

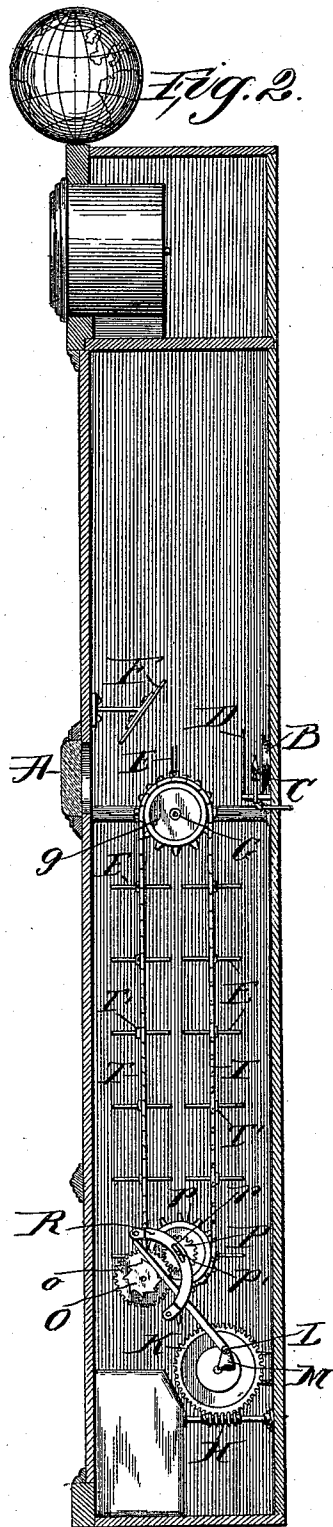
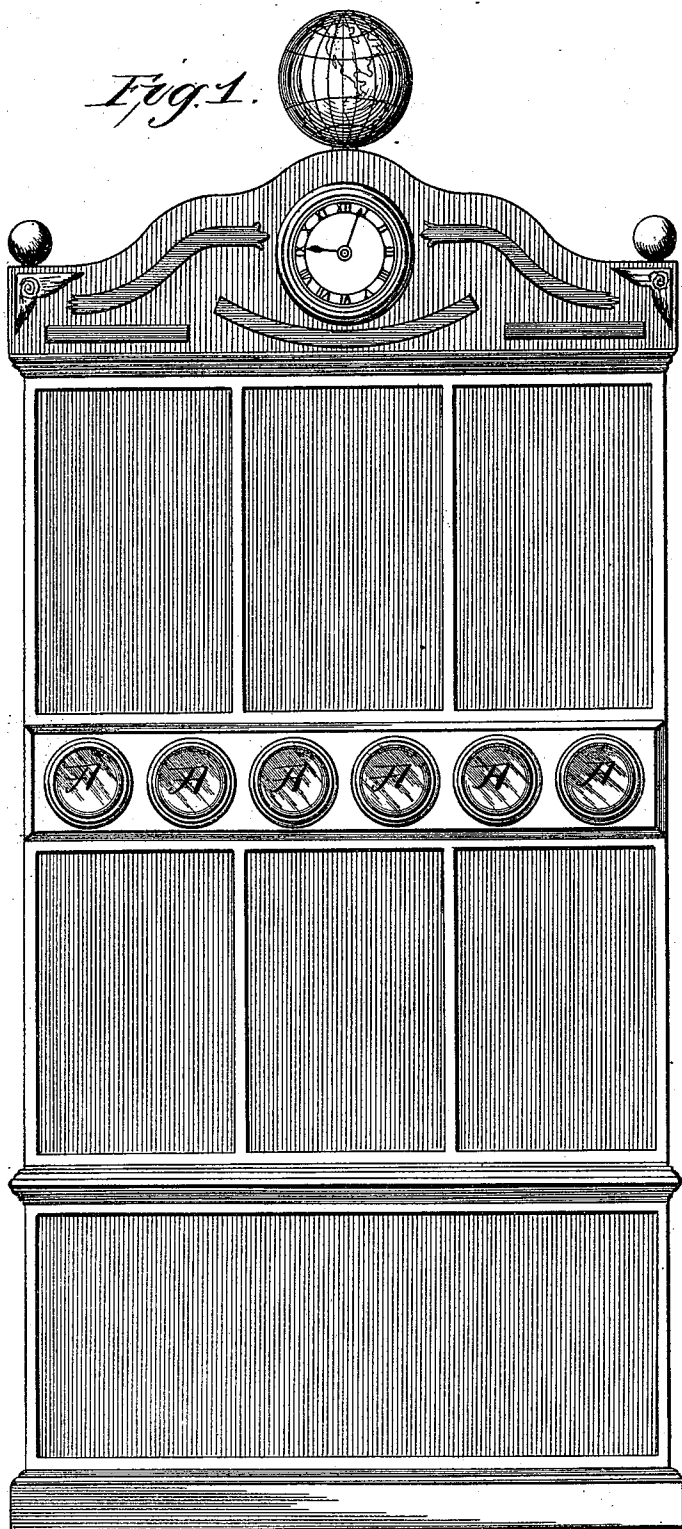
(No Model.)

