

No. 658,255.

Patented Sept. 18, 1900.

R. FULGORA.

APPARATUS FOR DISPLAYING LIVING PICTURES.

(Application filed Apr. 19, 1900.)

(No Model.)

2 Sheets—Sheet 1.

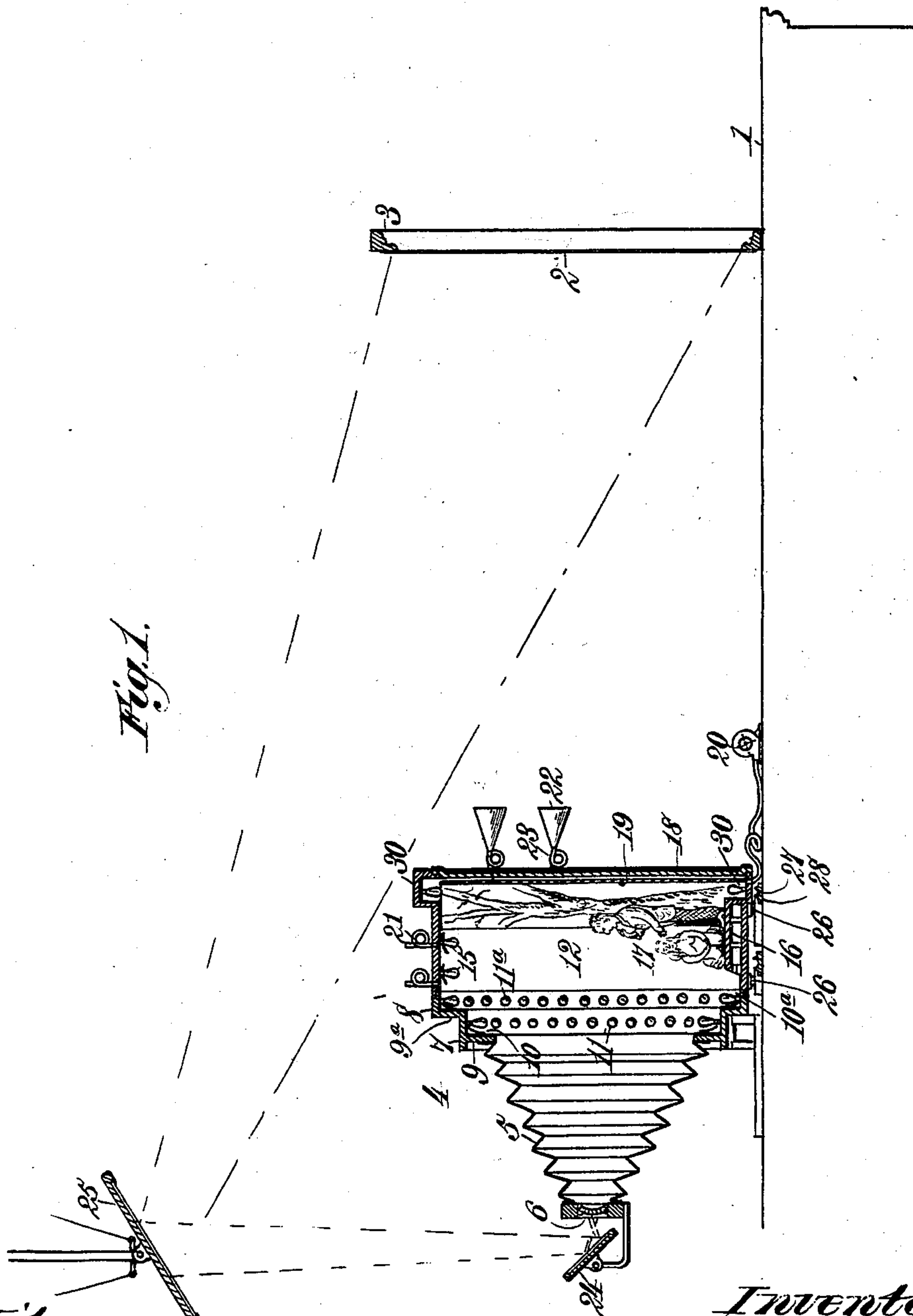


Fig. 1.

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Fig. 2.

