

June 26, 1923.

1,460,071

A. G. MERRIMAN
MOTION PICTURE CABINET

Filed Feb. 14, 1922

3 Sheets-Sheet 1

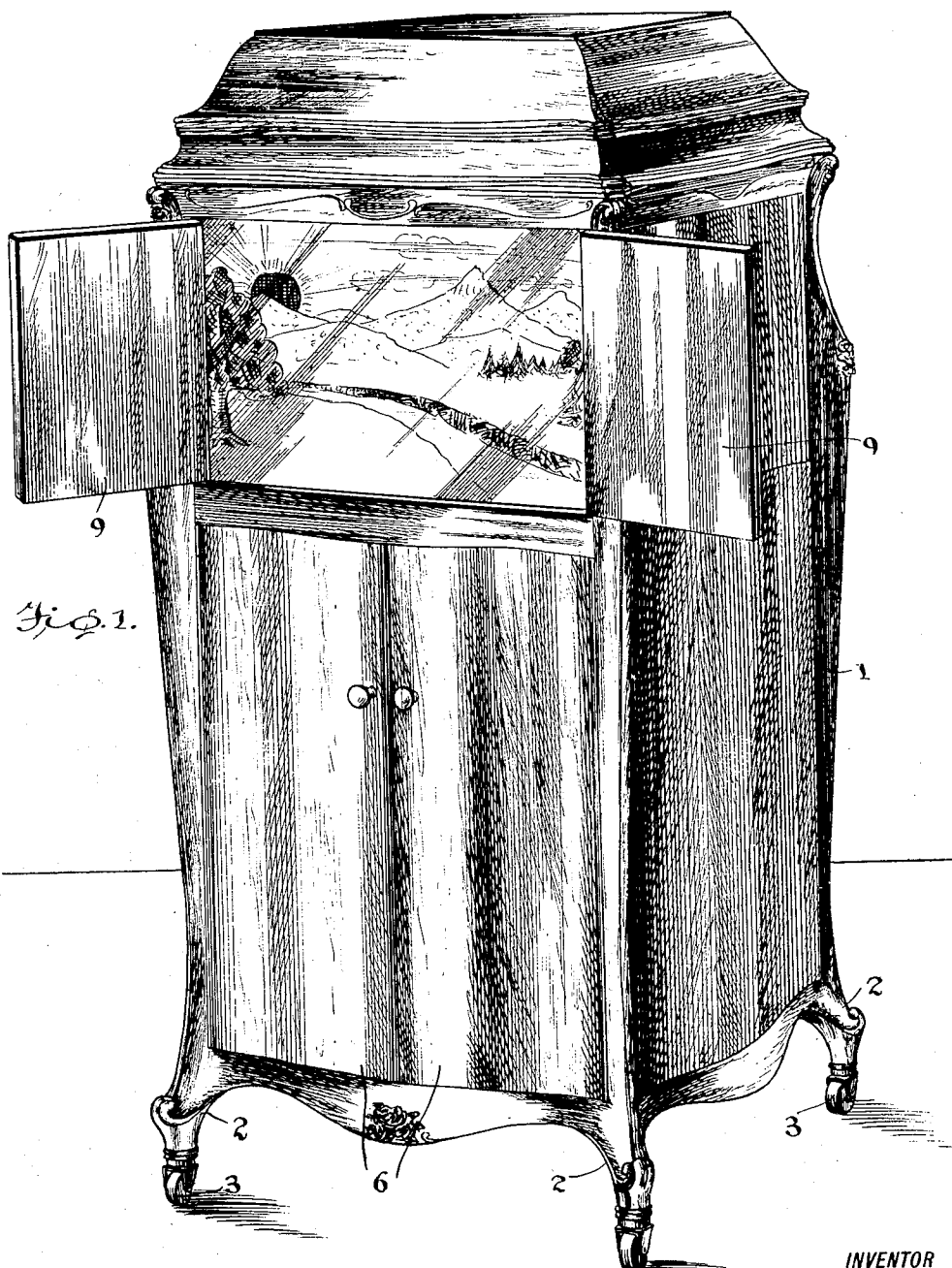


Fig. 1.