3 Sheets—Sheet 1.

W. C. FAWKES.  
PICTURE EXHIBITOR.

No. 485,464.

Patented Nov. 1, 1892.



Witnesses:

W. M. Rheine *[Signature]*

*Inventor:*  
W. C. Fawkes  
By *[Signature]* L. Rice his Att'y

(No Model.)

3 Sheets—Sheet 2.

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Fig. 3.

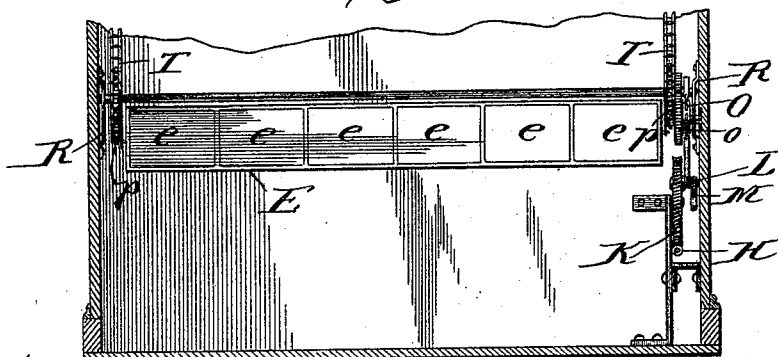


Fig. 8.



Fig. 9.

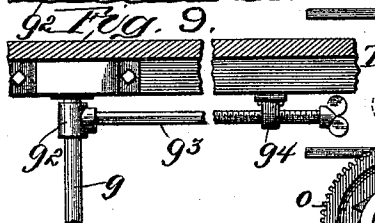


Fig. 6.

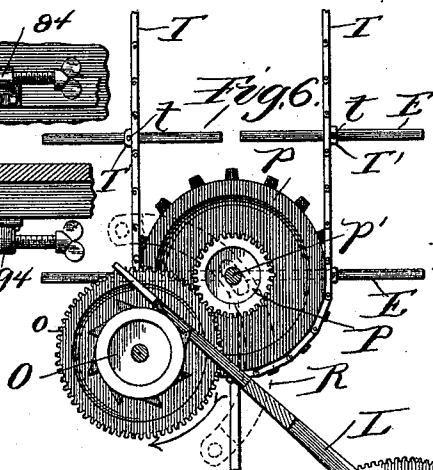


Fig. 5.

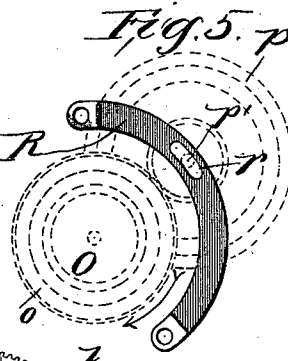


Fig. 7.

