its preferred form, my invention comprises a box 1, which may be rectangular in shape, and which consists of a front wall 2, a rear wall 3, 55

and side walls 4. It is also provided with a bottom 5 and a top 6, which may be made removable by any suitable means.

The front wall 2 has two parallel partitions 7 extending into the box from an intermediate portion thereof, the partitions running parallel to one another and being co-extensive in length, so as to form a light chamber 8 in which is mounted a source of light, indicated at 9.

The light chamber may be provided with a suitable reflector 10 for intensifying the light passing through the open rear end of the light chamber.

The rear ends of the partitions are suitably recessed, as shown at 11, and covered by a frame 12 to provide grooves 13 for a slide, indicated at 14. This slide may be of the conventional type used in projection machines, to carry a single individual image, or may be in the nature of a film carrying a continuous series of images, as used in the motion picture industry.

The top and bottom of the box are provided with suitable slots 15 and 16 aligned with the guide grooves, so as to allow slides or films to be passed vertically through the box in the rear of the light chamber.

The front wall is formed with suitable eye holes 17 on opposite sides of the light chamber and the rear wall has two reflectors 18 arranged in the line of sight of a person looking through the eye holes. These reflectors are mounted at reverse angles to the lines of sight, so as to face the slide or film disposed at the rear end of the light chamber.

The reflectors are preferably made in the form of magnifying glasses, with a silver coating upon the rear faces thereof.

The manner in which my invention operates will be readily understood from the foregoing description.

The light rays from the source of light 9 throw the image from the slide or film upon the two reflectors, and each of the latter reflects the image through the eye holes.

It will be noted that the two images reflected through the eye holes, although coming from the same source, are not alike, but that each image is slightly distorted on account of the angular position of its reflector.

Following a point on the slide or film marked *a*, for instance, it will be noted that this point is reflected from the left hand reflector near the left side thereof, while the same point is reflected from the right hand reflector also from the left side.

But in the left hand reflector, the point at which reflection takes place, is closer to the left eye than the corresponding point on the right hand reflector is to the right eye, so that the right eye sees the point at a different distance than does the left eye.

The same is true with reverse effect for the point *b* on the slide or film, which point is seen by the left eye at a greater distance than by the right eye. In other words, the left eye looks at a picture which slants away from it in one direction, while the right eye sees the picture which slants away from it in a reverse direction, both pictures being distorted, and the two eyes co-operating in reconstructing a single image out of the two pictures, with a definite third dimension, or depth effect.

The form shown in Figure 4 differs slightly from that shown in Figures 1 to 3, inclusive, and this form is intended to be used for viewing motion pictures or other images produced outside the box.

In this form, a screen 19 is substituted for the slide or film of the other form, and an opening 20 is provided in the rear wall opposite the screen. When used by a spectator at a motion picture theatre, the latter would direct his apparatus toward the screen of the theatre, much in the manner of opera glasses, and the pictures of the theatre screen would fall upon the screen 19 to be reflected by the two reflectors 18 to the eyes of the spectator in the manner previously described.

It is apparent that my invention lends itself to many different uses. In its simplest form, as shown and described, it is adapted particularly for individual home use, the operator successively inserting slides to be viewed through the slots 15 and 16.

If continuous films are to be exhibited, it would be a simple matter to provide a means for feeding a film through the slots 15 and 16 in the intermittent movement required for the display of motion pictures.

It would also be a comparatively simple matter to add a suitable coin-control, whereby a film would be released for feeding through the apparatus, only upon insertion of a coin.

It is also apparent that, while Figures 3 and 4 show different forms, one intended for viewing a film passing through the box, and the other for viewing a picture thrown upon an outside screen, the two forms may be easily combined into one, if desired. The screen 19, for instance,

might be made insertible in the form shown in Figure 3, in the same manner as the slide of said form, and the hole 20 might be provided in the form 3 with suitable means for shutting the same, when not desired.

The source of light 9 is shown in the drawing as provided with wires for connecting to a conventional house socket, but it would be possible, of course, to mount a small battery upon, or inside the box, as a source of power to render the device more available for carrying around.

I claim:

1. A stereoscopic apparatus comprising a box, means for mounting a film therein with an image on said film, the box having a pair of eye holes on opposite sides of the film, a source of light mounted behind the film and between the eye holes, and a pair of reflectors mounted in the box at reverse angularities in the line of sight of the eye holes and so as to face the image.

2. A stereoscopic apparatus comprising a box, means for mounting a film therein with an image on said film, the box having a pair of eye holes on opposite sides of the film, a source of light mounted behind the film and between the eye holes, and a pair of magnifying reflectors mounted in the box at reverse angularities in the line of sight of the eye holes so as to face the image.

3. A stereoscopic apparatus comprising a box having a front wall and a rear wall, partitions projecting into the box from an intermediate section of the front wall, a slide mounted upon the inner ends of the partitions, a source of light mounted between the partitions, the front wall having eye holes on opposite sides of the partitions, and reflectors mounted on the rear wall in the line of sight of the eye holes and at reverse angularities to the line of sight so as to face the slide.

4. A stereoscopic apparatus comprising a box having a front wall and a rear wall, partitions projecting into the box from an intermediate section of the front wall, a slide mounted upon the inner ends of the partitions, a source of light mounted between the partitions, the front wall having eye holes on opposite sides of the partitions, and reflectors mounted on the rear wall in the line of sight of the eye holes and at reverse angularities to the line of sight so as to face the slide, the reflectors being constructed to magnify the images reflected through the eye holes.

CHARLES A. RASCO.