

A. Z. BAKER.
TOY KINEMATOGRAPH.
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Patented Sept. 5, 1911.

1,002,483.

Fig. 2.

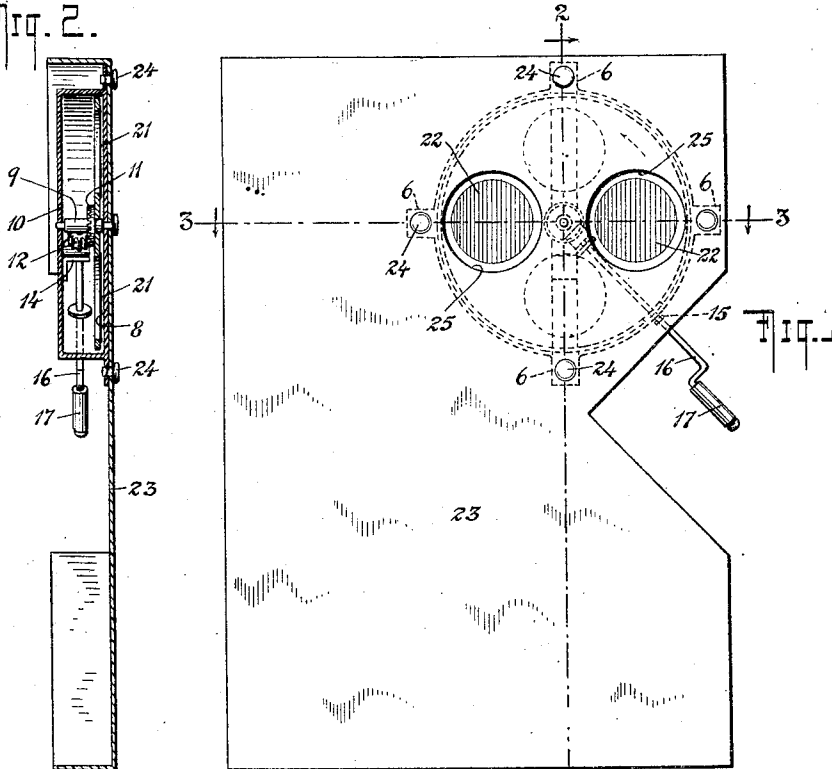
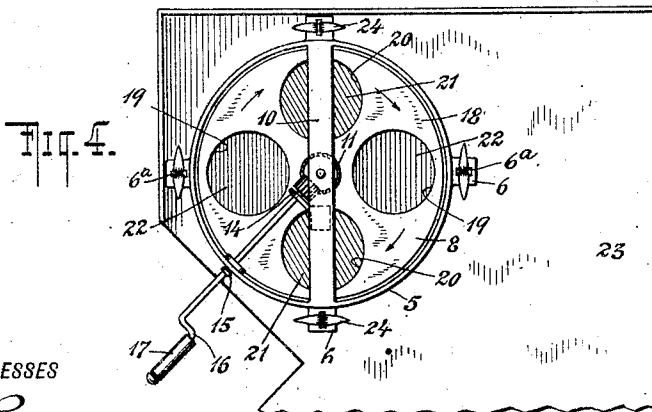
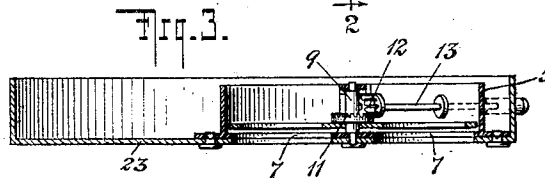


Fig. 3.



WITNESSES

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TOY KINEMATOGRAPH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED Z. BAKER, a citizen of the United States, and a resident of Nutley, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Toy Kinematographs, of which the following is a specification.

My improvement relates to toy kinematographs by means of which apparent motion may be given to inanimate objects as for instance pictures of various descriptions. In devices of this kind, in the case of pictures, the object is or objects are shown in various different positions illustrating successive movements, each position being produced in a different preferably complementary color. Such pictures when viewed through a movable transparent screen having successive complementary colors corresponding to the colors in which the successive positions of the object or objects are produced, have the appearance of being in motion. A device of the above description is shown for instance, in United States Patent No. 174,206 of February 29, 1876.

The particular object of my invention is to improve the construction of the screen so that the same may be easily and uniformly operated and thus produce a more natural apparent movement in the object being viewed than has heretofore been possible.

My invention will be fully described hereinafter and the features of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a face view of my improved structure; Fig. 2 is a section thereof on the line 2—2 of Fig. 1; Fig. 3 is a similar view on the line 3—3 of Fig. 1 and Fig. 4 is a view similar to Fig. 1 looking at the opposite face of my improvement.

