

J. W. HAAG.
ADVERTISING APPARATUS.
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1,004,163.

Patented Sept. 26, 1911.

2 SHEETS—SHEET 1.

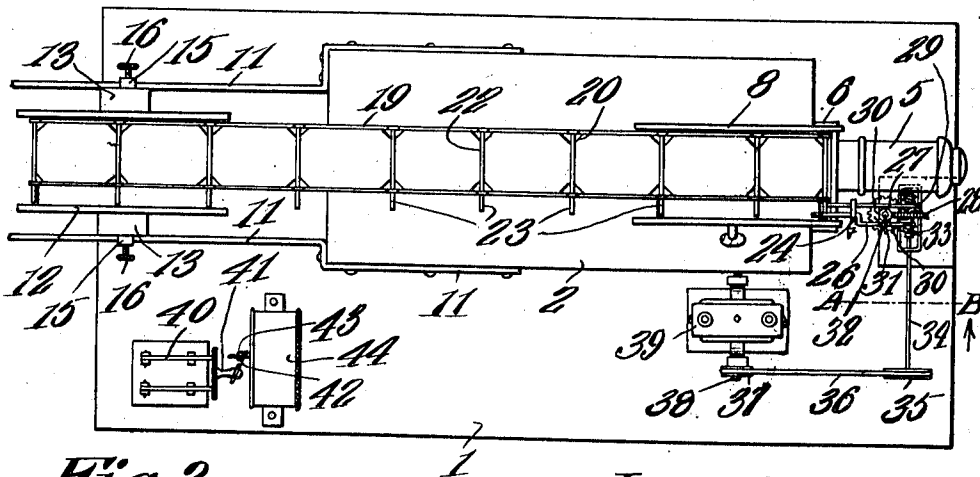
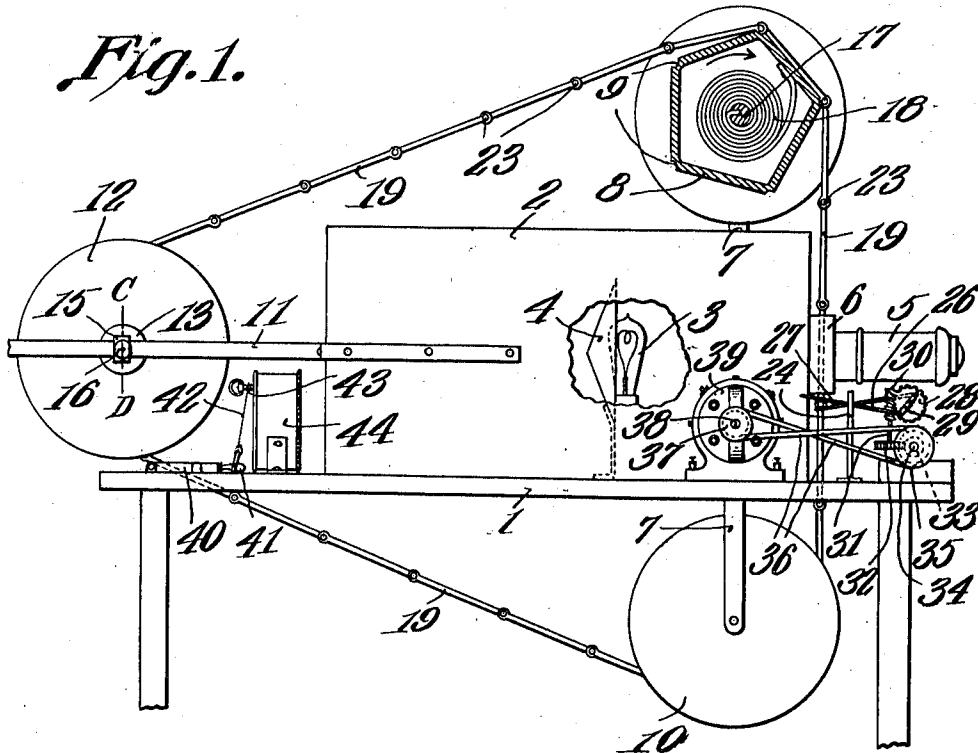


Fig. 2.
Witnesses
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2 SHEETS-SHEET 2.

Fig. 3.

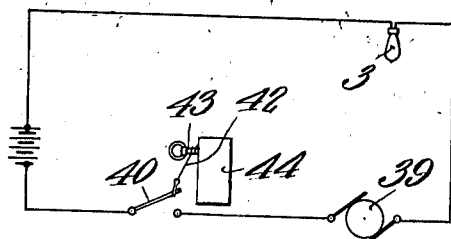


Fig. 4.

