

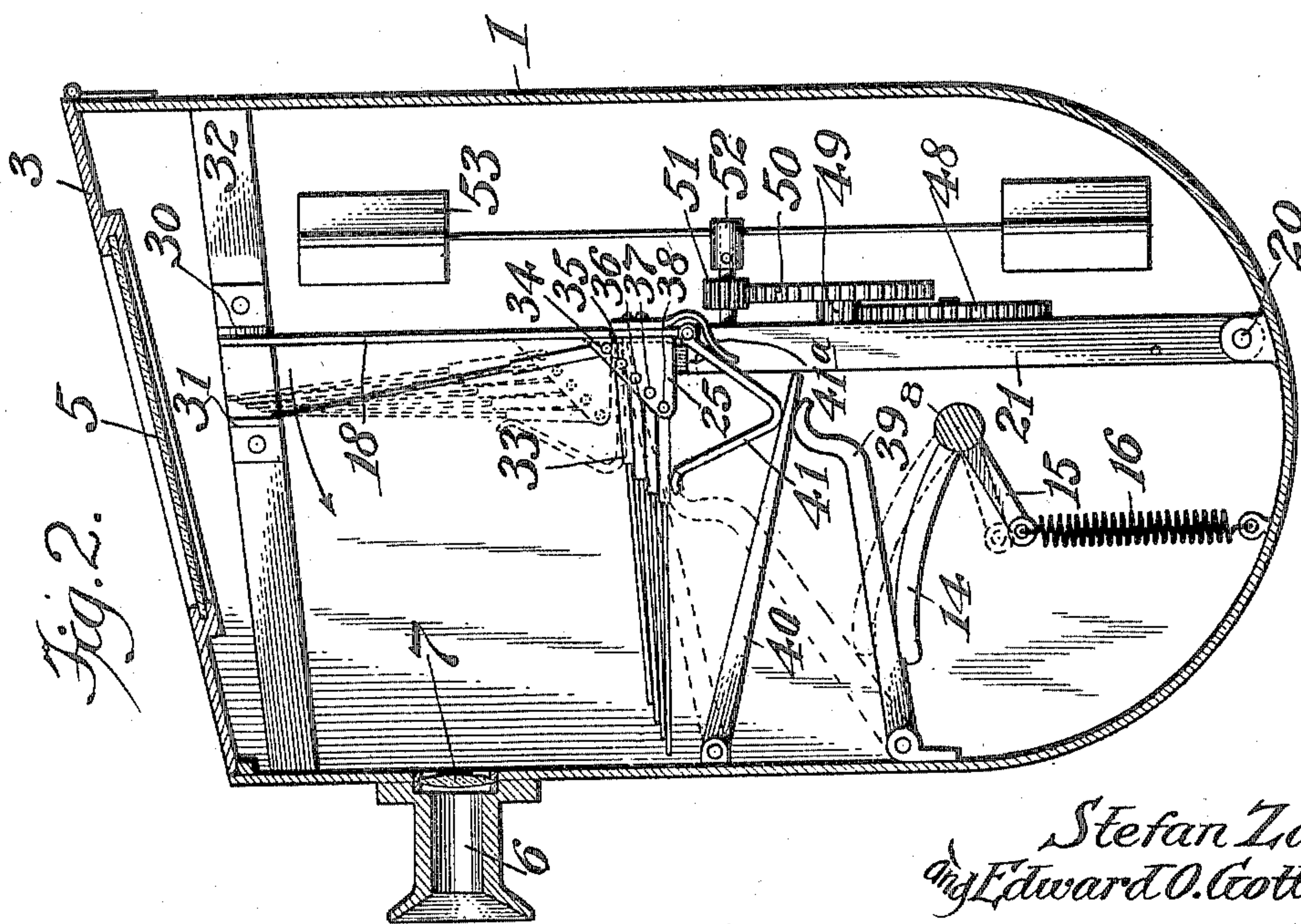
