J. H. CROSIER.

DISSOLVING SHUTTER FOR KINETOSCOPES.

APPLICATION FILED AUG. 13, 1908.

919,324. Patented Apr. 27, 1909.

Fig. 1.

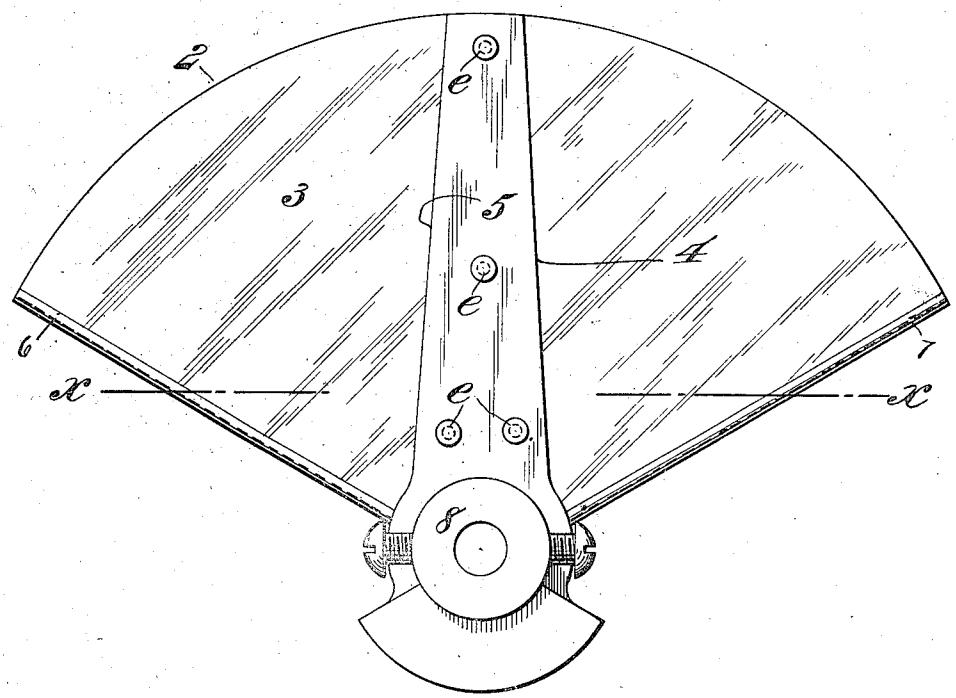
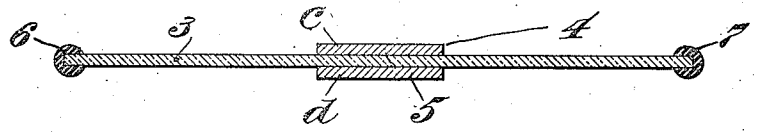


Fig. 2.



WITNESSES:

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DISSOLVING-SHUTTER FOR KINETOSCOPES.

No. 919,324. Specification of Letters Patent. Patented April 27, 1909.

Application filed August 13, 1908. Serial No. 448,298.

To all whom it may concern:

Be it known that I, JOHN H. CROSIER, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dissolving-Shutters for Kinetoscopes, of which the following is a specification.

My invention has relation to a shutter for dissolving one moving object or picture into other in throwing them onto a screen and thereby avoiding as far as possible, visible flickerings of the projected object or picture both as to background or field and objects or figures.

The prior art discloses types of means claiming to obviate flickerings in moving picture machines by the Letters Patent No. 720,931, of February 17th, 1903; No. 722,382, of March 10th, 1903; No. 777,381, of December 13th, 1904, and No. 832,112, of October 2nd, 1906.

According to my present invention the dissolving shutter, consists of a sector-shaped semi-transparent body having opaque central strips on both sides thereof and having the radial edges thereof and both front and back faces adjacent said edges rendered opaque.