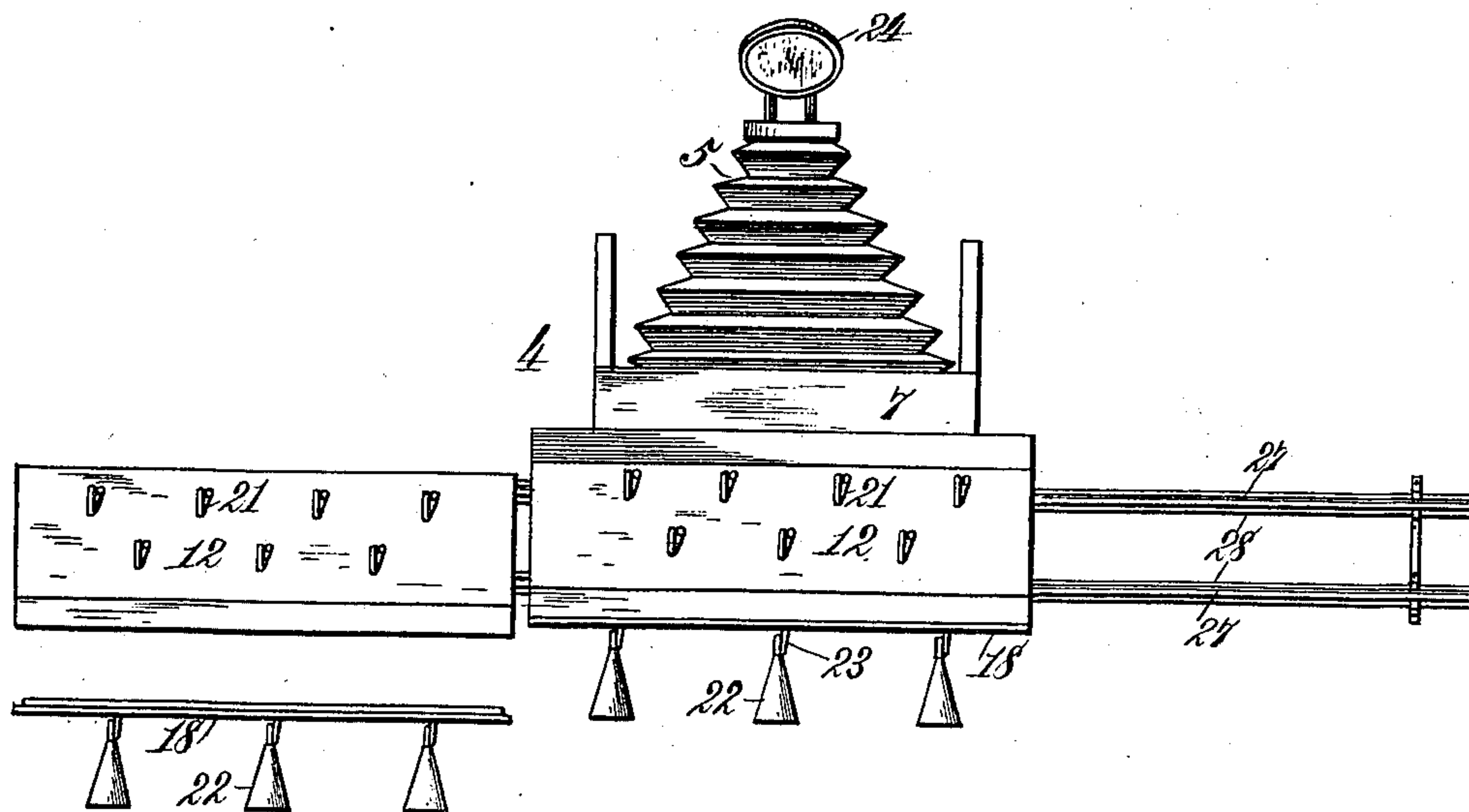
