C. F. JENKINS.

PICTURE PROJECTING MACHINE.

APPLICATION FILED OCT. 17, 1916.

1,302,800.

Patented May 6, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

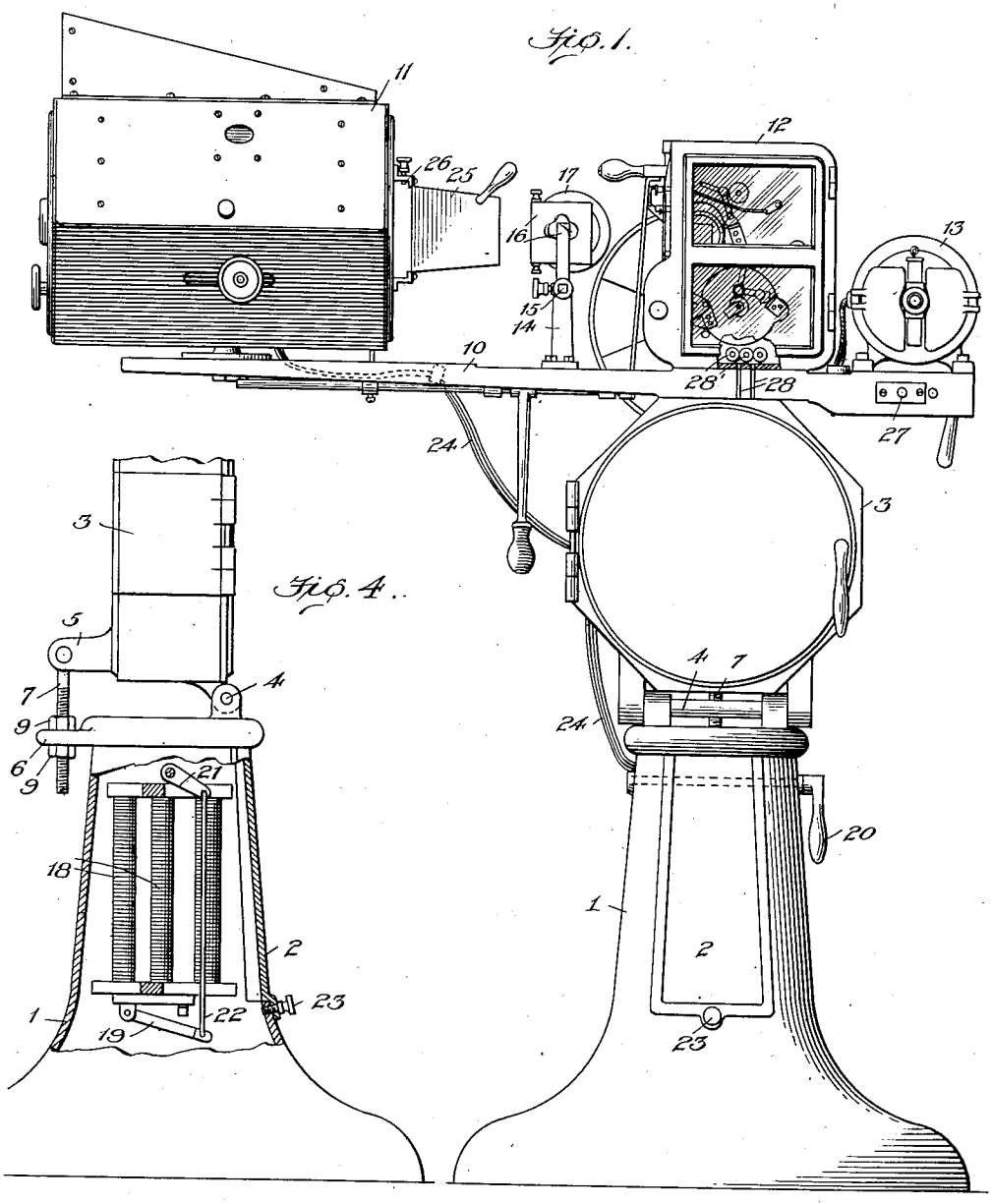

Fig. 4.

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2 SHEETS—SHEET 2.

Fig. 2.