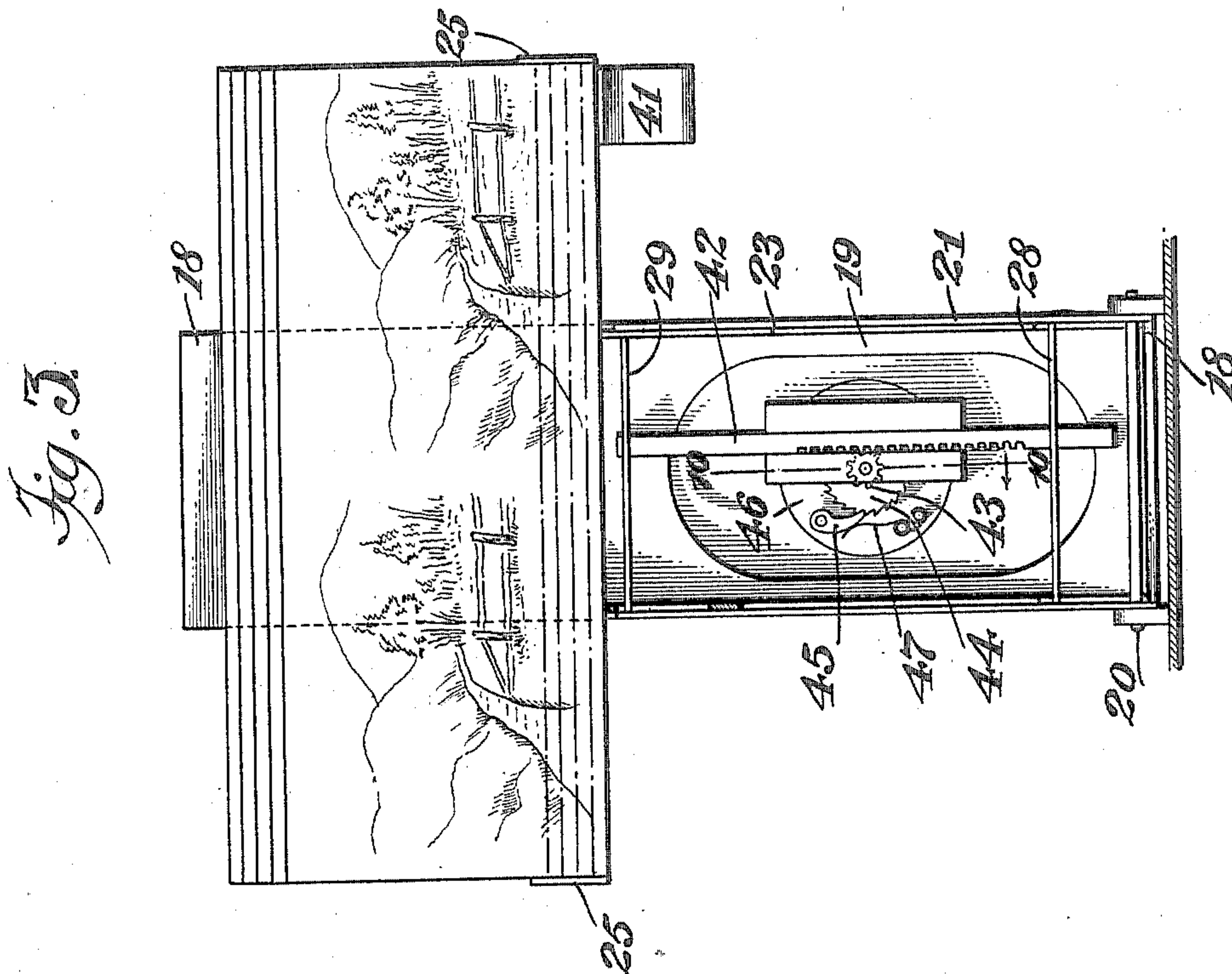
No. 811,610.