WITNESSES

W. R. Rousseau
L. E. Bates

INVENTOR
A. G. Merriman.

BY *Henry H. Co.*
ATTORNEYS

June 26, 1923.

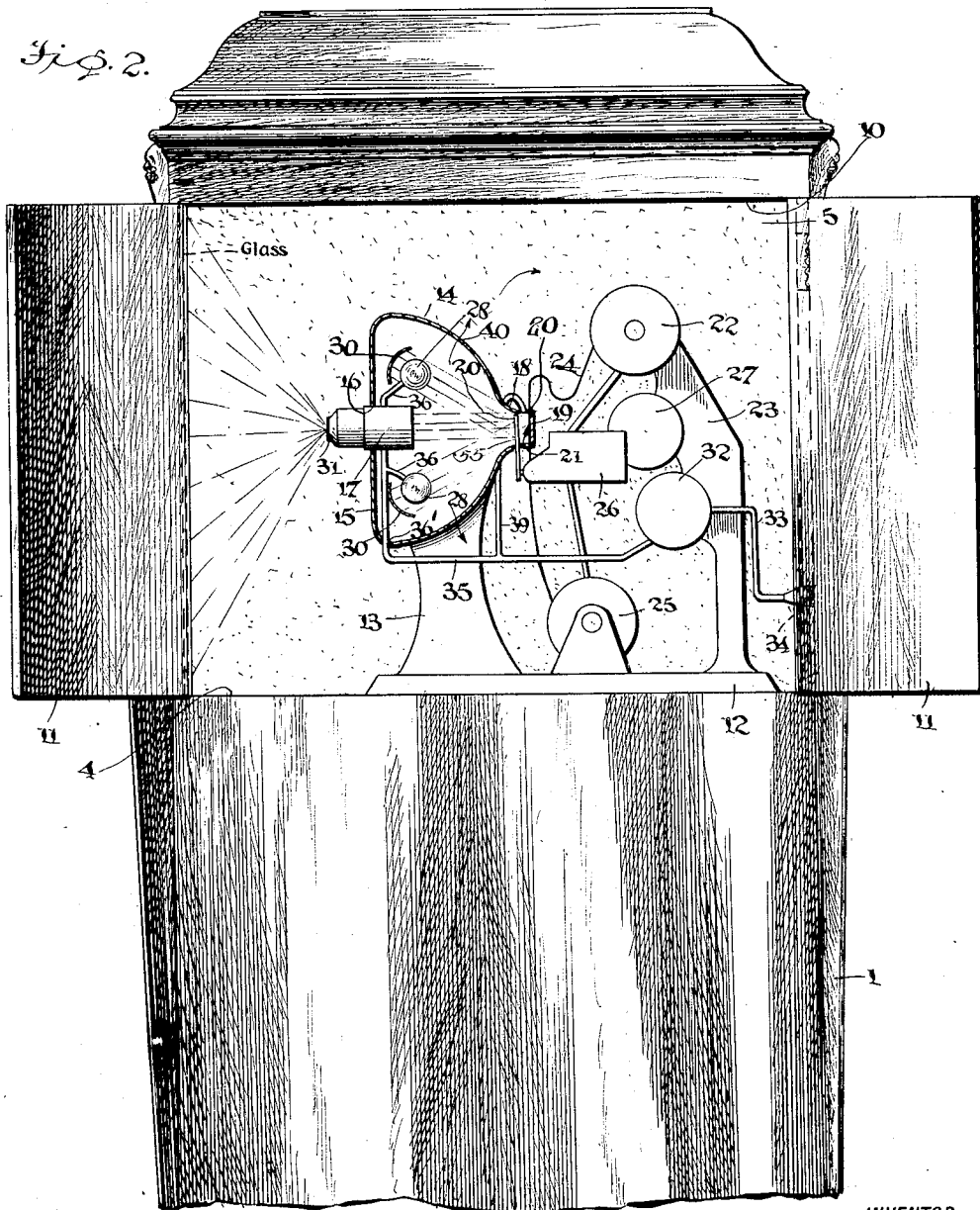
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3 Sheets-Sheet 2

Fig. 2.



