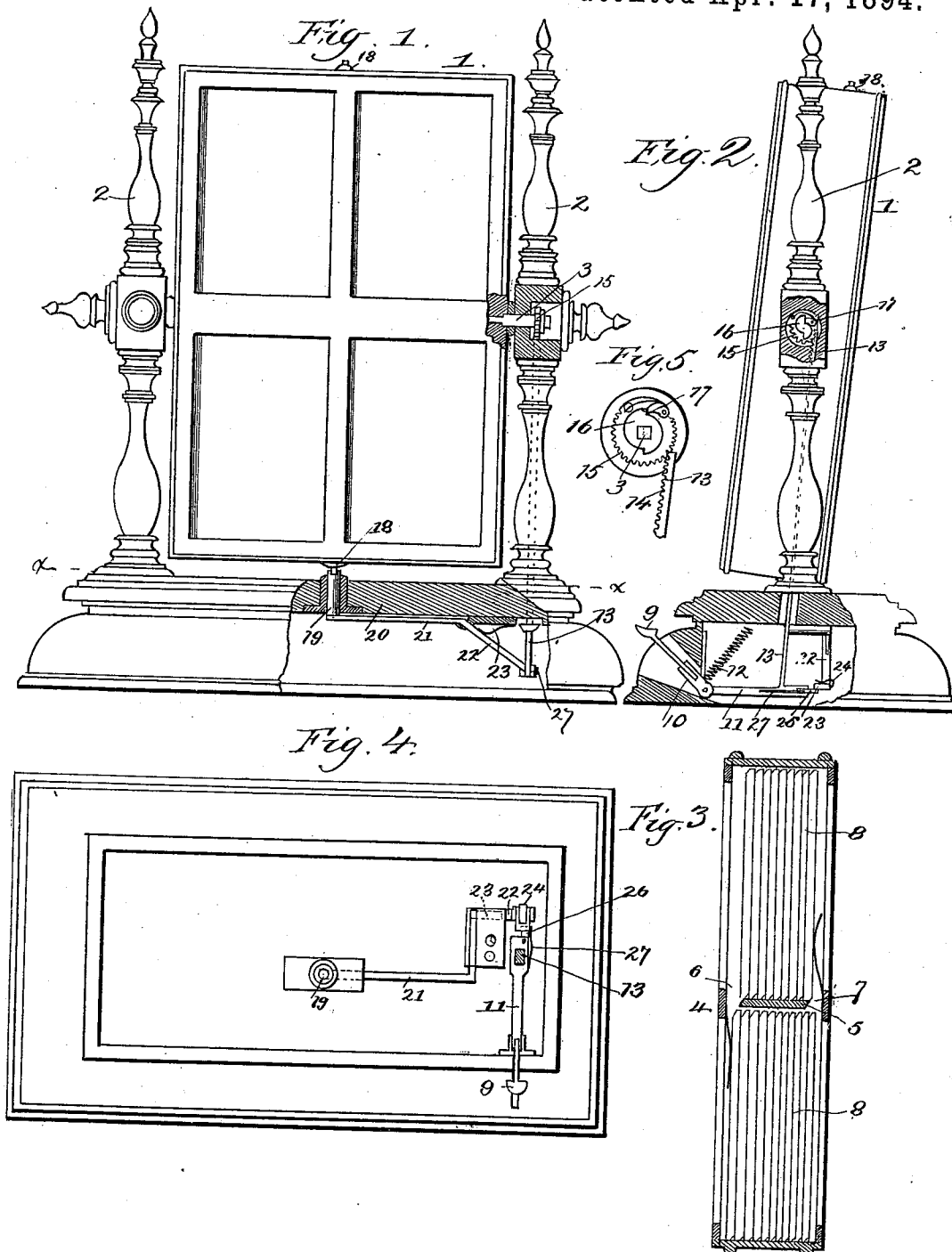


(No Model.)

J. EKVAL.
PHOTOGRAPH ALBUM.

No. 518,346.

Patented Apr. 17, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN EKVAL, OF FARGO, NORTH DAKOTA.

PHOTOGRAPH-ALBUM.

SPECIFICATION forming part of Letters Patent No. 518,346, dated April 17, 1894.

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To all whom it may concern:

Be it known that I, JOHN EKVAL, having declared my intention to become a citizen of the United States, residing at Fargo, in the county of Cass and State of North Dakota, have invented certain new and useful Improvements in Photograph-Albums; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to photograph albums or devices for displaying pictures, and has for its object to provide simple and effective means for bringing a series of pictures consecutively to the view of the person operating the device.

