J. M. OSBORNE.

PICTURE DISPLAY MACHINE.

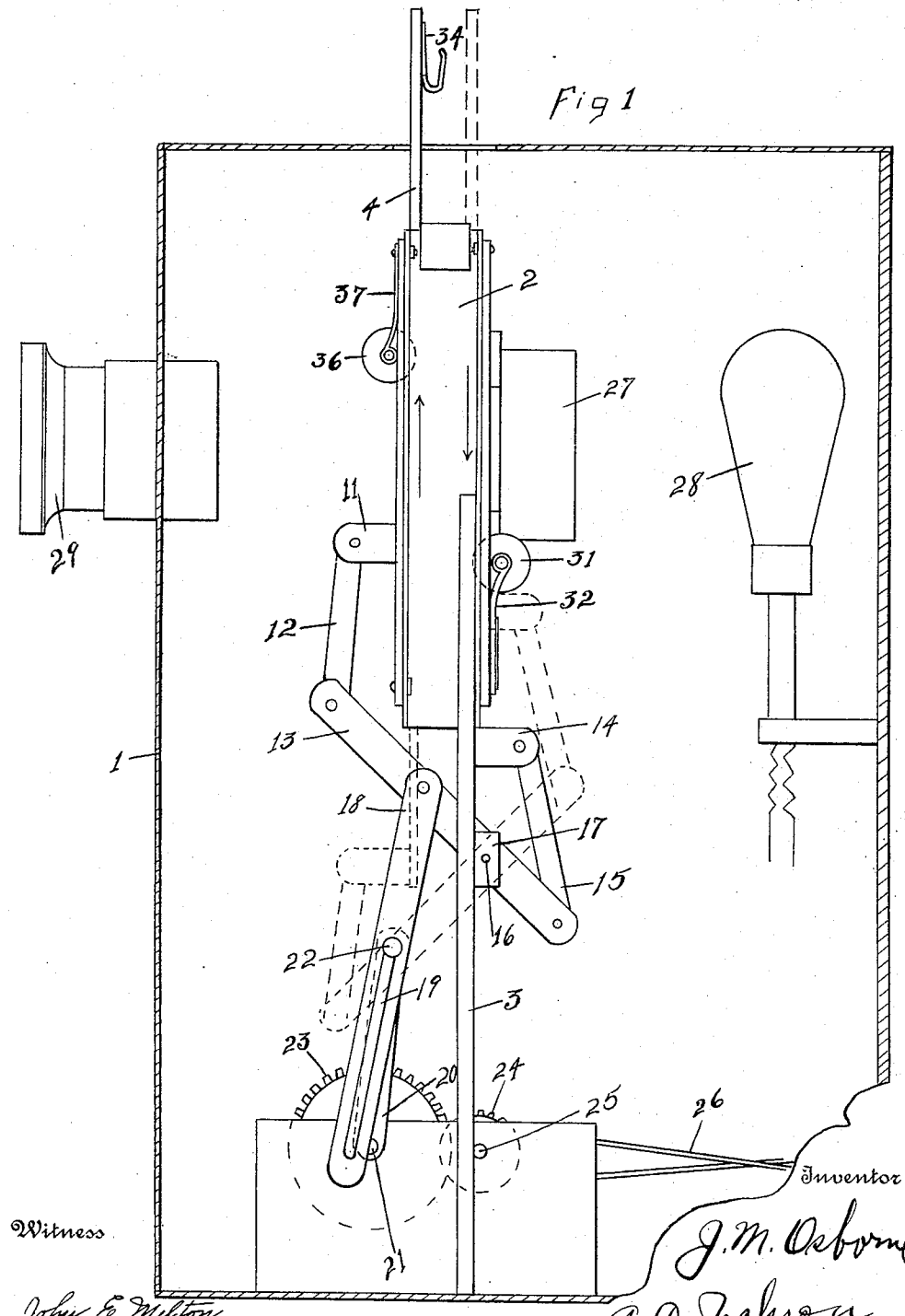
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1,215,694.

Patented Feb. 13, 1917.

2 SHEETS—SHEET 1.

Fig 1



Witness

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2 SHEETS—SHEET 2.

