A. J. STONE.

LANTERN FOR MOVING PICTURES.

APPLICATION FILED OCT. 15, 1914.

1,133,412.

Patented Mar. 30, 1915.

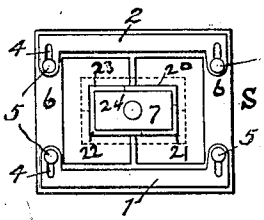


Fig. 3.

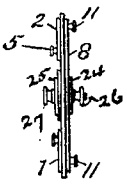


Fig. 4.

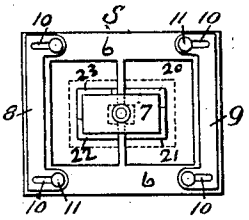


Fig. 5.

Fig. 1.

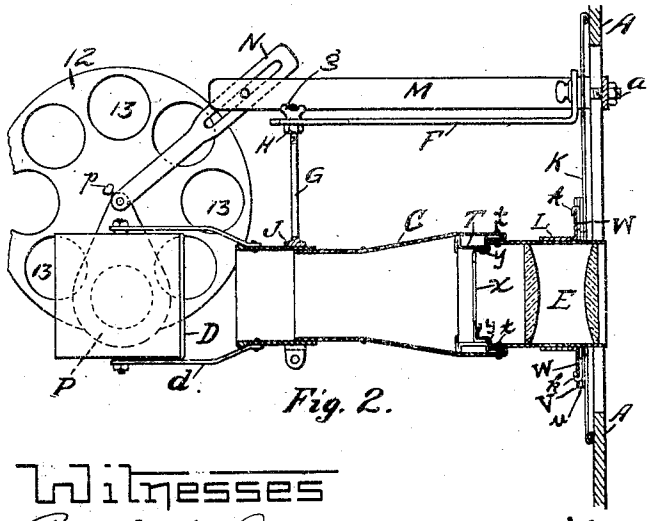


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

ABRAHAM J. STONE, OF ALBANY, NEW YORK, ASSIGNOR OF ONE-HALF TO SAMUEL SUCKNO, OF ALBANY, NEW YORK.

LANTERN FOR MOVING PICTURES.

1,133,412. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed October 15, 1914. Serial No. 866,765.

To all whom it may concern:

Be it known that I, ABRAHAM J. STONE, a citizen of the United States of America, residing at the city of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Lanterns for Moving Pictures, of which the following is a specification.

My invention relates to apparatus for displaying pictures upon a screen by means of a projection lamp or other suitable device, and the object of my invention is to provide a means for displaying around a picture a suitable frame or border displayed by a moving picture lamp, with means for changing the color of the frame or border, and means for displaying a legend, name or designation at the top, bottom or side of the picture displayed by a lantern; together with such elements and combinations as are hereinafter more particularly set forth and claimed. I accomplish these objects by means of the mechanism illustrated in the accompanying drawing, in which—

Figure 1 is a plan. Fig. 2 is a section along the lines X—X on Fig. 1. Fig. 3 is a plan of the adjustable slide, S. Fig. 4 is a plan of the edge of the adjustable slide, S. Fig. 5 is a plan of the reverse side of the adjustable slide, S.

Similar letters and figures refer to similar parts throughout the several views.

To the lamp house, A, containing the projection lamp, B, for displaying a picture upon a screen, I attach by suitable bolts, *a*, *a*, a plate, K, to which is secured the lens case, C. Light from the side of the lamp, B, will shine through the lens case, C, and be reflected by a mirror, D, which mirror is rotatably mounted in an arm, *d*, attached to the lens case, C. In the lens case, C, I place a lens, E, of any desired form. The post, F, is slotted near its outer end at *f*, through which slot a rod, G, extends, on the end of which rod is a thumb screw, *g*, adapted to be secured in contact with the sides of the slot, *f*, there being a nut or shoulder, H, formed on the rod near the thumb screw, *g*. The rod, G, is attached to a collar, J, passing around the neck of the lens case, C. The lens case, C, is adjustably secured to the plate, K, by means of the collar, L, which embraces the lower portion of the lens case, C, the lens case passing through an enlarged opening in the plate, K, the collar, L, being secured to a plate, W, adapted to slide in the groove formed by the over-turned edge of the plate, *k*, upon which the plate, W, rests. The plate, K, is adapted to move in the groove, U, in the plate, V, which rests upon the plate, K. Thus the lens case, C, may be adjusted to its position in reference to the lamp, B, by movement in one direction in the groove, U, in the plate, V, and in the opposite direction on the plate, *k*, guided by its over-turned edge.

To a post, M, I secure an adjustable arm, N, carrying a rod, O, upon which is mounted a lens, P. The rod, O, is adjustable in the arm, N, and held in position by a suitable thumb screw, *m*. The lens, P, is adjustable in the arm, N, held in position by the thumb screw, *p*. The lens, P, is placed in such position that the reflection from the mirror, D, will pass through the lens and be projected upon the screen (not shown).