WITNESSES

R. H. Rousseau
L. J. Bates

INVENTOR
A. G. Merriman,

BY *Allen Ho*
ATTORNEYS

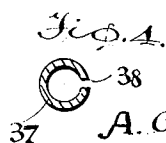
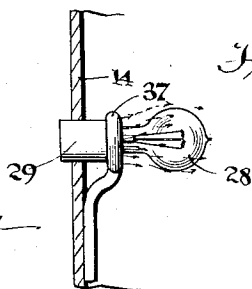
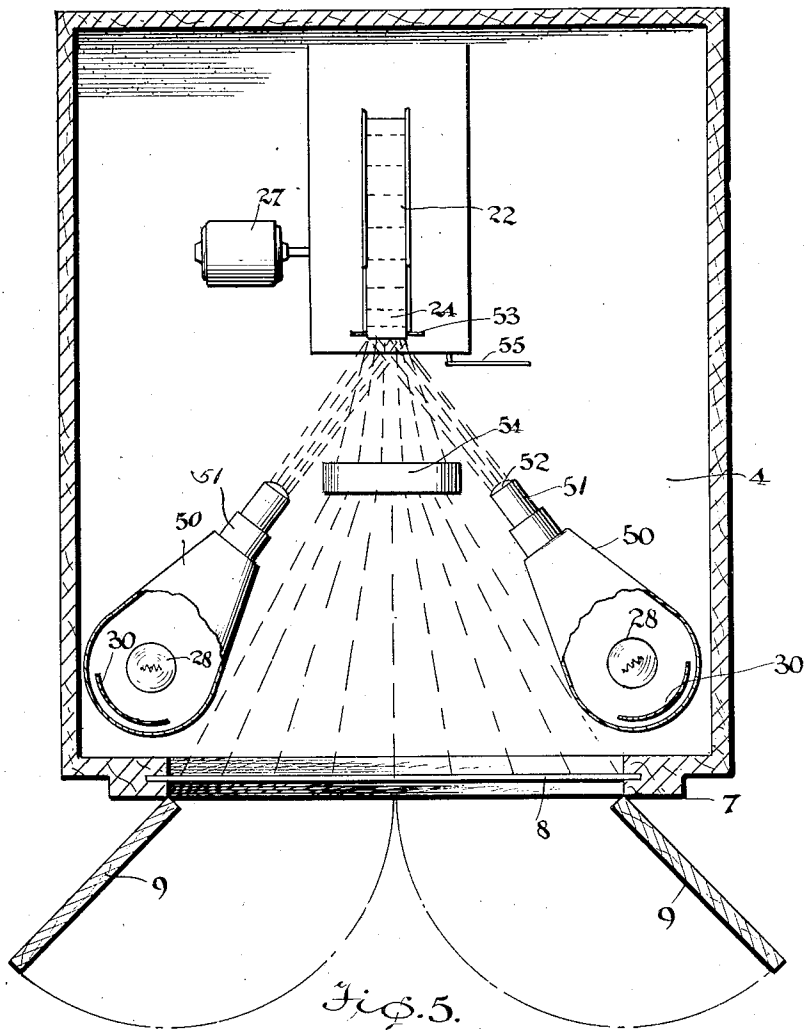
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3 Sheets-Sheet 3



WITNESSES

R. E. Rousseau
L. B. Bates

INVENTOR

A. G. Merriman,

BY

Mum Co.
ATTORNEYS

Patented June 26, 1923.