Fig 2

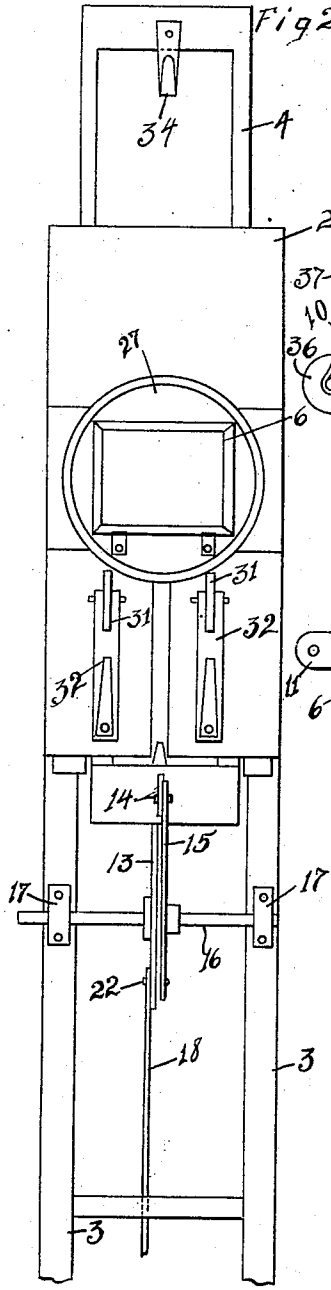


Fig 3

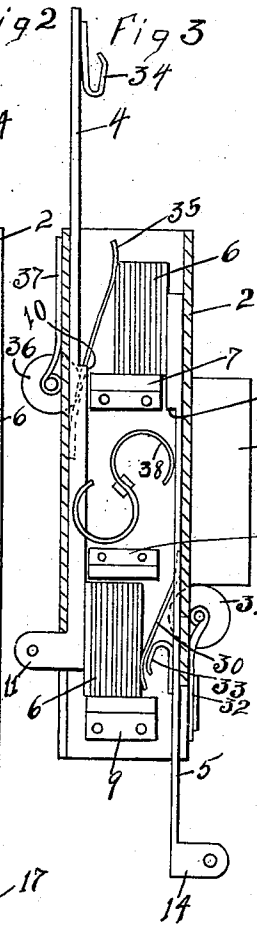


Fig 4

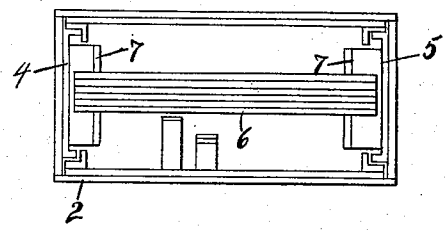
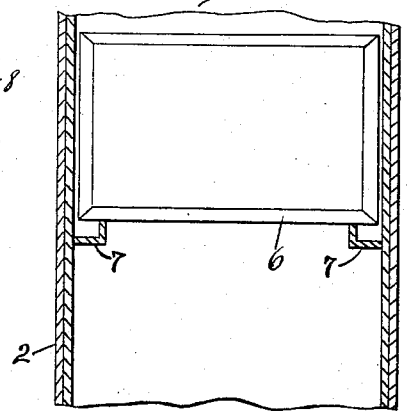


Fig 5



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UNITED STATES PATENT OFFICE.

JAMES M. OSBORNE, OF FORT WORTH, TEXAS.

PICTURE-DISPLAY MACHINE.

1,215,694. Specification of Letters Patent. Patented Feb. 13, 1917.

Application filed April 29, 1916. Serial No. 94,310.

To all whom it may concern:

Be it known that I, JAMES M. OSBORNE, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Picture-Display Machines, of which the following is a specification.

My invention relates to picture display and advertising machines and more particularly to a machine that will automatically and successively exhibit a series of pictures which are mounted in slides; and the object is to provide a machine which is inexpensive and which is highly efficient in operation and which is simple in construction and to a machine which can be used automatically for advertising purposes and which can be connected with any ordinary stereopticon machine, and which can also be manually operated. Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Figure 1 is a side elevation of the machine, the housing being shown in section. Fig. 2 is a rear elevation of the machine. Fig. 3 is a vertical section of the casing, showing interior mechanism for carrying the slides. Fig. 4 is a plan view of the machine, the condenser and the driving mechanism being omitted. Fig. 5 is a broken vertical section of the casing and slide supports.

Similar characters of reference are used to indicate the same parts throughout the several views.

The machine is provided with a suitable housing 1. A casing 2 carries the operating mechanism and the casing is provided with supports 3. Slide carriers 4 and 5 are reciprocated in the casing 2 for elevating and lowering the slides 6. The slides which are not in use are supported on brackets 7 and 9 and a bracket 8 prevents the misplacement of the slides upwardly. The yokes 4 and 5 have hooks 10 for engaging the slides 6. The yoke 4 has a lug 11 to which is pivotally connected a link bar 12 which is also pivotally connected to an operating bar 13. The yoke 5 has a lug 14 to which is pivotally connected a link bar 15 which is pivotally connected to the operating bar 13. The operating bar 13 is mounted on a rocker-shaft 16 which is journaled in bearings 17.

Any suitable means may be used to operate the bar 13. A bar 18 is pivotally connected to the bar 13 and has a slot 19. A crank 20 is rigid with a driving shaft 21 and is connected to the slotted bar 18 by a wrist pin 22. The shaft 21 is driven by a cog wheel 23 which is driven by a pinion 24 which is rigid with a shaft 25. The shaft 25 may be driven by any suitable gearing, a belt 26 being shown for leading to a motor. The slot 19 in the bar 18 serves as a timing means for the exposure of the slides to the condenser 27. As the shaft 21 is driven, the crank 20 will alternately raise and lower the long arm of the bar 13. This will alternately raise and lower the yokes or slide carriers 4 and 5. Every time the carrier 4 goes up, it takes a slide 6 by means of the hooks 10. Every time the carrier 5 goes down, it takes a slide 6, but the hooks 10 do not go lower than the position shown in Fig. 3. When the slide has been brought to this position, it is in position to be exposed to the condenser 27 and remains there until the hooks 10 bring down another slide 6 which engages the slide below and forces the same down to the brackets 10. By reason of the slot 19, the bar 13 remains stationary for fixed periods of time while the slide is being exposed to the condenser 27. A lamp 28 is mounted in a suitable position to throw the picture through the lens 29.