PATENTED FEB. 6, 1906.

S. ZACSEK & E. O. GOTTLIEB.
APPARATUS FOR DISPLAYING PICTURES.

APPLICATION FILED MAY 23, 1904.

3 SHEETS—SHEET 2.



Witnesses
A. Appleman
Waldo M. Chapin

Stefan Zacsek
Edward O. Gottlieb,
Inventors,

By *Their Attorneys,*
Rosenbaum & Stockbridge.

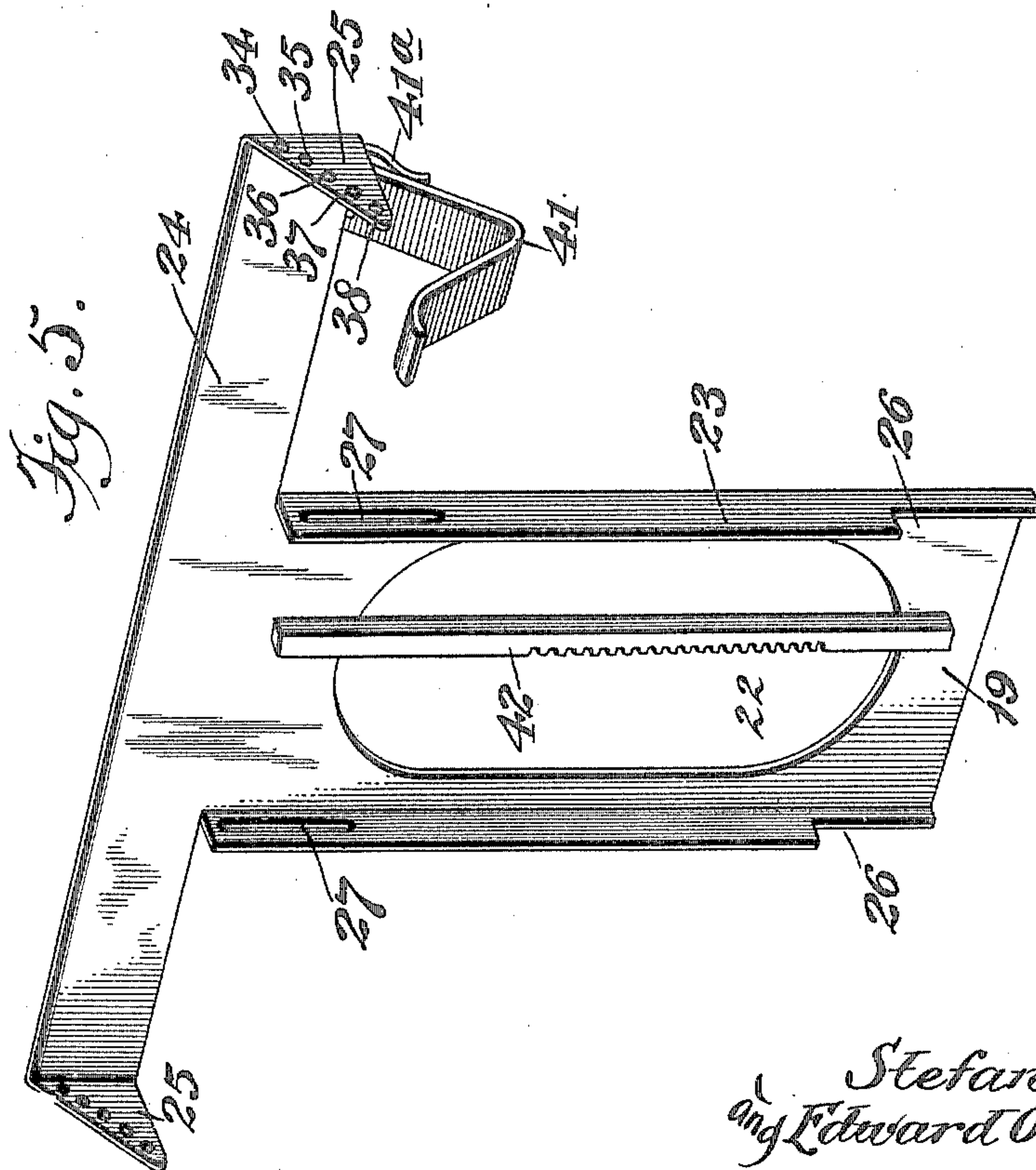
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UNITED STATES PATENT OFFICE.