The shutter is adapted to be mounted on a driven shaft and to be rotated at preferably a greater speed than the pictures upon the film are being projected, whereby to all appearances the background or field of the picture projected appears to the eye as fixed and only the objects or figures movable, within the field or background, but without visible flickerings and with high lights about the objects or figures sharply defined.

My present invention stated in general terms, consists of a dissolving shutter constructively arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, in which—

Figure 1, is a front elevational view enlarged, of a dissolving shutter embodying the essential main features of this invention and adapted for application to any type of kinetoscope; and Fig. 2, is a transverse sectional view on the line *x*, *x*, of Fig. 1, showing a preferred manner of arranging the same.

Referring to the drawings 2, represents the shutter, consisting of a sector shaped semi-transparent body 3, having two central opaque strips 4 and 5, on opposite sides and secured thereto. The sector-like body 3, preferably consists of either a decidedly yellowish mica, or a decidedly white or grayish mica. The opaque strips 4 and 5, may be composed of brass or any other metal. The respective strips are preferably, arranged so as to taper from the inner ends where they are formed into a hub 8, to the outer free end. The hub 8, is adapted to be mounted on and driven by the shaft of any kinetoscope, for example, of the type of that illustrated in the U. S. Patent No. 722,382. The radial edges 6 and 7, of the body 3, as well as the front and back faces of the body adjoining such edges are, respectively, coated with shellac or other suitable material to render such edges 6, 7, substantially opaque.

In practice it has been fully demonstrated that if the said dissolving shutter is revolved at preferably a speed two or more times greater than the moving picture film is being passed in the path of an intense light and the lens of a kinetoscope, the film reproduction upon the screen will appear without visible flickerings, and hence without annoyance to the spectators who are viewing the picture upon the screen.

In viewing moving pictures on a screen according to my invention backgrounds or fields of all such appear to the eye as fixed and only the objects or figures as movable; and moreover both are more clearly or sharply defined as are also high lights and colorings in the moving projected pictures. In instances, where printed matter is presented in high light upon dark grounds visible flickerings to the eye of such are reduced to such an extent as to be practically unobservable.

The described dissolving shutter of my said invention is adapted to be revolved in a kinetoscope between the traveling film influenced by an intense light and the lens of the machine for magnifying the picture to be projected upon a screen for accomplishing the purposes of my said invention.

The shutter of my invention is adapted for use in any of the well known types of machines for effectively obviating flickerings in presenting a moving picture on a screen.

Having thus described the nature and ob-

jects of my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A dissolving shutter for kinetoscopes, comprising a semi-transparent sector shaped structure having a radial opaque portion and opaque radial edges, substantially as and for the purposes described.

2. A dissolving shutter for kinetoscopes, comprising a semi-transparent sector shaped structure having a central radial opaque portion and opaque radial edges and the front and rear faces adjoining said edges also opaque, substantially as and for the purposes described.

3. A dissolving shutter for kinetoscopes, comprising a semi-transparent sector shaped structure having a central radial opaque portion, a hub, and opaque radial edges, substantially as and for the purposes described.

4. A dissolving shutter for kinetoscopes, comprising a semi-transparent sector shaped structure having an opaque radial central portion and the front and rear faces adjoining the radial edges of the structure opaque, substantially as and for the purposes described.

5. A dissolving shutter for kinetoscopes, comprising a semi-transparent sector shaped structure having a hub, a tapering radial central opaque portion extending to the peripheral edge of the structure, the greatest width of said tapering portion being adjacent the hub, opaque radial edges and front and rear opaque faces adjoining said edges, substantially as and for the purposes described.

6. A dissolving shutter for kinetoscopes, comprising a semi-transparent sector shaped structure having an opaque radial portion tapering to the peripheral edge of the structure and provided with a hub, the greatest width of said tapering portion being adjacent the hub, and with front and rear opaque faces adjoining the radial edges of said structure, substantially as and for the purposes described.

In witness whereof, I have hereunto set my signature in the presence of two subscribing witnesses.

JOHN H. CROSIER.

Witnesses:

THOMAS M. SMITH,

G. M. CONNERTON.