T. B. EASTMAN.

DISSOLVING VIEW MACHINE.

APPLICATION FILED JAN. 20, 1905. RENEWED APR. 13, 1907.

1,003,094. Patented Sept. 12, 1911.

Fig. 3.

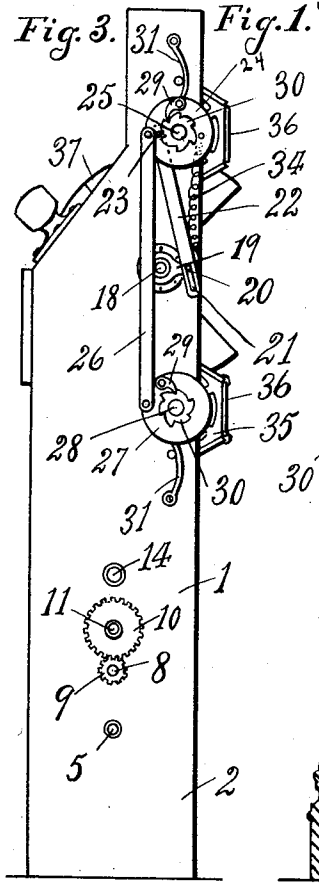


Fig. 1.

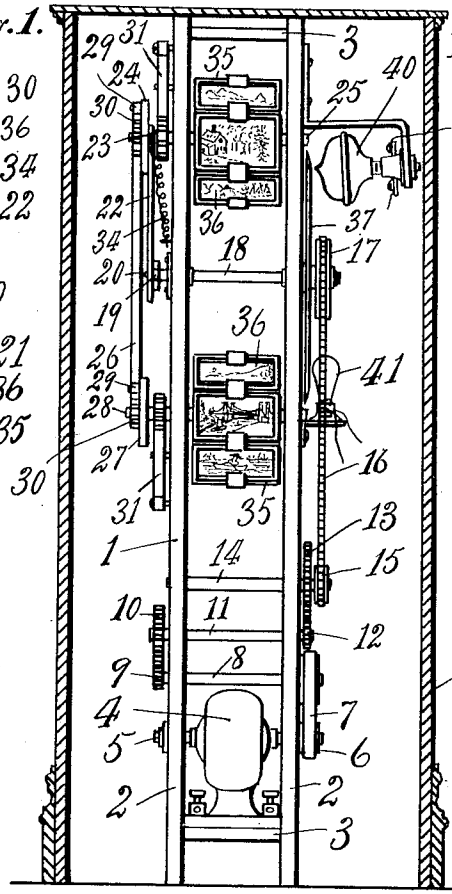


Fig. 2.

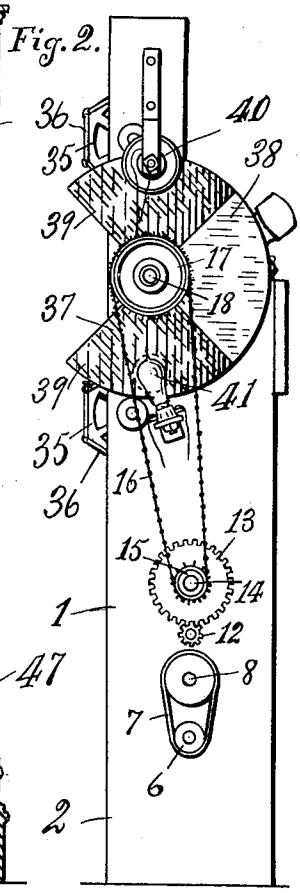
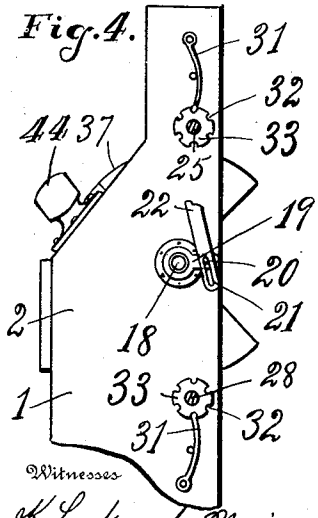


Fig. 4.



Witnesses

K. Lockwood-Nevins

Bessie Gorfinkel.

Fig. 5.

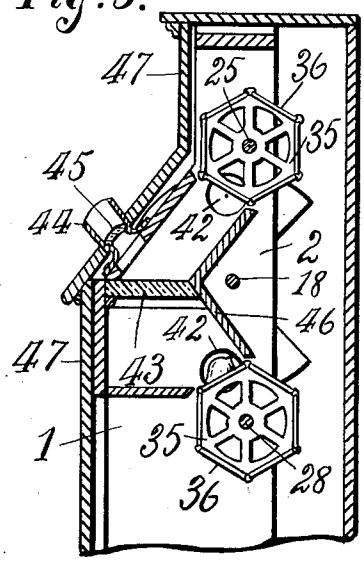
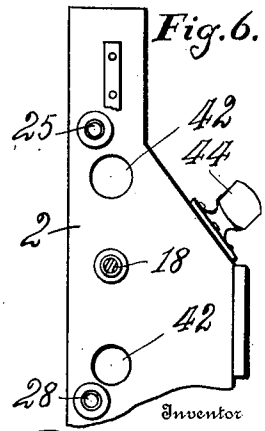


Fig. 6.