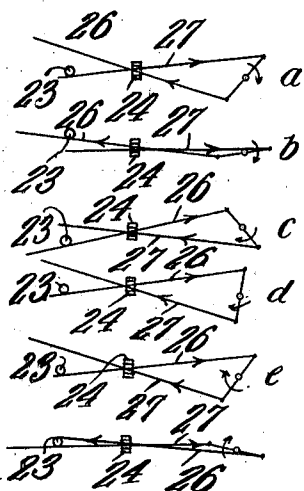
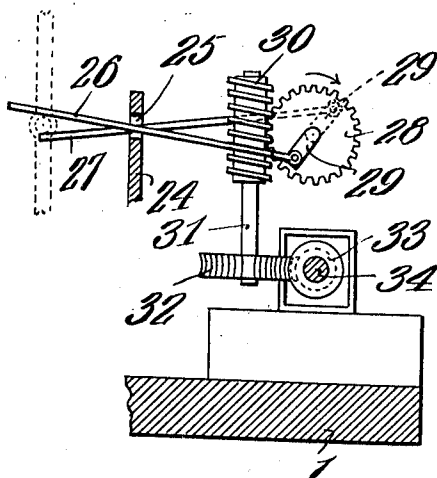


Fig. 6.

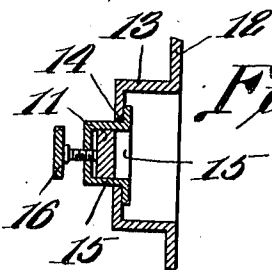


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

JACOB W. HAAG, OF LARNED, KANSAS, ASSIGNOR OF ONE-FOURTH TO GEORGE W. CRAWFORD, OF LARNED, KANSAS.

ADVERTISING APPARATUS.

1,004,163.

Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed December 30, 1910. Serial No. 600,055.

To all whom it may concern:

Be it known that I, JACOB W. HAAG, a citizen of the United States, residing at Larned, in the county of Pawnee and State of Kansas, have invented a new and useful Advertising Apparatus, of which the following is a specification.

This invention relates to apparatus for advertising purposes, its object being to provide a lantern or stereopticon for projecting pictures onto a suitable screen, means being employed whereby pictures, arranged in a series, may be automatically supplied successively to the projecting apparatus and maintained in exposure position for a predetermined period of time.

A further object is to provide speed controlling mechanism of novel form adapted to be operated by a motor, a separate motor being utilized for shifting the pictures or slides when released from the controlling means.

A further object is to provide time controlled means for automatically stopping the apparatus.

It is old in the art of advertising to utilize a lantern or stereopticon for the purpose of projecting pictures and advertising matter upon a suitably arranged screen, but it has usually been necessary to employ the services of an operator for the purpose of changing the slides and attending to the operation of the various parts of the mechanism.

The principal object of the present invention is to provide mechanism which, after once being set, will operate automatically to successively project the pictures or advertisements onto a screen, and which will, when a predetermined time has arrived, automatically extinguish the light and stop the operation of the speed controlling motor.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings,—Figure 1 is a view

partly in side elevation and partly in section, of the complete apparatus. Fig. 2 is a plan view of the apparatus. Fig. 3 is a view showing, diagrammatically, the relative arrangement of the light, motor, and switch-operating mechanism. Fig. 4 is an enlarged section on line A—B Fig. 2. Fig. 5 is an enlarged section on line C—D Fig. 1. Fig. 6 is a view showing, diagrammatically, the successive positions of the speed controlling rods during the stopping and release of a slide.

Referring to the figures by characters of reference 1 designates a supporting frame or table on which is mounted the casing 2 of the lantern or stereopticon, there being an electric lamp 3 arranged within the casing in front of a reflector 4. The reflector and lamp are located directly back of the lens tube 5 and a guide-way 6 is interposed between the tube and the front end of the casing 2, in the usual manner. Arms 7 extend upwardly and downwardly from the front portion of the casing 2, the upper arms supporting a spool 8, preferably pentagonal and having grooves 9 in the ridges or angles formed by the meeting outer faces thereof. The lower spool 10 carried by the lower arm 7 is preferably similar to the spool 8. Longitudinally extending arms 11 are connected to the rear portion of the casing 2 at the sides thereof, and arranged between these arms is a third or back spool 12 also preferably similar to the spool 8. This spool 12, however, has central side extensions 13 each of which is formed with a central opening 14 for the reception of a bearing block 15. Said block is slidably mounted on the adjacent arm 11 and is adapted to be held against movement relative thereto, by means of a set screw 16 or the like. It will be apparent that, by loosening the screws, the blocks 15 can be shifted longitudinally of the arms 11 for the purpose hereinafter set forth and then, by tightening the screws, the said blocks can be held against further movement.

The upper spool 8 is mounted to rotate on a shaft 17 and a spring 18 is coiled about the shaft and secured at one end to the spool, while its other end is attached to said shaft. This spring may be wound in any manner desired and it will be apparent that it operates to exert a continuous pull upon the spool so as to cause it to rotate on the shaft

in the direction indicated by the arrow in Fig. 1.

An endless chain made up of pivotally connected frames 19, is mounted on the spools 8, 10 and 12 and has angular corner pieces 20 designed to be engaged by the corner portions of slides or transparencies. The pivot racks 22 connecting the frames are extended beyond one side of the chain to form a stop projection 23.