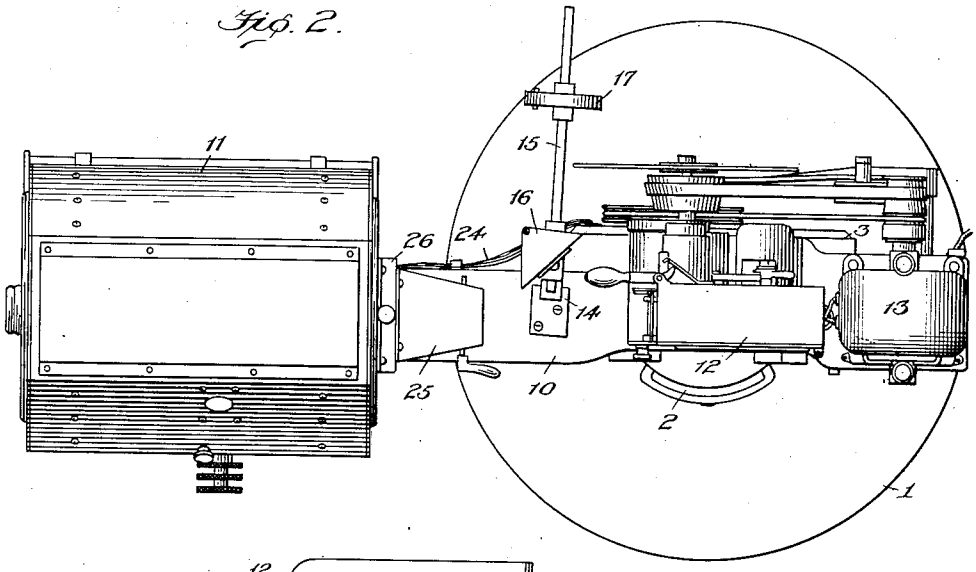
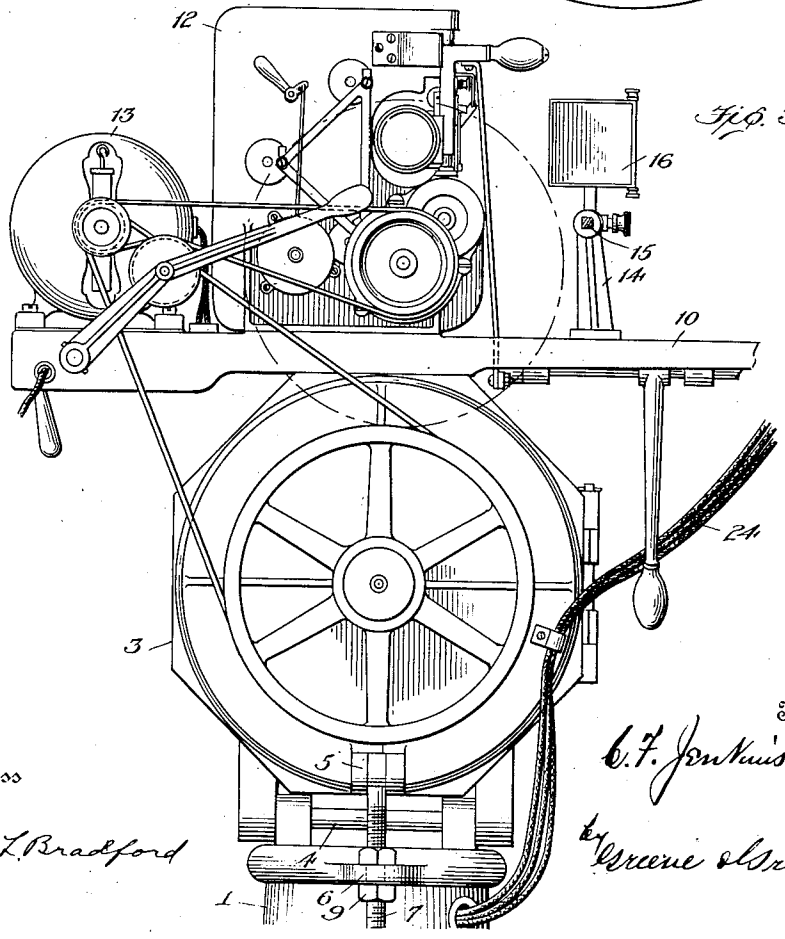


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES FRANCIS JENKINS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO THE GRAPHOSCOPE COMPANY, OF WASHINGTON, DISTRICT OF COLUMBIA, A CORPORATION OF DELAWARE.

PICTURE-PROJECTING MACHINE.

1,302,800. Specification of Letters Patent. Patented May 6, 1919.

Application filed October 17, 1916. Serial No. 126,061.

To all whom it may concern:

Be it known that I, CHARLES FRANCIS JENKINS, a citizen of the United States, and resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Picture-Projecting Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

In picture projecting devices it is highly desirable to combine in a small space the entire apparatus for projecting motion pictures and other pictures, such apparatus including electric illuminating devices, a film operating mechanism, an electric motor, with all the electric apparatus arranged to meet all municipal and underwriters' regulations, and further to have the apparatus such that it may be operated conveniently and safely by those having little skill, and may be adaptable for use under all conditions likely to be met. With these ends in view, I provide a hollow metal standard or base, and upon it a film box carrying a rigidly connected normally horizontal table is pivotally mounted for rocking adjustment. Upon the table are mounted in alinement an illuminating and projecting apparatus, a film moving apparatus, and an electric motor, with a device normally out of line but adapted to be moved at will into the line of the projecting light beam and to deflect the latter at right angles, before it reaches the film apparatus.