1,460,071

UNITED STATES PATENT OFFICE.

ARTHUR GATES MERRIMAN, OF COLUMBUS, OHIO.

MOTION-PICTURE CABINET.

Application filed February 14, 1922. Serial No. 536,483.

To all whom it may concern:

Be it known that I, ARTHUR G. MERRIMAN, a citizen of the United States, and a resident of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Motion-Picture Cabinets, of which the following is a specification.

My invention relates to cinematographic apparatus, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a cinematographic apparatus which comprises a casing having a translucent screen in one side thereof and means disposed interiorly of the cabinet for occasioning the reflection of images of desired pictures upon the screen.

A further object of my invention is to provide in an apparatus of the character described, a cabinet of ornamental and artistic appearance which is particularly well adapted to be placed in a parlor for use in home entertainment.

A still further object of my invention is the provision in an apparatus of the character described of an effective means for preventing the overheating of combustible elements comprised in the apparatus.

Other objects and advantages will be apparent from the following description, and the novel features of the invention will be particularly outlined in the appended claims.

My invention is illustrated in the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a perspective view of a practical embodiment of the invention,

Fig. 2 is a side elevation of a portion of the apparatus shown in Fig. 1, the view being taken substantially at right angles to Fig. 1,

Fig. 3 is a detail of a fragmentary portion of the structure shown in Fig. 2, showing an incandescent lamp comprised in the apparatus and a portion of the cooling means associated therewith,

Fig. 4 is an enlarged cross section through the discharge ring of the portion of the cooling means shown in Fig. 3, and

Fig. 5 is a horizontal section through an apparatus embodying in a modified form the same invention as that illustrated in the preceding views.

In carrying out my invention, I provide a casing 1 which by preference is similar in conformation and finish to the casing of a Victrola cabinet, being substantially rectangular in cross sectional contour and supported upon legs 2 which are provided at their lower ends with casters 3. A horizontal partition 4 divides the interior of the casing 1 into an upper compartment 5 and a lower compartment which is not shown in the drawings but which extends from the horizontal partition 4 to the lower end of the casing. The lower compartment is a storage compartment and is formed with an opening through the front wall thereof for which a pair of swinging doors 6—6 are provided. The upper compartment is provided with an opening 7 through its front wall in which is mounted a translucent panel 8 which may be made of ground glass or other suitable material. A pair of doors 9—9 are hingedly attached to the walls of the opening 7 and may be moved into position to close the opening and cover the translucent panel 8 or into open position as illustrated in Figs. 1 and 5. The upper compartment 5 also has an opening 10 through a side wall thereof, which opening is normally closed by a pair of swinging doors 11—11.

The means for producing the images of desired objects as, for instance, pictures, upon the translucent panel or screen 8, is disposed within the upper compartment 5. The image producing means now preferred by me is illustrated to advantage in Fig. 2 and will now be described.

A base plate 12 is superimposed upon the horizontal partition 4 and has formed on the front part thereof an upstanding pedestal 13 carrying a lamp and projector casing 14. The latter is substantially hemispherical in form and is closed at its larger end by an integral end portion 15 having a central opening 16 formed therethrough. A projector tube 17 is received in the opening 16 and projects at its opposite ends interiorly and exteriorly of the casing 14, as shown. The casing 14 is formed with an elongated integral neck portion 18 at its smaller end, which neck portion is in axial alinement with the opening 16 and consequently with the projector tube 17. The elongated or tubular neck portion 18 is closed at its outer end by a mirror 19 and is provided with transversely extending vertically alined

slots 20—21 through its walls adjacent to the inner or reflecting surface of the mirror 19.