Mounted on the supporting structure 1 adjacent one side of the tube 5, is an up-standing guide 24 having an opening 25 therein within which the two controlling rods 26 and 27 are mounted to slide and rock, these rods extending to opposite sides of a gear 28 and being attached to oppositely extending crank arms revoluble with the gear, these arms being indicated at 29. The crank arms 29 and the rods 26 and 27 are of such length that, during the rotation of the crank arms, the rods 26 and 27 will be successively projected into, and withdrawn from the path of the projections 23. The gear 28 receives motion from a worm 30 mounted on a shaft 31, this shaft having a worm gear 32 which, in turn, receives motion from a worm 33 revoluble with a shaft 34. This shaft is driven, through a pulley 35 and a belt 36, from a pulley 37 connected to the drive shaft 38 of a motor 39.

As shown diagrammatically in Fig. 3, the lamp 3 and the motor 39 are arranged in the same electric circuit, there being a switch 40 within said circuit. This switch is pivotally mounted, as indicated in Figs. 1 and 2, and the handle 41 thereof is connected, as by means of a cord 42 or the like, to the stem 43 of the alarm mechanism of an alarm clock 44. It will be apparent, therefore, that when the alarm is set for a certain time, the stem 43 will rotate as soon as the alarm mechanism is released, and will wind the connection 42 thereon, thus lifting the switch 40 and breaking the circuit to the motor and to the lamp.

When it is desired to use the apparatus, the chain made up of frames 19 is drawn taut by adjusting blocks 15, the slides or transparencies are arranged in desired order within the various frames 19 and the spring 18 is wound by means of any suitable mechanism (not shown). As one of the rods 26 and 27 is always in the path of the projections 23, it will be seen that when said spring 18 is wound, the chain carrying the slides, will be held against movement. The clock 44 is set so as to cause the alarm mechanism to operate at a predetermined time and the switch 40 is then shifted so as to close the circuit. Connection 42 is then attached to the switch and to the stem. As soon as the circuit is closed, the motor 39 is set in motion and the lamp 3 is illuminated. Motion is transmitted from the motor

through the worm gearing to the crank arms 29, these arms rotating at any predetermined speed. In Fig. 1 the stop projection 23 on one of the frames is shown in contact with the rod 27 and this position of the parts is also shown in Fig. 4 and in diagram *a* in Fig. 6. As the crank arms rotate in the direction indicated by the arrows in Figs. 4 and 6, the rod 26 is projected over the projection 23 bearing on rod 27, while said rod 27 is gradually withdrawn from under the projection. Further rotation of the crank arms will result in the release of projection 23 from rod 27 and the spring 18 will therefore promptly shift the endless chain longitudinally, thus bringing the projection 23 of the next succeeding frame into position upon the rod 26 in the path thereof, and as shown by diagram *b* in Fig. 6. Further rotation of the crank arms will result in the tilting of the rod 26 and its gradual withdrawal from under the projection 23, the rod 27, meanwhile, gradually assuming a position over the projection 23. Various steps of this operation have been illustrated by diagrams *c* and *d* in Fig. 6. Finally, as the rod 26 is withdrawn from under the projection 23, the spring 18 again shifts the chain longitudinally and brings the projection 23 of the next succeeding frame 19 into position upon the rod 27. The foregoing operation is then repeated. After the operation has been continued until the time selected, the alarm mechanism in the clock 44 is released and the stem 43 winds connection 42 thereon, thus shifting the switch 40 and breaking the circuit to the lamp and motor. The light will therefore be immediately extinguished and the motor will stop.

It will be apparent that, by utilizing a mechanism such as has been described, the display of pictures and advertising matter may continue uninterruptedly throughout a predetermined period of time without requiring the attendance of an operator and, upon the completion of the time of operation, the mechanism will be automatically stopped.

What is claimed is:—

1. The combination with projecting apparatus including a lamp and a lens tube, of an endless series of pivotally connected slide holders, means for automatically shifting said series to bring the holders successively into position between the lamp and tube, a stop projection upon each holder, and separate, normally crossed power driven means for successively intercepting the projections to stop the holders for a predetermined period while in position between the lamp and the tube.

2. The combination with projecting apparatus including a lamp and a lens tube, of an endless chain made up of pivotally connected slide holders, said chain being ex-

tended between the tube and lamp, means for shifting the chain automatically in the direction of its length, a stop projection upon each holder, and separate, normally crossed power driven elements slidably and tiltably mounted for successively engaging the successive stop projections to cause an intermittent movement of the chain.

3. Apparatus of the class described including a lamp and a lens tube, a series of slide holders movable between the lamp and tube, a stop projection upon each holder, and means for successively stopping and releasing the projection during the movement

of the series in one direction, said means including a guide, oppositely extending cranks mounted for simultaneous rotation, and a rod connected to each crank and tiltably and slidably mounted within the guide, said rods being adapted to successively project into the path of the projections.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JACOB W. HAAG.

Witnesses:

GEORGE W. CRAWFORD,
CHARLES L. SHANEFELTER.