STEFAN ZACSEK AND EDWARD O. GOTTLIEB, OF NEW YORK, N. Y.

APPARATUS FOR DISPLAYING PICTURES.

No. 811,610.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed May 23, 1904. Serial No. 209,151.

To all whom it may concern:

Be it known that we, STEFAN ZACSEK and EDWARD O. GOTTLIEB, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Displaying Pictures, of which the following is a full, clear, and exact description.

The object of our invention is to provide novel means for displaying a series of pictures one by one; and the invention consists of a vertically-movable picture-supporting frame capable of swinging movement, a stop for limiting the forward movement of said frame picture-holders pivoted at different elevations to said frame, and means for swinging said picture-holders to their upright positions and for afterward swinging and bodily elevating said frame, so that the pictures carried thereby may assume positions behind said stop.

It also consists in certain 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 perspective view showing the exterior of the casing in which the operating mechanism is mounted. Fig. 2 is a vertical section on the line 8 8 of Fig. 1. Fig. 3 is a front elevation of the picture-supporting frame and certain of the parts which cooperate therewith. Fig. 4 is an enlarged detail sectional view on the line 10 10 of Fig. 3, and Fig. 5 is a perspective view of the sliding portion of the picture-supporting frame.

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

The casing 1 of the apparatus has been shown as mounted upon a pedestal or upright 2, although of course it may be otherwise supported, if desired. The top 3 of this casing is pivoted to the back thereof in order that access may be had to the interior, and said top is provided with a light-opening 4, preferably covered by a sheet of glass 5, the purpose of this construction being to permit of the admission of light to the pictures which are to be displayed. The front of the casing 1 is provided with two sight-tubes 6 6, having lenses 7 within them and through which a vision of the pictures to be displayed in magnified form may be obtained. Ex-

tending transversely through the casing 1 is an operating-shaft 8, mounted for rocking movement, one end of which projects through the side 10 of the casing and has an operating crank or handle 11 thereon. This crank or handle is located on the outside of the casing 1 and is mounted in an arc-shaped guard 12, which serves to limit its movement in both directions to approximately ninety degrees. The shaft 8 is provided intermediate the side ends of the casing 1 with a forwardly-extending arm 14, which when the shaft 8 is rocked serves as the means for actuating the picture-displaying mechanism. Said shaft 8 is also provided with an arm 15, to which is connected spring 16, attached to the bottom wall of the casing 1, the said spring serving to return said shaft 8 to its normal position when the pressure thereon is released.

The picture-displaying mechanism consists of a supporting-frame made up of a plate 18 and a vertically-movable slide 19 thereon. The plate 18 is pivoted at 20 to the bottom wall of the casing 1 and is provided with the forwardly-extending side flanges 21. The slide 19 is preferably made of a plate or strip of sheet metal having an elongated substantially elliptical opening 22 therein, having forwardly-extending side flanges 23, which fit within and lie in substantially close relation to the side flanges 21 on the plate 18, and a cross-head 24, extending across the upper end thereof beyond the flanges 23 and itself provided with the forwardly-extending substantially triangular flanges 25. The lower ends of the flanges 23 are notched or cut away, as shown at 26, and the upper ends of said flanges are provided with the elongated slots 27. The plate 18 and the slide 19, which go to make up the picture-supporting frame, are connected to each other by means of the rod 28, which connects the side flanges 21 of the plate 18 near their lower ends and lies within the notches or cut-away portions 26 of the flanges 23, and the rod 29, which connects the flanges 21 near their upper ends and extends through the slots 27 in the flanges 23. The plate 18 of the picture-supporting frame extends up to a point slightly below the lid or cover 3 of the casing 1 and is located between two substantially parallel stops 30 31, which serve to limit the pivotal or swinging movement of said frame in opposite directions. These stops have been shown in the form of