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UNITED STATES PATENT OFFICE.

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DISSOLVING-VIEW MACHINE.

1,003,094. Specification of Letters Patent. **Patented Sept. 12, 1911.**

Application filed January 20, 1905, Serial No. 242,007. Renewed April 13, 1907. Serial No. 368,085.

To all whom it may concern:

Be it known that I, TARLETON B. EASTMAN, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Dissolving-View Machines, of which the following is a specification.

This invention relates to a machine for exhibiting dissolving views, the object of the invention being to provide an apparatus of this character of small compass by which a succession of dissolving views may be seen through a lens, either single or stereoscopic. The machine may be used in connection with a slot device for permitting a person depositing a coin to look at a certain series of views, or may be used without such slot device. As such slot device forms no part of my present invention it is not shown herein.

In the accompanying drawing, Figure 1 is a vertical section of the apparatus; Fig. 2 is a side view of the mechanism and the frame thereof removed from the casing; Fig. 3 is a similar view of the other side of the frame; Fig. 4 is a side view of the upper part of the frame, the disks being removed to show the friction wheels; Fig. 5 is a vertical longitudinal section of the upper part of the apparatus; Fig. 6 is a view of the upper portion of the opposite side of the apparatus to that shown in Fig. 4, certain parts being removed.

Referring to the drawings, 1 represents a frame, consisting of two uprights 2 united at the top and bottom by cross pieces 3. The apparatus is illustrated herein as driven by an electric motor, although other power may be used. The motor is shown at 4, between the two uprights, and on the shaft 5 of the motor, outside the frame, is mounted a pulley 6 which drives, by a belt 7, a shaft 8 carrying a pinion 9 which meshes with a gear wheel 10 on a transverse shaft 11, which carries a pinion 12, meshing with a gear wheel 13 on a transverse shaft 14, the object of the gearing being to reduce the speed of the latter shaft relatively to the speed of the electric motor shaft. On said latter shaft 14 is mounted a sprocket wheel 15 around which travels a sprocket chain 16 which also travels around a sprocket wheel 17 upon a shaft 18. Said latter shaft carries a short crank 19 having at the end a pin 20 which passes into a slot 21 in the lower end of a pitman 22 pivoted at 23 to a disk 24 loose on a transverse shaft 25. The rotation of the shaft 18 thus produces an oscillating motion of the disk 24. The object of providing a slot in the lower end of the pitman is to obtain lost motion between the crank and pitman, in order that the disk will advance during only about one-fourth of the time of one revolution of the shaft 18, the object of which will be hereinafter explained. Said disk 24 is connected by a link 26 to a second disk 27 loose upon a lower shaft 28, so that said disks oscillate in unison. Said disks carry pawls 29 which engage ratchet wheels 30 fast to the shafts 25, 28, so that by the oscillation of said disks there is obtained an intermittent rotation of said shafts. In order to retain each shaft at the point to which it has been rotated there is provided a spring 31 having a rounded end which enters in succession notches 32 in a friction disk 33 mounted upon the shaft, said notches corresponding with the teeth of the ratchet wheel. The weight of the link 26 is counterbalanced by a spring 34, but a weight may also be used for this purpose. Said shafts 25, 28 carry between the uprights polygonal drums 35 the faces of which form supports upon which are mounted pictures 36. While both of said shafts rotate intermittently it is arranged that each shaft is advancing while the other shaft is stationary. It will be observed that for this purpose the pawls point in opposite directions. Therefore while one pawl is operative the other is inoperative.

Upon the shaft 18 is mounted outside the frame, a segment 37, of which the central section 38 is opaque and occupies about one-fourth of a circle and on each side thereof are two sections 39 made preferably of celluloid and shaded so as to be more transparent at the ends farther from the opaque central portion. Upon the outside of the frame and outside said segment are mounted upper and lower electric lamps 40, 41 opposite to the path traversed by the opaque portion in its revolution. The frame is formed with holes 42 through which the light can pass unless shut off by said opaque portion 38 or after passing through the

more or less transparent portions 39. There is provided between the two uprights a thick sheet of plate glass 43 at such an angle that a person looking down upon said plate glass through the sight hole 44 and lens 45 therein will see either a picture of the lower series through the glass, if said lower series is illuminated, and the upper series is in darkness, or an image of a picture of the upper series, if the lower series be in darkness and the upper series illuminated. When the celluloid or partly transparent portions pass between the lamps and the pictures, a picture of each series is seen, one direct and one by reflection, and the two pictures commingle for a time, one gradually fading out and the other becoming stronger until the first disappears altogether. There is provided a V-shaped piece of wood 46 between the two uprights forming a shutter for the light between the two series of pictures.

The lamp 40 is made to give a stronger light than the lamp 41, this being needed to illuminate the upper series of pictures which are seen by reflection and therefore require a stronger light than those seen directly through the glass 43.