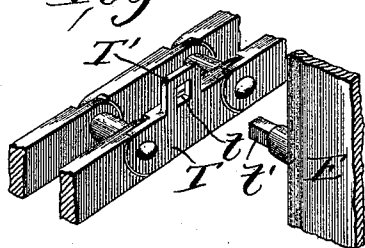
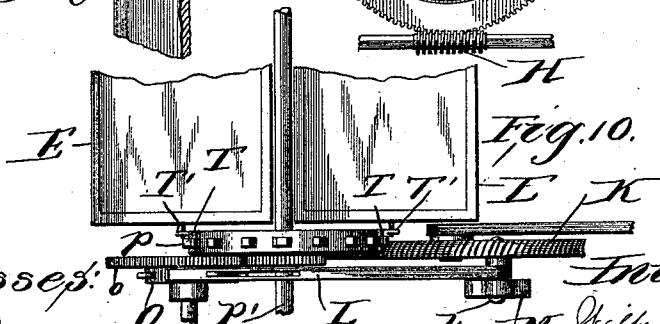


Fig. 10.



Witnesses:

Wm. M. Rheing

John A. For A.

Inventor

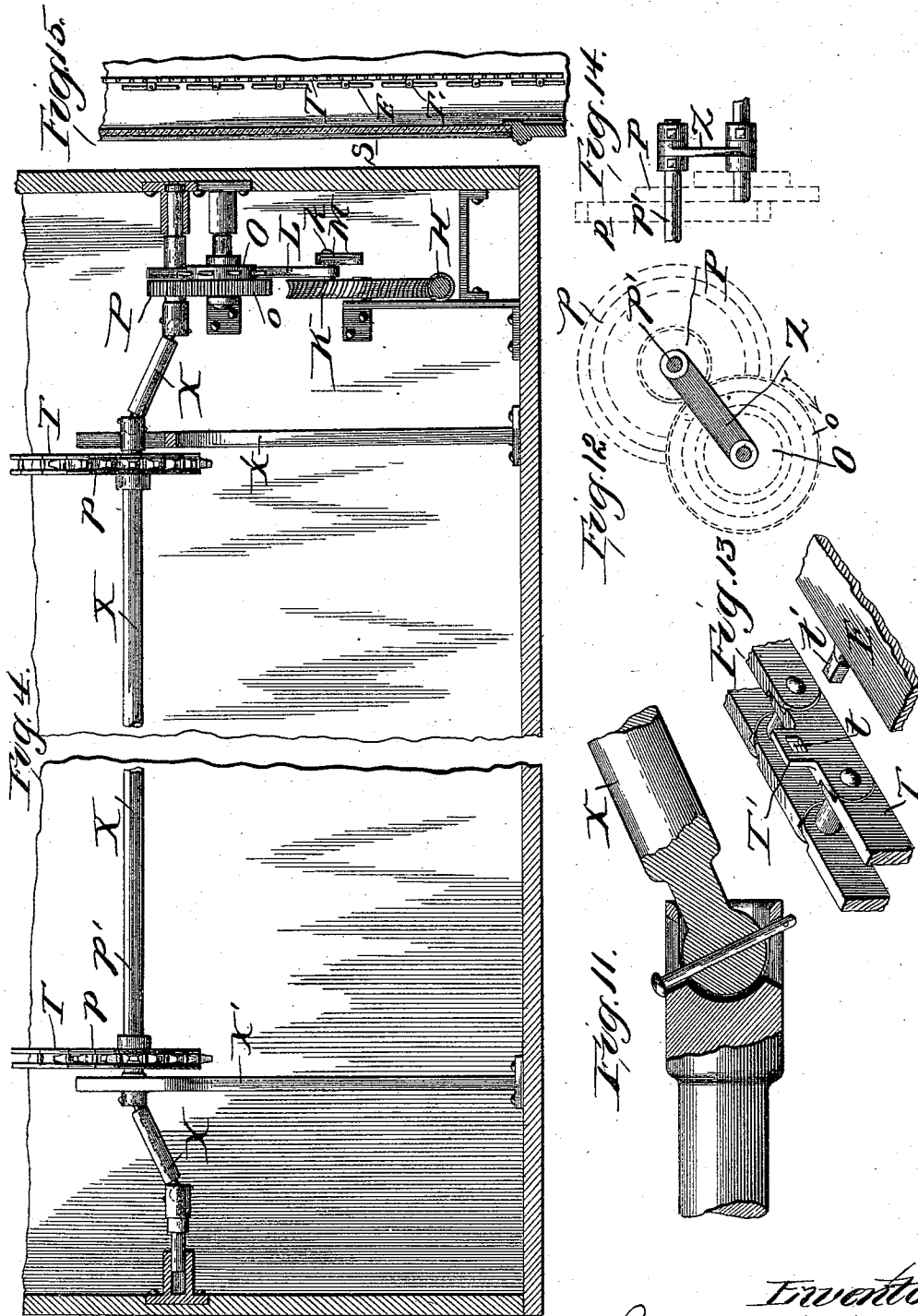
Wm. M. Rheing

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# UNITED STATES PATENT OFFICE.

WILBERT C. FAWKES, OF CHICAGO, ILLINOIS.

## PICTURE-EXHIBITOR.

SPECIFICATION forming part of Letters Patent No. 485,464, dated November 1, 1892.

Application filed December 10, 1891. Serial No. 414,576. (No model.)

*To all whom it may concern:*

Be it known that I, WILBERT C. FAWKES, a citizen of the United States of America, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Advertising Devices, of which the following is a specification.

Referring to the accompanying drawings, wherein like reference-letters indicate like parts, Figure 1 is a front elevation; Fig. 2, a vertical section; Fig. 3, a partial section; Fig. 4, a partial section of a modified form; and Figs. 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15 are detail views.

In bringing advertising matter before the public it is desirable to present it in such a manner as to attract and hold the attention of such people as may come in its immediate vicinity. To do this numerous devices have been invented, one of the most successful of which is to so mingle the advertising matter with other matter of great interest that the former is involuntarily brought to view while searching for the latter.

My invention relates to this class of devices, and is intended to so display interesting matter—such as scenic views, transparencies, &c.—as to draw and hold the attention and at the same time so mingle with it business-cards and advertising matter as to command the attention of the onlooker without wearying him. The advertising matter may also be in attractive form, as in transparencies, &c.