My invention comprises a receptacle or carrier 5 provided at spaced intervals with outwardly projecting lugs 6 at its lower periphery and having diametrically opposite openings 7 formed in the bottom 8. A spindle 9 has its one end journaled in said bottom 8 and its opposite end rotatably secured in a cross-brace 10 extending across the receptacle 5 as best illustrated in Fig. 4. A crown gear or the like 11 is secured to the spindle 9 and meshes with a pinion 12 carried by a shaft 13 journaled in the

wall of the receptacle 5 and in a lug 14 attached to or forming part of the cross-brace 10. A collar 15 on the shaft 13 prevents lengthwise movement of the said shaft in one direction while the pinion 12 maintains said shaft against such movement in the opposite direction. The shaft 13 has its free end formed with a crank 16 on which a sleeve 17 is rotatably secured to form an operating handle. The spindle 9 in addition to the crown-gear 11 also carries a disk or screen 18 arranged to be rotated preferably in close proximity to the bottom 8 of the receptacle 5. The said disk is formed with openings 19 and 20 arranged in pairs along diametric lines extending at substantially right angles to each other in the specific illustration of the invention and provided with transparent colored plates 21 and 22 secured in position in said openings in any convenient manner. It is to be understood that the plates 21 in the openings 19 are similarly colored and the plates 22 in the openings 20 likewise similarly colored, thus the plates 21 may be red and the plates 22 may be green or other preferably complementary colors may be used.

In operation, an actuation of the handle 17, to cause a rotation of the shaft 13 will rotate the pinion 12 and the crown gear 11 and thus communicate a rotary motion to the spindle 9 and disk 18. As the disk 18 is thus rotated the plates 21 and 22 will be alternately and successively brought into registry with and moved across the openings 7. If a picture in which any object or objects appear in successive positions each of which is printed or otherwise produced in colors corresponding to the colors of the plates 21 and 22 is viewed through the device the said object or objects will have the appearance of being in motion. This is due to the fact that when the red plates 21 register with the openings 7 only that position of the object or objects which is produced in red will be visible, while the position appearing in green will be invisible and vice versa. As the disk 18 is rapidly rotated this appearance and disappearance of successive positions of the object or objects will be more or less rapid according to the speed of operation of the disk so that the impression of each position remains on the retina of the eye after the next succeeding impression appearing shortly after

has been made thereon thus giving the impression of animation. This impression of animation reaches the highest state of perfection when the disk 18 is rapidly and uniformly actuated which is impossible in slides or screens which are reciprocated but is made easily possible with my improved construction.

In many instances the particular device so far described may be used by itself while in other cases it might be convenient to suitably support said device. Thus in the particular form illustrated I have shown the device as attached to the inside surface of a box cover 23 by means of simple fasteners 24 passing through openings 6^a in the projections 6 and through the said box cover 23. In this instance the said box cover would be provided with apertures 25 arranged opposite to and in registry with the openings 7 and further would be cut away as indicated at 26 to provide space for the operation of the handle 17. The pictures or other objects intended to be viewed through the kinematograph may when not in use be placed in the box of which the cover 23 forms a part so that the entire coöperating paraphernalia may be kept together as a comparative unit with the danger of loss and separation greatly minimized. It is to be understood that other forms of supports for the kinematograph proper may be substituted for the cover 23 if this is desired. Instead of the projections 6 a continuous flange may be provided having spaced openings for the accommodation of the fasteners 24.

My improvement thus provides a toy kinematograph which is simple in construction and capable of a uniform operation regulatable to the special needs of each specific instance to secure the best and desired result.

Various changes in the specific construction shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:

1. A kinematograph comprising a car-

rier provided with diametrically opposite openings, a screen rotatably mounted on said carrier and provided with complementary colored transparent portions movable across said openings and means for rotating said screen.

2. A kinematograph comprising a carrier provided with diametrically opposite openings, a shaft journaled on said carrier, a screen mounted on said shaft and provided with complementary colored transparent portions movable across said openings and operating mechanism connected with said shaft.

3. A kinematograph comprising a carrier provided with diametrically opposite openings, a support for said carrier, a screen rotatably mounted on said carrier and provided with complementary colored transparent portions movable across said openings, and rotatable mechanism for actuating said screen.

4. A kinematograph comprising a support provided with diametrically opposite openings, a carrier removably secured on said support and provided with openings in registry with the openings of the support, a screen rotatably mounted on said carrier and provided with complementary colored transparent portions movable across said openings and rotatable mechanism for actuating said screen.

5. A kinematograph comprising a support provided with diametrically opposite openings, a carrier having similar openings arranged to register with the openings of the support, means for removably securing said carrier on said support, a movable screen having spaced apertures movable across said openings, complementary colored plates carried by said screen at the apertures and means for actuating said screen.

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

ALFRED Z. BAKER.

Witnesses:

JOHN A. KEHLENBECK,

M. H. LOCKWOOD.