If desired, between the two partly transparent portions and opposite to the opaque segment, there may be provided variously colored glass pieces which may throw lights of various colors upon the pictures to produce a pleasing effect.

The whole apparatus is inclosed in a suitable casing 47 in which is formed the sight hole 44, having the lens 45 mounted therein.

I claim:—

1. In a view machine, the combination of a plurality of individual supports for pictures, a casing having a sight hole, a sheet of glass so arranged relatively to said sight hole and supports that two of the pictures thereon are visible from said sight hole simultaneously, one through the glass and the other by reflection therefrom, means for illuminating first the picture on one of said supports exclusively, and then the picture on the other support exclusively, and means for moving the supports whereby a fresh pair of pictures is brought into the visible position, substantially as described.

2. In a dissolving view machine, the combination of a plurality of individual supports for pictures, a casing having a sight hole, a sheet of glass so arranged relatively to said sight hole and supports that two of the pictures thereon are visible from said sight hole simultaneously, one through the glass and the other by reflection therefrom, means for illuminating first the picture on one of said supports exclusively, then the pictures on both supports, and then the picture on the other support exclusively, and means for moving the supports whereby a fresh pair of pictures is brought into the said visible position, substantially as described.

3. In a dissolving view machine, the combination of a plurality of individual supports for pictures, a casing having a sight hole, a sheet of glass so arranged relatively to said sight hole and supports that two of the pictures thereon are visible from said sight hole simultaneously, one through the glass and the other by reflection therefrom, means for illuminating first the picture on one of said supports exclusively, then the pictures on both supports, and then the picture on the other support exclusively, and means for moving the supports whereby a fresh pair of pictures is brought into the said visible position, said moving means being in operation for each support only when the picture thereon is not illuminated and exposed to view through the sight hole, substantially as described.

4. In a dissolving view machine, the combination of a suitable frame, a pair of drums revolubly supported thereon, each drum having supports for a plurality of pictures, means for revolving said drums intermittently and alternately, a casing having a sight hole, a sheet of glass so arranged that a single picture on each drum is visible from said sight hole simultaneously, one through said glass, and the other by reflection therefrom, and means for illuminating first one of said pictures exclusively, then both simultaneously, and then the other exclusively, substantially as described.

5. In a dissolving view machine, the combination of a suitable frame, a pair of drums revolubly supported thereon, each drum having supports for a plurality of pictures, means for revolving said drums intermittently and alternately, a casing having a sight hole, a sheet of glass so arranged that a single picture on each drum is visible from said sight hole simultaneously, one through said glass, and the other by reflection therefrom, and means for illuminating first one of said pictures exclusively, then both simultaneously, and then the other exclusively, the illuminating means being operative on either picture only when the moving means is inoperative on the drum supporting said picture, substantially as described.

6. In a dissolving view machine, the combination of a plurality of individual supports for pictures, a casing having a sight hole, a lens therein, the sight hole being contracted below said lens, a sheet of thick glass so arranged relatively to said sight hole that two of the pictures are visible from said sight hole, one through the glass and one by reflection therefrom, and means for variably illuminating the pictures on the supports alternately, substantially as described.

7. In a picture exhibitor, the combination

with a pair of rotatably mounted cylinders adapted to receive pictures, and to display the same, one at a time, of means by which the cylinders may be alternately rotated through an arc equal to the width of one of the pictures, and means whereby the cylinders will be alternately illuminated making a picture visible on one cylinder, while the unilluminated cylinder is rotated, substantially as described.

8. In a picture exhibitor, the combination with two rotatably mounted cylinders one of which is adapted to be seen directly by an observer, and the other to be seen by reflection, of means by which the cylinders may be alternately rotated through a fraction of their circumferences, and means adapted to alternately illuminate the cylinders, substantially as described.

9. The combination with a plurality of sets of pictures disposed at an angle to each other when in position to be exhibited, of a reflector disposed between said pictures and making an equal angle with each and having a degree of transparency such as to permit one picture to be viewed directly when illuminated, and to reflect the image of the other picture when it is illuminated, means for illuminating one of said pictures at a time, and means for shifting a picture of one set while a picture of the other set is illuminated, substantially as described.

10. The combination with a transparent reflector, of means for rendering a group of pictures to be visible, one at a time from in front of said reflector, means permitting a second group of pictures to be visible one at a time from the same point by reflection from said reflector, and means for alternately illuminating said pictures, substantially as described.

11. The combination with a transparent reflector of means for rendering a group of pictures to be visible, one at a time from in front of said reflector, means permitting a second group of pictures to be visible one at a time from the same point by reflection from said reflector, and automatic means for alternately illuminating said pictures, substantially as described.

12. The combination with a transparent reflector, of means for rendering a group of pictures to be visible one at a time from in front of said reflector, means permitting a second group of pictures to be visible one at a time from the same point by reflection from said reflector, means for alternately illuminating said pictures, and means for shifting a picture of one group while a picture of the other group is illuminated, substantially as described.

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

TARLETON B. EASTMAN.

Witnesses:
FRANCIS M. WRIGHT,
BESSIE GORFINKEL.