A reel 22 supported upon an upright 23 upstanding from the base plate 12 carries a ribbon 24 made of paper or other opaque material and having produced upon the outer side thereof a series of pictures. The ribbon 24 is threaded through the slots 20—21 in the walls of the neck portion and is wound upon a lower reel 25 as unwound from the upper reel 22. A cinematographic ribbon feeding mechanism which may be of any suitable known construction and which is therefore shown diagrammatically, as indicated at 26, is provided for occasioning the unwinding of the ribbon 24 from the upper reel 22 and the winding of the same upon the lower reel 25 in a desired manner and at a desired speed. This cinematographic ribbon feeding mechanism also operates a shutter 55, so that the latter cuts off the light at each instant when the shift is made from one picture to the next in cinematographic sequence, just as is done in a standard motion picture machine.

A motor 27 for operating the ribbon feeding mechanism 26 is shown diagrammatically in the drawings. I prefer to provide an electric motor adapted to be operatively connected with and actuated from a lighting circuit such as is ordinarily installed in a residence, although obviously any suitable driving mechanism of known construction may be employed.

Within the casing 14, a plurality of sources of light are supported, such as the incandescent lamps 28 carried by sockets 29 projecting through openings in the walls of the casing 14, as illustrated in Figs. 2 and 3. Reflectors 30 are provided for focusing the rays of light from the incandescent lamps 28 upon the portion of the ribbon 24 which is being passed through the neck portion of the casing transversely thereof. It is to be observed at this point that the incandescent lamps 28 are disposed substantially equidistant from the projector tube 17 and that the latter extends within the casing 14 a sufficient distance to preclude the possibility that rays of light may pass directly from the incandescent lamps 28 into the projector tube. The rays of light from the incandescent lamps will strike the object, such as a picture, which is produced upon the ribbon 24 and will be reflected through the projector tube 17 and through a lens 31 in the outer end of the latter, whereby the image of the picture produced upon the ribbon 24 will be presented upon the translucent panel 8, as shown in Fig. 1, and may be viewed by all persons to whom the translucent panel is visible. The lens 31 is of such form as to cause the rays of light passing therethrough to diverge, thus enlarging or magnifying the

image of the object produced upon the ribbon.

It is desirable that means be provided for preventing the overheating of the parts disposed within the upper compartment 5 and particularly for preventing the heating of the ribbon 24 to the ignition point. To this end, I provide a blower mechanism which may be of any suitable known type of construction and is therefore shown diagrammatically, as indicated at 32. The blower mechanism 32 has an air intake tube 33 communicating with a screened opening 34 through the walls of the casing 1. A main delivery tube 35 leads from the blower 32 to an opening 36 in the casing 14 and is formed to provide branches 36 extending within the casing 14 into communication with annular discharge nozzles 37 respectively disposed upon the sockets 29 adjacent to the incandescent lamps 28 and each having an annular slot or orifice 38 through the side thereof proximate to the incandescent lamp with which associated. A branch delivery tube 39 connected with the main delivery tube 35 has the discharge end thereof positioned adjacent to the slot 20 through the casing 14 and in position to discharge the air passing therethrough upon the portion of the ribbon 24 disposed within the neck portion of the casing.

An opening 40 through the upper part of the casing 14 permits the escape of the cooling air from the casing 14 into the upper compartment 5, when it passes through a suitably screened opening (not shown) in the walls of the latter to the atmosphere.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The blower mechanism 32 may be operatively connected with the motor 27 or may be actuated by any other suitable known means.

It will be obvious that when the ribbon 24 having produced thereon a series of related objects or pictures, is threaded through the neck portion of the casing 14 in the same manner that a film is passed through a motion picture machine of conventional construction, that images produced upon the translucent panel 8 will appear in sequence in similitude to a motion picture. The images produced may be varied at will and may be selected to afford both entertainment and instruction in the home. The casing 1, when the apparatus is not in use, has the appearance of an ornamental article of furniture and adds to the general ensemble of the room in which disposed.