To accomplish this in a simple, economical, and durable manner is the object of my invention. For this purpose I construct an ornamental case or cabinet, as in Fig. 1. This may be of any desirable design or size suitably adapted to contain the necessary mechanism. Upon the various panels and exterior parts cards, scenery, or other interesting, ornamental, or advertising matter may be placed. Through the front of said case I arrange the apertures A A in such a manner as to give a clear and unobstructed view of a portion of the interior. In these apertures may be fitted suitable lenses to magnify and bring clearly to view the matter displayed within. At the back of the case, opposite the lenses, I place a powerful reflector B, in front of which is arranged the light C and the translucent or semi-transparent screen D.

Said screen may be of ground glass or any suitable material. I prefer to use ground glass.

Between the screen D and the lenses A A I interpose successively the frames E E, mounted upon the endless chain T T and containing a series of divisions, as *eee*, in which may be placed any desired arrangement of instructive or comic views or other like matter, intermingled or alternating with the advertising matter, the arrangement and order of which may be so changed and varied from time to time as to continually attract attention.

For the purpose of properly displaying opaque cards or similar matter I arrange the mirror F above the lenses A A at such an angle as to reflect the light from the back of the case upon such cards from the front.

As it is difficult to procure a large number of lenses of exactly the same magnifying power, it is desirable to arrange for an adjustment of the cards and views in relation to the lenses. To accomplish this, I prefer to construct the shaft G of the upper sprocket-wheels *g g* with boxes and slotted bearings *g' g'*, so that by means of the collars *g<sup>2</sup> g<sup>2</sup>* and screw-threaded rods *g<sup>3</sup> g<sup>3</sup>*, attached thereto and acting in the screw-threaded fixed nuts *g<sup>4</sup> g<sup>4</sup>*, the said sprocket-wheels and frames E E, mounted thereon, may be made to assume a position nearer to or farther from the said lenses. It is obvious that the series of lenses for each case should be selected from those of the same or nearly the same magnifying power. The lenses may also be made adjustable, if desired, to accomplish the same purpose.