Means are provided for shifting the slides 6 laterally. When the slide 6 comes down under the pressure of the hooks 10 on yoke 5, a spring 30 which is attached to the casing 2 tends to push the slides away from the casing. Roller bearings 31 are mounted on the casing 2 by means of springs 32 and these rollers bear the slides 6 toward the opposite side. When the carrier 5 comes down, the spring 33 which is attached to the carrier 5 completes the pushing of the slides toward the opposite side of the casing. The carrier or yoke 4 is provided with a spring 34 and a weaker spring 35 is attached to the casing 2 and serves to start the slides toward the opposite side of the casing. Roller bearings 36 are mounted on the casing 2 by means of spring bearings 37 and work through slots in the casing 2 and tend to push the slides toward the opposite side so that when the next slide comes up from the bottom, being carried by the hooks

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10 on carrier 4, it will take its place by the other slides on the brackets 7. When the spring 34 comes down with the carrier 4, the spring will complete the movement of the slides toward the opposite side of the machine. Thus when carrier 5 goes down, it will carry one slide and when carrier 4 goes up, it will carry one slide. The springs and roller bearings serve to position the slides on the brackets 7 and 9. When the carrier 5 brings a slide 6 down to the position to be exposed the spring 38 will bear the slide against the casing and hold the same in front of the condenser for a fixed period of time and then another slide will come down and shove the slide below to be positioned on the brackets 9. In the drawings, not as many slides are shown as the machine will contain. Slides are omitted for clearness in illustration. The slides will continue to make the round through the machine as long as the machine is running or being operated and the slides will be shown in continuous succession until removed. The shifting of the slides from the lower to the upper position affords some amusement as the effect is to cause a shadow on the screen. The dissolving effect of shifting the slides will attract attention.

What I claim, is,—

1. A picture display machine comprising a casing having vertical guide ways therein, vertically movable carriers operating in said guide ways, one carrier having hooks for drawing one slide down at a time and the other carrier having hooks for lifting one slide at a time, brackets supporting the slides in the upper part of the casing and brackets supporting slides in the lower part of the casing, and means for shifting said slides on said brackets from one carrier to the other.

2. A picture display machine comprising a casing having vertical guideways therein, vertically movable carriers operating in said guide-ways, brackets horizontally disposed in said casing, the down carrier having hooks for drawing one slide down at a time and the up carrier having hooks for lifting one slide at a time, springs for shifting slides on said brackets from one carrier to the other, and means for operating said carriers.

3. A picture display machine comprising a casing having guideways therein and provided with a condenser, brackets horizontally disposed in said casing, an up carrier having hooks for lifting one slide at a time, a down carrier having hooks for drawing one slide at a time to position the same against said condenser, means for pressing the slide against the condenser until said down carrier presses another slide down to take its place, means for forcing the slides on said brackets from one carrier to the other, and means for operating said carriers.

4. A picture display machine comprising a casing having guideways therein and provided with a condenser, brackets horizontally disposed in said casing, up and down carriers operating in said guide ways, the up carrier having hooks for lifting one slide at a time, a down carrier having hooks for drawing one slide at a time to position the same against said condenser, a spring for pressing the slide against the condenser until said down slide brings another slide down and forces the slide below away from the condenser, means for operating said carriers, and means for projecting a light through said condenser.

5. A picture display machine comprising a casing having a condenser and having vertical guide-ways therein, an up-carrier and a down-carrier moving in said guideways, upper and lower brackets in said casing, said up-carrier lifting one slide at a time from the lower bracket to the upper bracket and said down-carrier bringing one slide from the upper bracket down to position the same against said condenser, a spring for holding said slide against the condenser until said down-carrier brings another slide down and forcing the lower slide down to the lower bracket, spring bearings for positioning said slides on said brackets, and means for actuating said carriers.

6. A picture display machine comprising a casing having vertical guideways therein, upper and lower brackets in said casing, an up-carrier and a down-carrier operating in said guideways, said up-carrier taking one slide at a time from said lower bracket to the upper bracket and said down-carrier taking one slide at a time from said upper bracket, roller bearings and springs for positioning said slides on said brackets, means for actuating said carriers, and springs carried by said carriers for forcing slides to the opposite carrier.

7. A picture display machine having a casing having vertical guide-ways therein, upper and lower brackets in said casing, an up-carrier and a down-carrier operating in said guide ways for shifting slides from the upper bracket to the lower bracket and from the lower bracket to the upper bracket, springs for positioning the slides on said brackets, means for stopping the down going slide periodically until forced down by the next down-coming slide, and a timing operating mechanism for actuating said slides to determine the time each slide stops in its downward movement.

In testimony whereof, I set my hand this 22nd day of April, 1916.

JAMES M. OSBORNE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."