In Fig. 5, I show a section through a modification of the embodiment of the invention heretofore described. Like reference numerals have been used to designate like parts of the two embodiments of the invention illustrated in the drawings and

I shall confine my description of the form of the device illustrated in Fig. 5, to a description of the parts thereof that differ from analogous parts of the preferred form of the device. Instead of the single projector and lamp casing 14 as heretofore described, each incandescent lamp 28 is confined within a separate casing 50, as is the reflector 30 for that particular lamp. The several casings 50 are relatively arranged so that their axes if extended would intersect at a point through which the ribbon 24 is passed when unwound from the reel 22 to a lower reel. Each casing 50 is open at the end thereof facing the ribbon 24 and each casing has disposed in the open end thereof a projector tube 51 provided with a suitable lens 52 for focusing the rays of light from the lamp upon the ribbon 24 and upon a mirror 53 disposed back of the exposed portion of the ribbon and adjacent thereto.

The rays of light focused upon the exposed portion of the ribbon 24 are reflected therefrom through a lens 54 upon the translucent panel or screen 8. The mirror 53 serves to reflect through the lens 54 such rays of light as do not strike the ribbon 24. The image of the picture produced upon the exposed portion of the ribbon 24 will be presented upon the translucent panel or screen 8. The shutter 55 is provided for cutting off the rays of light from the ribbon 24 each instant when the shift is made from one picture to the next in the series.

The operation of the modified form of the device is otherwise identical in essential respects with the operation of the preferred form of the device and consequently need not be described herein.

Obviously my invention is susceptible of embodiment in forms varying in detail from those illustrated in the accompanying drawings or described herein, and I therefore consider as my own all such modifications and adaptations of the embodiment of the invention illustrated which fairly fall within the scope of the appended claims.

I claim:—

1. In a cinematographic apparatus, a cabinet casing having a translucent panel in the walls thereof, a substantially hemispherical lamp projector casing supported within said compartment with the larger end thereof facing the translucent panel, said lamp casing being closed at its larger end by an integral wall having an axial opening formed therethrough and having an elongated integral neck portion at its smaller end in axial alinement with the opening through the larger end thereof, said neck portion having vertically alined slots through its

walls, adjacent to its extremity and having an additional slot through its walls in parallel relation to the plane of the first slots and between the latter and the body of the lamp projector casing, an edgewise swingable shutter working in said second slot, means for feeding opaque picture ribbon through said first slots to expose portions of the latter within the neck portion of the casing, a mirror disposed transversely of the neck portion of the casing at the extremity of the latter and in confronting relation to said translucent screen, an incandescent lamp disposed within the casing for projecting rays of light upon the exposed portion of picture ribbon, and means for operating said ribbon feeding means and said shutter to feed said ribbon through said neck portion of the casing and to alternately prevent and permit rays of light from the incandescent lamp to strike the exposed portion of ribbon.

2. In a cinematographic apparatus, a cabinet casing having a translucent panel in the walls thereof, a substantially hemispherical lamp projector casing supported within said compartment with the larger end thereof facing the translucent panel, said lamp casing being closed at its larger end by an integral wall having an axial opening formed therethrough and having an elongated integral neck portion at its smaller end in axial alignment with the opening through the larger end thereof, said neck portion having vertically alined slots through its walls, adjacent to its extremity and having an additional slot through its walls in parallel relation to the plane of the first slots and between the latter and the body of the lamp projector casing, an edgewise swingable shutter working in said second slot, means for feeding opaque picture ribbon through said first slots to expose portions of the latter within the neck portion of the casing, a mirror disposed transversely of the neck portion of the casing at the extremity of the latter and in confronting relation to said translucent screen, an incandescent lamp disposed within the casing for projecting rays of light upon the exposed portion of the picture ribbon, means for operating said ribbon feeding means and said shutter to feed said ribbon through said neck portion of the casing and to alternately prevent and permit rays of light from the incandescent lamp to strike the exposed portion of ribbon, and cooling means comprising an air conduit having a ring nozzle surrounding the incandescent lamp and another nozzle arranged to discharge upon the exposed portion of the ribbon.

ARTHUR GATES MERRIMAN.