In the lens case, C, I place the adjustable slide, S, preferably holding it in position by means of the frame, T, secured to the side of the lens case, C, by the rivets, *t*, *t*. Adjustably supported in the frame, T, is the movable recessed plate, X, which is capable of movement within a slot formed between the frame, T, and a short angled piece, Y, attached to the frame, T, and to the side of the lens case, C, by the rivets, *t*, *t*. My slide is made up of two adjustable side pieces, 1 and 2, each provided with slotted ends, 4, 4. The bolts or rivets, 5, are placed through each of said slots into the frame, 6. Between the side pieces, 1 and 2, the light from the lens will pass, except at the central portion where it will be intercepted by the adjustable block, 7. The width of the space between the block, 7, and side pieces, 1 and 2, will depend, of course, upon the position the slides, 1 and 2, occupy with respect to each other, as well as the degree to which the block, 7, is expanded or contracted. When the side pieces are drawn toward the center there will not be so much light passing around the sides of the block, 7, as when the pieces, 1 and 2, are farther apart. And, of course, when the block, 7, is contracted there will be more light than when it is expanded to the condition shown by dotted lines in Fig. 3.

In order to regulate the amount of light delivered at the top and bottom of the picture, I arrange the slides, 8 and 9, at the

top and bottom of the frame, 6, and have the ends slotted at 10, 10, the bolts or rivets, 11, passing through the slots into the frame, 6, whereby the slides, 8 and 9, may be moved to or from each other with the adjustable block, 7, and thus regulate the quantity of light that will be delivered at the top or bottom of the picture.

The block, 7, is made up of four right-angled plates, 20, 21, 22, and 23, which are supported between two parallel plates, 24, 25. Thus the plates, 20, 21, 22, and 23, may be drawn outwardly from the plates, 24, 25, so that they will occupy the position shown by dotted lines in Figs. 3 and 5. Passing through the plates, 24, 25, is the screw, 27, provided with the nut, 26, so that by loosening the nut, 26, the plates, 20, 21, 22 and 23, may be moved, and by tightening the nut 26, they may be held in the desired position in which they are placed. As thus arranged, when the light from the lamp, B, is thrown from the lens, E, there will be reflected on the mirror, D, a border of light of a width equal to the distance between the block, 7, and the inner side of the side pieces, 1 and 2, and slides, 8 and 9. This border of light will be thrown into the lens, P, which lens will be projected to the picture on the screen so that this border of light will surround the picture displayed by the lamp, B, on the screen, making a finishing border for the picture. In order to provide a color for this border, I arrange a disk, 12, containing a series of colored glass, 13, which is mounted on a suitable rod, 14, and arranged so that the desired color may be placed in front of the lens, P, whereby the light emitted from that lens will, when projected on the screen, display the color of the glass in the disk through which it passes. Instead of colored glass I may place a name, legend, advertising matter or any wording desired on the transparent part of the disk, and thus cause that to appear on the screen adjacent to the picture from the projection lamps.

By my invention, without the cost of procuring and operating an additional lamp, I am enabled to put upon the screen a suitable frame for my pictures which adds to the artistic qualities of the picture, and just as a frame upon a painting makes the painting appear more attractive and indeed brings out the colors and shades of the picture, so a suitable frame upon a picture displayed on a screen adds to its attractiveness and effectiveness.

What I claim as my invention and desire to secure by Letters Patent is:

1. A lantern adapted to display a picture from a lamp housing in which the lantern is mounted; with a lens case; means for attaching the same to the said lamp housing; a lens in said case; an adjustable slide in said case; a mirror placed in position to receive the light from said lens; means for adjusting said mirror; a lens adapted to receive the reflection from said mirror; means for adjusting said last mentioned lens; and a disk containing a transparent portion with matter for display placed thereon adapted to be placed in front of the last mentioned lens, substantially as described.

2. A device for projecting a border on a picture, comprising a lantern for displaying the picture on a screen; a lens mounted at the side of said lantern; an adjustable slide comprising four movable strips, one on each side and one at each end of the adjustable slide; with means for moving said strips to and from the center of the adjustable slide; with a central adjustable, opaque portion in said adjustable slide, comprising four plates adapted to be drawn obliquely from the four corners of the central portion, thereby extending the sides and ends of the central portion; with means for clamping and holding said adjustable plates in the desired position; a mirror adapted to receive the light projected around said adjustable slide; a lens mounted to receive the reflection from said mirror; and means for adjusting said last mentioned lens, substantially as described.

3. An attachment for a moving picture lantern, comprising a lens case adapted to be attached to the side of the lantern; a lens in said case; an adjustable slide in said lens case; a mirror at the end of said lens case; an adjustable lens to receive the light from said mirror; and a series of varied colored glass mounted in front of said last mentioned lens, whereby the light therefrom may pass through one of said colored glasses, substantially as described.

4. An adjustable slide for a projection lamp, comprising a frame with movable extension side pieces connected therewith; means for holding said extension side pieces in position on the frame; with movable extension end pieces in connection with said frame; means for holding said end pieces in the desired position; a series of adjustable movable extension plates centrally disposed and attached to said frame; means for extending said last mentioned plates and holding them in the desired position, all substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

ABRAHAM J. STONE.

Witnesses:
FREDERICK W. CAMERON,
BEULAH CARLE.