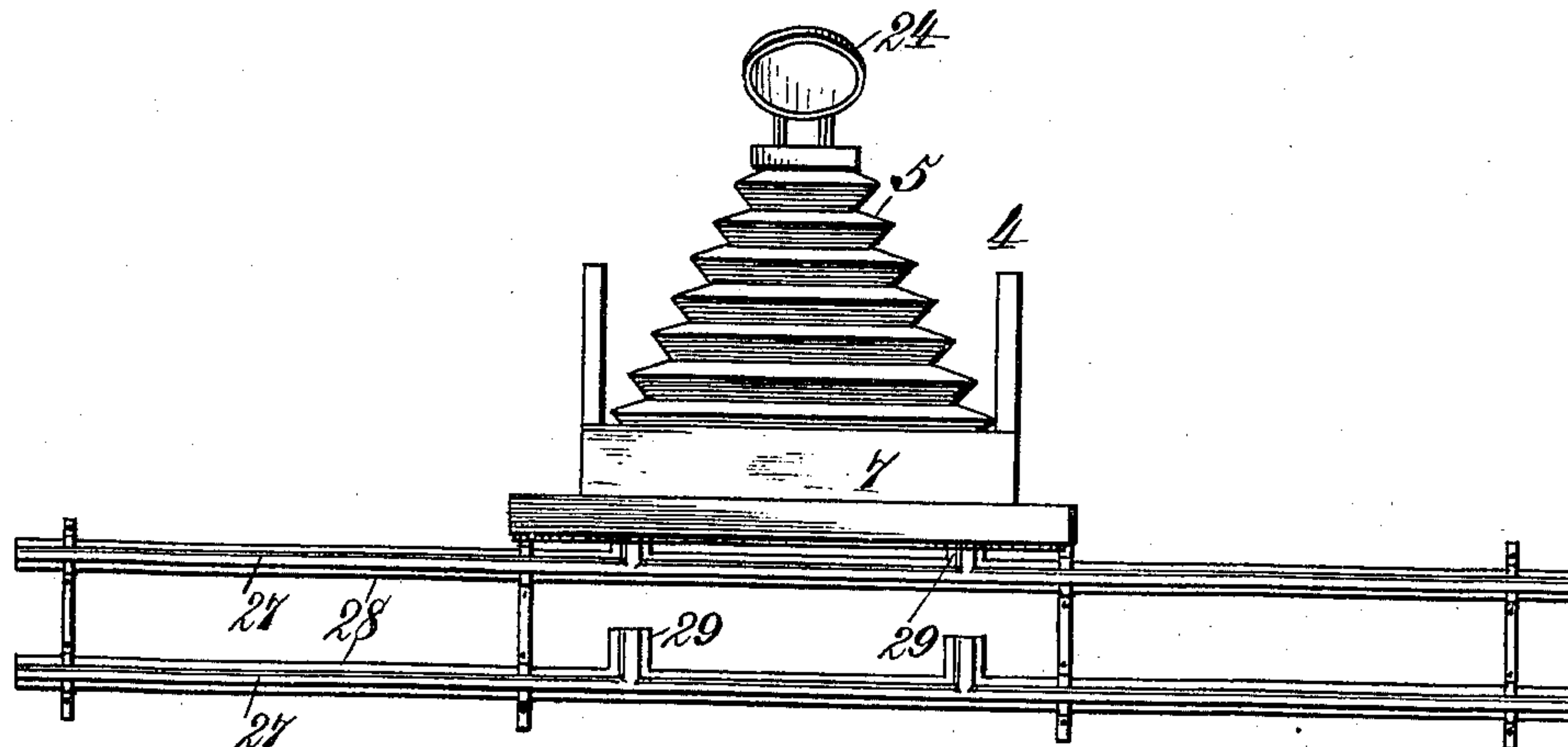


Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT FULGORA, OF NEW YORK, N. Y.

APPARATUS FOR DISPLAYING LIVING PICTURES.

SPECIFICATION forming part of Letters Patent No. 658,255, dated September 18, 1900.

Application filed April 19, 1900. Serial No. 13,518. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FULGORA, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Apparatus for Displaying Living Pictures, of which the following is a specification.

My invention relates to apparatus for displaying living pictures, one object of the same being to provide means whereby the image of living objects may be projected upon a translucent screen at a distance from the apparatus, reproducing all the movements and colors of said objects.

A further object of the invention is to provide means whereby the pictures or images to be displayed may be readily and quickly changed without tedious waits or intervals.

Other objects and advantages of my invention will hereinafter appear.

The invention consists of the features and details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 is a longitudinal sectional view of my improved apparatus shown located on a stage. Fig. 2 is a top plan view of the same. Fig. 3 is a view similar to Fig. 2, with the movable cars or casings removed to show the construction and arrangement of the track on which they are mounted.

Like reference-numerals indicate like parts in the different views.

In carrying out my invention I mount upon the stage 1, preferably near the forward end thereof, a translucent screen 2, having an ornamental frame 3 surrounding the same. At the rear of the screen 2 the projecting apparatus 4 is located, the same consisting of an opaque tapering bellows 5, having a lens 6 at the apex thereof and an annular frame 7 at the rear thereof. The said frame is provided with a rearwardly-extending flange 8 and with an inwardly-extending flange 9, between which is an offset 9^a, forming two annular pockets or recesses 10 and 10^a, in which are located two continuous series of incandescent electric lamps 11 and 11^a. As these lamps are located, respectively, behind the flange 9 and the offset 9^a, the direct rays of

light therefrom are prevented from being projected against the lens 6. Behind the bellows 5, but in close contact with the frame 7, is a car or casing 12, having all sides closed except its front. The top, bottom, and sides are substantially in line with the flange 8 of the frame 7 and are adapted to form a lap-joint therewith. In the car or casing 12 rows of incandescent electric lamps 15 are located, the said lamps being so disposed that the direct rays thereof will be cut off from the lens 6 by the flange 9. When the car or casing 12 is in operative position—in close contact with and joined to the flange 8 of the frame 7—there is formed by the bellows 5 and the car 12 a closed chamber having opaque walls through which no light can enter or escape. At the bottom of the car or casing 12 I provide a platform 16, on which the living figures 17 stand in the positions they are to assume for the representation of the picture to be reproduced. Back of these figures and against the rear wall 18 of the car 12 suitable scenery 19 is placed. For the purpose of providing for the change of scenery the rear wall 18 is made removable. This, however, is not essential, as the scenery may be placed in position in other ways.

In order to provide for the ventilation of the box or car 12 which the living objects occupy, I provide a ventilating-fan 20 and pipes 21, the latter communicating with the outside of the car or casing and being crooked for the purpose of preventing the escape of light from within or the entrance of light from without. In the rear wall 18 of the car or casing 12 I also provide megaphones 22, having crooked stems 23 for the transmission of sound from the inside of the car to the outside.

In front of the lens 6 is an adjustable reflecting-mirror 24, and above the mirror 24 is a second adjustable mirror 25, these two mirrors being designed for the purpose of reflecting the image of the living objects within the car or casing 12 upon the rear side of the translucent screen 2. It will be obvious, however, that both of the mirrors 24 and 25 may be dispensed with and the image transmitted direct upon the rear side of the screen 2. To do this, however, the position of the projecting apparatus 4 would have to be reversed.

It will be understood from the foregoing that the electric lamps 11, 11^a, and 15 illuminate the living objects 17 within the car or casing 12 and that the rays of light from said
 5 living objects are collected by the lens 6 and transmitted upon the screen 2. All movements of these objects as well as the colors thereof will also be transmitted, with the result that the living picture represented by
 10 the objects 17 is accurately transmitted and reproduced within view of the audience in front of the stage 1.

It will be understood, of course, that a number of cars or casings 12 are employed, by
 15 means of which the picture to be reproduced may be readily and quickly changed. These cars are provided on their under side with ball-rollers 26, which fit within the grooves 27 of the rails 28, extending across the stage
 20 1 and secured thereto. These rails 28 are provided with lateral extensions or branches 29 just back of the projecting apparatus 4, so that a car may be moved from behind the scenes on the stage along the rails 28 until
 25 the branches 29 are reached, and then thrown forwardly until the sides of the car connect with the flange 8 of the frame 7 at the rear of the bellows 5. When it is desired to change from one picture to the other, the lamps 11
 30 and 15 are extinguished, and while the stage is still in darkness the car 12, containing the figures representing the picture which has just been produced, is drawn rearwardly on the branch rails 29 and moved off the stage—
 35 say to the right—along the main-track rails 28. At the same time the car containing the figures of the picture which is to be produced next is moved from the left-hand end of the track-rails 28 to the branch rails 29, and then

thrown forwardly until contact or close en- 40
 gagement is had between said car and the frame 7. The lamps 11, 11^a, and 15 are then turned on and the apparatus acts as before.

In addition to the pockets 10 and 10^a in the annular frame 7 for the reception of incan- 45
 descent electric lamps 11 and 11^a I form at the rear of the car or casing 12 a pocket or pockets 30, in which a supplemental row of incandescent lamps is placed. The front walls
 50 of these pockets cut off the direct rays of light from the lamps from the lens 6.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an apparatus for reproducing living pic- 55
 tures, the combination with a tapering bellows having opaque walls, provided with a lens at the apex thereof, and with an annular frame at the rear end thereof, the said frame
 60 being provided with a rearwardly-extending flange, with an inwardly-extending flange and with an intermediate, inwardly-extending offset forming two pockets, of a movable car or casing containing a platform for the living
 65 object to be reproduced, the said car or casing having opaque top, bottom, side and rear walls, and adapted to form a lap-joint with the rearwardly-extending flange on the frame at the rear of said bellows, and electric lamps
 70 arranged in said pockets.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT FULGORA.

Witnesses:

WM. M. STOCKBRIDGE,
 EWELL A. DICK.