strips secured to a cross-bar 32. The triangular flanges 25 on the cross-head 24 of the slide 19 serve as supports for the picture-holders 33. These picture-holders may be in the form of clamps or of any other suitable construction. The same are pivoted at 34, 35, 36, 37, and 38 along the inclined edges of the supports 25, so that when the pictures carried thereby are in their raised positions the upper edges thereof will lie at different elevations. Coöperating with these parts is the series of levers 39, 40, and 41. The lever 39 is pivoted to the front wall of the casing 1 and lies within the path of movement of and is adapted to be engaged by the arm 14 on the operating-shaft 8. The free or inner end of the lever 39 is adapted to engage the free or inner end of the lever 40, which lever 40 is also pivoted to the front wall of the casing 1 and extends rearwardly therefrom. The lever 41 is shown in the form of an elbow-lever, one arm of which is pivoted to the cross-head 24 on the slide 19, the other arm of which is adapted to engage the lowermost picture-holder 33, and the elbow of which is adapted to be engaged by the lever 40. The lever 41 is prevented from falling beyond a predetermined point by means of a limiting-stop 41^a, secured to the cross-head 24.

Secured to and carried by the slide 19 and extending longitudinally of the opening 20 in said slide is a rack-bar 42, the teeth of which mesh with a pinion 43, mounted in suitable bearings in and carried by the plate 18. Said pinion is secured to a ratchet-wheel 44, and through the latter and the spring-actuated pawl 45 is connected with a disk 46. The pawl 45 is pivoted to the disk 46 and is held in engagement with the teeth of the ratchet-wheel 44 by the spring 47. The disk 46 is secured to a gear 48, meshing with pinion 49, which in turn is secured to a gear 50, meshing with pinion 51 on a shaft 52, carrying a pair of speed-controlling blades 53, constituting a governor. It is of course obvious that for the particular system of gearing and speed-controller shown any other system of reducing gearing and governor may be substituted.

Constructed as above described, the operation of our invention will doubtless be readily understood. Briefly stated, however, it is as follows: When the operating-shaft 8 is rocked, as it may be done by turning the crank or handle 11, the arm 14 thereon is raised against the action of the spring 16. When the arm 14 is raised, the levers 39 and 40 will also be elevated and the lever 41 will be rocked. When the latter lever is rocked, the first action caused thereby will be to swing the picture-holders 33 and the pictures carried thereby upwardly and rearwardly on their pivotal connections with the supports 25. When thus moved to the position shown in dotted lines in Fig. 2 of the

drawings, the next action will be to swing the picture-supporting frame on its pivot 20 until the plate 18 strikes against the stop 30. When this takes place, a space will be left in front of the plate 18 and between it and the stop 31. The further upward movement of the lever 41 will cause a bodily upward movement of the slide 19 and the picture-holders and pictures carried thereby until the front picture of the series reaches a point behind the stop 31, when all of said pictures are prevented by said stop from falling down into their horizontal positions. When the slide 19 is moved upwardly, the rack 42 rotates the pinion 43 and through the latter the ratchet-wheel 44 is turned. During the turning movement of said ratchet-wheel, however, the teeth thereof will slip on the pawl 45 without causing any rotation of the disk 46. When the pressure upon the operating-shaft 8 is released, the said shaft will be returned to its normal position through the action of the spring 16 and the levers 39, 40, and 41 will be returned to their normal positions by gravity. The slide 19 and the parts carried thereby will also return to their normal positions by gravity; but this movement will be slow, the same being retarded by the action of the speed-controlling mechanism described—that is to say, as the slide 19 falls the rack 42, acting upon the pinion 43, will turn the ratchet-wheel 44 in such direction that through the pawl 45 the disk 46 and the system of reducing-gearing described, together with the shaft 52 and the blades 53, will have to be rotated. This means that the said slide 19 will return slowly to its normal position. While doing so, the front picture of the series, carried by the holders 33, will first be exposed to view through the sight-tubes 6 for an appreciable period of time or until the upper edge thereof passes below the stop 31. When this takes place, said front picture and its holder will drop by gravity to the position shown in full lines in Fig. 2 of the drawings. The second picture of the series will then be exposed to view for an appreciable period of time and then fall by gravity to its normal position, and so on until all of the pictures have been exposed. As heretofore stated, the light-opening 4 in the cover of the casing provides for the admission of sufficient light to the interior of the casing to enable the different pictures to be readily viewed.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a vertically-movable picture-supporting frame, capable of swinging movement, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said frame and means for swinging said picture-holders to their upright positions and for afterward swinging and bodily elevating