The mechanism I prefer to employ to drive the sprocket-wheels and cause the frames E E to be successively presented before the lenses is described as follows: The worm-screw H is driven by any satisfactory power, as by an electric motor, spring-power, &c. Near said worm-screw and meshing therewith and driven thereby I place the pinion K. To a wrist-pin *k* on the pinion K, I articulate the bar L, which is slotted near its free end. To assist in the downpull of the bar L, I attach the compensating weight M also to the wrist-pin *k*. I may dispense with said weight by using an equivalent, as by making said wrist-

pin heavier, or enlarging the lower end of the bar L, or constructing the pinion K heavier near said wrist-pin. I prefer to use the weight M. The slot near the free end of the lever L acts upon the ratchet-wheel O, the teeth of which extend into the slot in said bar. Rigidly mounted upon the same shaft with the ratchet-wheel O and revolving therewith I place the pinion *o*, which meshes with a pinion P, mounted upon the shaft *p'* of the lower sprocket-wheel *p* and revolving therewith. The shafts upon which the sprocket-wheels *g* and *p* are mounted may be extended to near the opposite side of the case, where similar sprocket-wheels and chain may be used, or a belt or band may be employed for the same purpose.

To compensate for the wear of the chain or for the extremes of heat and cold, causing contraction or expansion of the same, which might interfere with the successful operation of the device, it is desirable to arrange for a vertical and automatic adjustment of the sprocket-wheels and chain. This has been accomplished heretofore in analogous structures by applying the motive power to the upper sprocket-wheel or pulley, making the lower sprocket-wheel or pulley vertically movable, and using gravity or spring-power to hold down said lower wheel, and thus keep the chain or belt taut. In my apparatus, however, it is desirable to keep the space in the vicinity of the upper sprocket-wheel clear of all unnecessary mechanism, to place the motive apparatus at or near the bottom of the chain or belt, and by making connection direct from the motor to the lower sprocket-wheel to avoid the necessity of extending the shaft to the upper wheel; but as the upper wheel must be fixed in position it is the lower wheel which must in such case be made vertically adjustable, and as the motor-wheel is necessarily fixed in position provision must be made by which the driven gear-wheel can be vertically adjusted without ungearing from the driving-wheel. In order to accomplish this, I have contrived several different means, all, however, involving one and the same principle—viz., that of combining an endless chain or belt, passing around and operated by an adjustable wheel at its lower end, with a stationary pinion to drive said wheel, means for automatically tightening the belt or chain, and means for preventing such automatic movement from disengaging the movable pinion from the stationary pinion. To illustrate the application of the principle, I show three different forms of this embodiment, which I will now describe. In the device shown in Figs. 5 and 6 to accomplish this result, for the bearing of the lower sprocket-wheel *p* I use bearings R in the form of a circular arc concentric with the pinion *o*. In this bearing I form a slot *r*, whose width is slightly greater than the diameter of the shaft *p'*, and which extends in the general direction of the bearing R. It will thus be

seen that the revolution of the pinion *o* has a tendency to move the shaft *p'* downward in the slot and that the revolution of the pinion *o* in the direction indicated by the arrow marked upon it tends to increase this tendency, while the bearing, by its form, keeps the pinions *o* and P at an unvarying distance from each other, and therefore properly in mesh. In place of the bearing R with slot *r* the bar Z in Figs. 12 and 14 may be used, connecting together the shafts of the pinions *o* and P, thereby keeping them in proper mesh and also allowing a vertical adjustment, the revolution of the pinion *o* tending to increase the tension, as before. A similar result will be produced by the third form of apparatus, (shown in Fig. 4,) in which I use the flexible or partially-flexible shaft X, guided in its vertical adjustment by the slotted or forked guides *x'*, which allow a vertical movement but not a lateral one. Weights or springs may be used to increase the tension in any of these devices, if desired, or either may be used singly, or two or more combined. Of the three devices shown I prefer to use that first explained and shown in Figs. 5 and 6.