In the accompanying drawings,

Figure 1 is a side elevation of the apparatus.

Fig. 2 is a plan view of the same device.

Fig. 3 shows in side elevation the central portion of the devices of Figs. 1 and 2.

Fig. 4 shows the standard, looking from the right in Fig. 1, parts being broken away to show devices within.

In these figures, 1 represents a hollow metal post or base preferably of cast metal, 2 a metal door normally closing a lateral opening in the base, and 3 a metal film reel box pivotally supported on an axis 4 near one side of the post so that the box may have side to side swinging adjustment. Such adjustment is made by means of arms 5, 6 projecting from the box and base, respectively, and connected by a pivoted threaded rod 7, carrying adjusting nuts 9.

Fixed to the upper side of this box, which is preferably polygonal, is a relatively long narrow horizontal table 10 and upon this is an illuminating apparatus 11 mounted in any suitable way for adjustment longitudinally of the table. On the table above the film box 3 is fixed a film-moving apparatus 12 and upon the table still farther from the illuminating devices is an electric motor 13. In the space between the devices 11 and 12 a standard 14 is fixed to the table and in this standard is adjustably secured a transverse sliding rod 15 upon which are secured a beam-deflecting device 16 and a stereopticon lens 17, both in the horizontal plane of the beam, and the device 16 being normally, or when the machine is projecting motion pictures, at one side of the path of the beam. It is thus possible to slide the deflecting device 16 into the path of the beam and thus deflect the latter so that it will pass through the lens 17 and fall upon substantially the same portion of the screen which receives motion pictures from the apparatus at 12.

Within the standard 1 are mounted a rheostat 18 and a switch 19 operated by a handle 20, crank 21 and connecting link 22. Access to these devices is had by means of the door 2 which is normally secured against accidental opening by a screw 23, so that there may be, ordinarily, no possibility of fire or of shock in operating this portion of the apparatus. Conductors 24 pass to and from the rheostat through a small aperture in the standard and lead upward therefrom, along the under side of the table and into the casing 11. The light from within the casing 11 passes through an exterior detachable tube 25 and thence to the film devices 12. When stereopticon views are to be shown, this tube is preferably detached and pictures are inserted in ways 26 on the casing 11. Since the pictures of either kind are projected transversely to the table and to the axis 4, rocking the table on this axis obviously varies the height of thte illuminated area upon the screen so that pictures may be shown at the proper point whether the apparatus is on, above, or below the horizontal plane of the center of the screen.

The operator while standing alongside the standard 1 may reach and manually control all the various mechanisms described, the motor switch 27 like all other ordinary control devices being upon or accessible from the side of the apparatus seen in Fig. 1.

The standard 1, closed, metal film box 3 and film feeding apparatus 12 are in vertical alinement and the intervening metal table is provided with very narrow film slots 28 through which film may pass to rollers 28′ at the bottom of the casing. Combustion is not continued downward between the rollers and through the slots to the film box 3, and thus ignition at the exposure point at most destroys a foot or two of film without seriously heating the casing.

What I claim is:

1. The combination with a hollow metal standard, a metal table supported by the standard, an electric illuminating device mounted on the table, picture projecting apparatus mounted on the table in alinement with said device, a rheostat and switch inclosed in the standard, means without the standard for manually operating the switch, and suitable conductors for putting the illuminating device and rheostat in the circuit controlled by the switch.

2. The combination with a central support, of a narrow transversely rocking table thereon bearing approximately alined, motor devices, motion picture and single picture mechanisms both arranged to project transversely with respect to the table's axis, and illuminating devices, and means for holding the table in any position to which it may be rocked; whereby mere rocking adjusts all parts together to project at any point above or below the normal horizontal plane of the light rays.

3. The combination with a closed film reel box adapted to contain both outgoing and incoming film and a table secured to the top of the box, of a casing for film feeding devices secured upon the table directly above said box, the parts separating the interiors of the box and casing being provided with two adjacent, parallel narrow combustion-prohibiting slots through which film passes from and to the interior of the box, a roller parallel to the slots and extending across the space between them, and two other co-acting rollers lying upon opposite sides of the roller first mentioned and forming a second guard against transmission of combustion; whereby the outgoing and incoming film is guided and safeguarded by the three rollers.

4. The combination with a suitable standard, of a storing and delivering film box hinged to the top of the standard and provided with means for progressively rocking it about its hinge axis and locking it in each position, a narrow suitably slotted table fixed to the top of the box with its axis parallel to the hinge axis and bearing all necessary picture projecting mechanisms arranged to project laterally with respect to the table; whereby the entire apparatus above the standard is set as a unit to project at any desired point above or below its normal plane.

In testimony whereof I hereunto affix my signature.

CHARLES FRANCIS JENKINS.