said frame so that the pictures carried thereby may assume positions behind said stop, as and for the purpose set forth.

2. The combination with a vertically-movable picture-supporting frame, capable of swinging movement, and a pair of stops between which said frame is adapted to swing, of picture-holders pivoted at different elevations to said frame and means for swinging said picture-holders to their upright positions and for afterward swinging and bodily moving said frame so that the pictures carried by said holders may assume positions between said stops, as and for the purpose set forth.

3. The combination with a vertically-movable picture-supporting frame, capable of swinging movement, and having a pair of supporting-flanges at its side ends, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said flanges, and means for swinging said picture-holders to their upright positions and for afterward swinging and bodily elevating said frame, so that the pictures carried by said holders may assume positions behind said stop, as and for the purpose set forth.

4. The combination with a vertically-movable picture-supporting frame, capable of swinging movement, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said frame, means for swinging said picture-holders to their upright positions and for afterward swinging and bodily elevating said frame so that the pictures carried by said holders may assume positions behind said stop and means for retarding the return movement of said frame to its normal position, as and for the purpose set forth.

5. The combination with a vertically-movable picture-supporting frame, capable of swinging movement, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said frame, a lever fulcrumed to said frame and adapted to engage the lowermost of said picture-holders and means for rocking said lever, whereby said picture-holders are raised to their upright positions, said frame is rocked and bodily elevated and the pictures carried by said holders are caused to assume positions behind said stop, as and for the purpose set forth.

6. The combination with a vertically-movable picture-supporting frame, capable of swinging movement, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said frame, an elbow-lever fulcrumed to said frame and having its free end adapted to engage the lowermost of said holders, means for limiting the downward movement of said lever and means for causing the upward movement of said lever, whereby said pic-

ture-holders are raised to their upright positions, said frame is rocked and bodily elevated and the pictures carried by said holders are caused to assume positions behind said stop, as and for the purpose set forth.

7. The combination with a picture-supporting frame comprising a pivoted member and a vertically-movable slide thereon, and a stop for limiting the forward swinging movement of said frame, of picture-holders pivoted at different elevations to said slide, and means for swinging said holders to their upright positions and for afterward elevating said slide, so that the pictures carried by said holders will assume a position behind said stop, as and for the purpose set forth.

8. The combination with a picture-supporting frame comprising a pivoted member and a vertically-movable slide thereon, and a stop for limiting the forward swinging movement of said frame, of picture-holders pivoted at different elevations to said slide, means for swinging said holders to their upright positions and for afterward elevating said slide, so that the pictures carried by said holders will assume a position behind said stop, and means for retarding the return movement of said slide, as and for the purpose set forth.

9. The combination with an operating-shaft, of a picture-supporting frame comprising a pivoted member and a vertically-movable slide thereon, a stop for limiting the forward movement of said frame, picture-holders pivoted at different elevations to said slide, and means thrown into operation by said shaft for swinging said holders to their upright positions and for afterward swinging said frame and bodily elevating said slide, whereby the pictures carried by said holders are caused to assume positions behind said stop, as and for the purpose set forth.

10. The combination with an operating-shaft, of a picture-supporting frame comprising a pivoted member and a vertically-movable slide thereon, a stop for limiting the forward movement of said frame, picture-holders pivoted at different elevations to said slide, means thrown into operation by said shaft for swinging said holders to their upright positions and for afterward swinging said frame and bodily elevating said slide, whereby the pictures carried by said holders are caused to assume positions behind said stop, and means for retarding the return movement of said slide, as and for the purpose set forth.