In attaching the frames E E to the chain T, I prefer to use the extended shoulder T', as shown in Figs. 7 and 13, on the chain-link, in which I form a squared or irregular opening *t*, into which a similarly-shaped shoulder *t'* on the frame E fits; but any other form of attachment may be used that will cause the frame to assume and maintain a position that shall be fixed, as to the chain-link, either at right angles or parallel thereto.

The whole mechanism is so proportioned that for each reciprocation of the bar L one frame E is taken from the position of observation through the lens A and another is presented, while the two frames adjacent to the one in view assume a position at right angles to it or so nearly so as to be out of the line of observation.

It is obvious that my device is applicable for use as a photograph-exhibitor or for exhibiting views or similar matter alone. Fig. 15 shows one way in which I use it for exhibiting photographs or views. In this arrangement I place the frames E parallel to the chain, as shown, and place the lenses lower in the case or dispense with them and form a portion of the front wall of the case of glass, as S, so that the frames with their matter to be displayed may be viewed from the front of the case, in which case it might be desirable to change the position of the mirror F to throw the light properly upon the photographs and cards; or both lenses and glass front may be used.

It will be seen that by using the weight M or its equivalent less power will be required to drive the mechanism, as by the force of gravity it assists the bar L in its pulling action and is lifted to a position to assist in the next pull at a time when the only work to be done is to lift the bar L into position over the

next ratchet-tooth. Said weight therefore not only assists in the action of the bar L, but also acts as a governor or equalizer to the operation of the mechanism.

5 The mode of operation is as follows: The worm-screw, driving the pinion K, causes it to steadily revolve, giving the bar L a reciprocating movement. At each downward motion thereof the end of the slot in said bar L,  
10 engaging with one of the teeth of the ratchet-wheel O, revolves it a certain and fixed distance. This distance is so timed with the other mechanism as to revolve the chain a distance that shall move one frame E out of  
15 the line of vision and bring another of such frames into the position just vacated, thus successively bringing each frame into view, where it remains stationary a fixed time, when it suddenly disappears and another assumes  
20 its position.

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

1. In an exhibiting device of the kind described, the combination, in a case, of an endless chain or belt bearing both transparent and opaque cards and presenting the same regularly before a series of lenses with a reflector, light, semi-transparent screen, and  
25 mirror so arranged that the same light will illuminate the back of the transparencies and also be reflected upon the front of the opaque cards, substantially as and for the purposes set forth.

35 2. In a device of the kind described, the combination, in a case, of the vertical endless chain or belt and the upper wheel around which it revolves with a horizontally-adjustable bearing for the shaft of said upper

wheel, and the screw-threaded rod  $g^3$  and its fixed nut  $g^4$ , adapted to adjust said bearing back and forth and hold it in its adjusted position, substantially as set forth.

3. The combination, with the sprocket-wheel  $p$ , the pinion  $o$  for intermittently driving said sprocket-wheel, the ratchet-wheel O, the wheel K, an arm extending from a wrist-pin on the latter wheel and engaging with the ratchet to intermittently move the same, and the reinforcing-weight M, arranged to aid the wheel K in performing its work, substantially as set forth.

4. The combination of the endless chain or belt T, the stationary wheel  $g$ , over which the upper end of the chain or belt passes, the vertically-adjustable wheel  $p$ , around which the lower end of the chain or belt passes, the pinion P, the pinion  $o$ , the driving-wheel K, the bar L, the ratchet O, and the weight M, substantially as set forth.

5. In a device of the kind described, the combination of the endless chain or belt T, the wheel  $p$ , and its pinion P at the lower end of the chain or belt, and the plates R R, having formed therein the circular slots  $r$ , concentric with the pinion  $o$ , said slots serving as the bearings for the shaft of the pinion P, with the pinion  $o$  meshing with the pinion P and revolving in the direction which tends to automatically force the pinion P and its shaft downward in the slots  $r$ , and thus tighten the chain or belt, substantially as and for the purposes set forth.

WILBERT C. FAWKES.

In presence of—

E. A. SHERBURNE,  
JOHN W. HILL.