With these and other objects in view, the invention consists of the construction and arrangement of these several parts, which will be more fully hereinafter described and claimed.

In the drawings: Figure 1 is a sectional elevation of a device embodying the invention. Fig. 2 is an end elevation of the device showing a portion thereof broken away, and part of the operating mechanism in dotted lines. Fig. 3 is a transverse central section of the device. Fig. 4 is a horizontal section on the line $x-x$, Fig. 1. Fig. 5 is a detail view of cog-wheel.

Similar numerals of reference are employed to indicate corresponding parts in the several figures.

Referring to the drawings, the numeral 1 designates a box, which is made accessible by any suitable means, and rotatably mounted between two uprights 2 through the medium of trunnions 3. The front 4 of the box is constructed with sight glasses or panes of suitable dimension, and the interior of the said box is a shelf or dividing board 5, between which and the front and back portions of the said box are spaces 6 and 7. The pictures are placed in frames 8, each as shown, holding four pictures, and the frames are then placed in the box as shown in Fig. 3. Each time the box revolves one-half round, the frame at the front of the board 5, drops down by its own weight into the lower division of the said box, and thereby consecutively displays new pictures at each revolution. The lower portion of the box is relieved alternately of one of the

frames which passes through the opposite opening during the movement of the box into the opposite portion of the latter, and through the opposite opening adjacent to the board 5. It will be observed that by this operation, a continuous change in the pictures displayed to view is had.

To set the box in a revolving motion, a removable key 9 is employed, which slips into a socket 10, fulcrumed and pivoted to a bar 11, at its lower end, and having a retractile spring 12, attached thereto, which tends normally to raise the said socket in the position shown in Fig. 2. The inner end of the bar 11 is connected to an upright rod 13, which has the upper portion of one edge thereof formed with a series of teeth 14, which engage a cog-wheel 15, keyed to one of the trunnions 3, and adjacent to said cog-wheel, and co-acting therewith, is a ratchet and pawl, 16 and 17, which prevents the box from swinging backwardly and thereby causes a movement at all times toward the front. By pressing downwardly on the key 9, the rod 13 actuates the cog-wheel 15, and thereby the revolving motion is acquired. Secured to opposite ends of the box 1, is a catch 18, which co-acts with a keeper 19 secured on the base 20 of the device, and which has attached thereto a bar 21, with a connecting link 22, having a spring 23 bearing thereagainst, the said connecting link 22 being provided with a nose 24 at its lower pivoted end, and having a spring 25 bearing upon the same, which normally holds the said nose downwardly. To the rear extended end of the bar 13 is pivotally connected a catch 26, which has a spring 27 bearing thereagainst. And in operation, the said parts move as follows: When pressing downwardly on the key 9, the bar 21 through the link 22 pulls the keeper 19 down, said bar 21 being tilted by the movement of the key 9 so as to depress or draw downward on the keeper 19, as stated which unlocks the box, and simultaneously the cog-wheel 15 is set in motion by the movement of the rod 13; and after the movement of the box is completed, the key 9 is released and the keeper 19 moves downwardly, and engages the catch 18 at the opposite end of the said box 1 to thereby stop the box from revolving more than one-half round. It will be understood that when the key 9 is released, the

spring 12 restores all the parts to their normal position. Another operation also takes place at this time, and is incident to the operation of the keeper 19, and the catches 18.

5 On pressing downwardly on the key 9, the bar 11 is of course operated and the catch 26 strikes the nose 24 and raises the same, thereby actuating the link 22 against the influence of the spring 23 and transmits its movement

10 to the bar 21. The spring 23 is a little weaker than the spring 25, so that it lifts the link just enough to actuate the bar 21 to pull down the keeper 19 to unlock the box. Afterward when the key is released and the spiral spring

15 12 comes into play, the nose 24 and catch 26 slip by each other and the spring 27 sets the catch 26 back into its place ready for a similar operation.

The device as a whole is simple and exceptionally convenient, and it will be readily understood that many minor changes in the construction and arrangement of the several parts might be made and substituted for those

shown and described, without in the least departing from the nature or spirit of the invention. 25

Having thus described the invention, what is claimed as new is—

In a photograph album, the combination of a rotatable box, a series of gravitating 30 frames mounted therein, a gear wheel connected thereto, an upright rod having teeth engaging said gear wheel, and adapted to revolve the said box and removably keyed for actuating said rod, and a lock to hold the said 35 box and prevent the same revolving more than one-half revolution, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 40

JOHN EKVAL.

Witnesses:

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F. C. GARDNER.