11. The combination with a picture-supporting frame comprising a plate pivoted at its lower end, and a vertically-movable slide thereon, the said slide being provided with a cross-head having forwardly-extending flanges thereon, constituting supports, and a stop for limiting the forward swinging movement of said frame, of picture-holders pivoted at different elevations to said supports,

a lever fulcrumed to said slide and adapted to engage the lowermost of said holders, and means for rocking said lever upwardly, whereby said picture-holders are moved to their upright positions, said plate is rocked rearwardly on its pivot and said slide is bodily elevated so that the pictures carried by said holders will assume a position behind said stop, as and for the purpose set forth.

12. The combination with a picture-supporting frame comprising a plate pivoted at its lower end, and a vertically-movable slide thereon, the said slide being provided with a cross-head having forwardly-extending flanges thereon, constituting supports, and a stop for limiting the forward swinging movement of said frame, of picture-holders pivoted at different elevations to said supports, a lever fulcrumed to said slide and adapted to engage the lowermost of said holders, means for rocking said lever upwardly, whereby said picture-holders are moved to their upright positions, said plate is rocked rearwardly on its pivot and said slide is bodily elevated so that the pictures carried by said holders will assume a position behind said stop, and means for retarding return movement of said slide, as and for the purpose set forth.

13. The combination with a picture-supporting frame comprising a plate pivoted at its lower end and a vertically-movable slide thereon, the said slide being provided with a cross-head having forwardly-extending flanges thereon, constituting supports, and a stop for limiting the forward swinging movement of said frame, of picture-holders pivoted at different elevations to said supports, an elbow-lever fulcrumed upon said slide whose free end is adapted to engage the lowermost of said holders, a stop for limiting the downward movement of said lever, and means for rocking said lever upwardly, whereby said holders are moved to their upright positions, said plate is moved rearwardly on its pivot and said slide is bodily elevated so that the pictures carried by said holders will assume a position behind said stop, as and for the purpose set forth.

14. The combination with a picture-supporting frame, comprising a plate pivotally mounted at its lower end and provided with side flanges, and a vertically-movable slide thereon, the said slide being provided with slotted side flanges which fit within the

flanges on said plate, and also having a cross-head thereon provided with forwardly-extending flanges, constituting supports, and a pair of stops between which the upper end of said plate is adapted to swing, of picture-holders pivoted at different elevations to said supports, and means for moving said holders to their upright positions, for swinging said plate rearwardly and for elevating said slide so that the pictures carried by said holders will assume positions between said stops, as and for the purpose set forth.

15. The combination with a picture-supporting frame comprising a pivoted member and a vertically-movable slide thereon, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said slide, means for moving said holders to their upright positions, for swinging said frame rearwardly and for elevating said slide so that the pictures carried by said holders will assume positions behind said stop, a rack carried by said slide, a pinion carried by said pivoted member and meshing with said rack, a fan-shaft, and a system of reducing gearing between said pinion and said fan-shaft, as and for the purpose set forth.

16. The combination with a picture-supporting frame, comprising a pivoted member and a vertically-movable slide thereon, and a stop for limiting the forward movement of said frame, of picture-holders pivoted at different elevations to said slide, an elbow-lever pivoted to said slide and adapted to engage the lowermost of said holders, a rock-shaft having an arm thereon, and connections between said arm and said elbow-lever, whereby when said shaft is rocked in one direction, said elbow-lever is raised, said picture-holders are moved to their upright positions, said frame is swung rearwardly and said slide is elevated so that the pictures carried by said holders are caused to assume a position behind said stop, as and for the purpose set forth.

In witness whereof we subscribe our signatures in the presence of two witnesses.

STEFAN ZACSEK.
EDWARD O. GOTTLIEB.

Witnesses:

WM. M. STOCKBRIDGE,
WALDO M. CHAPIN.