

No. 636,642.

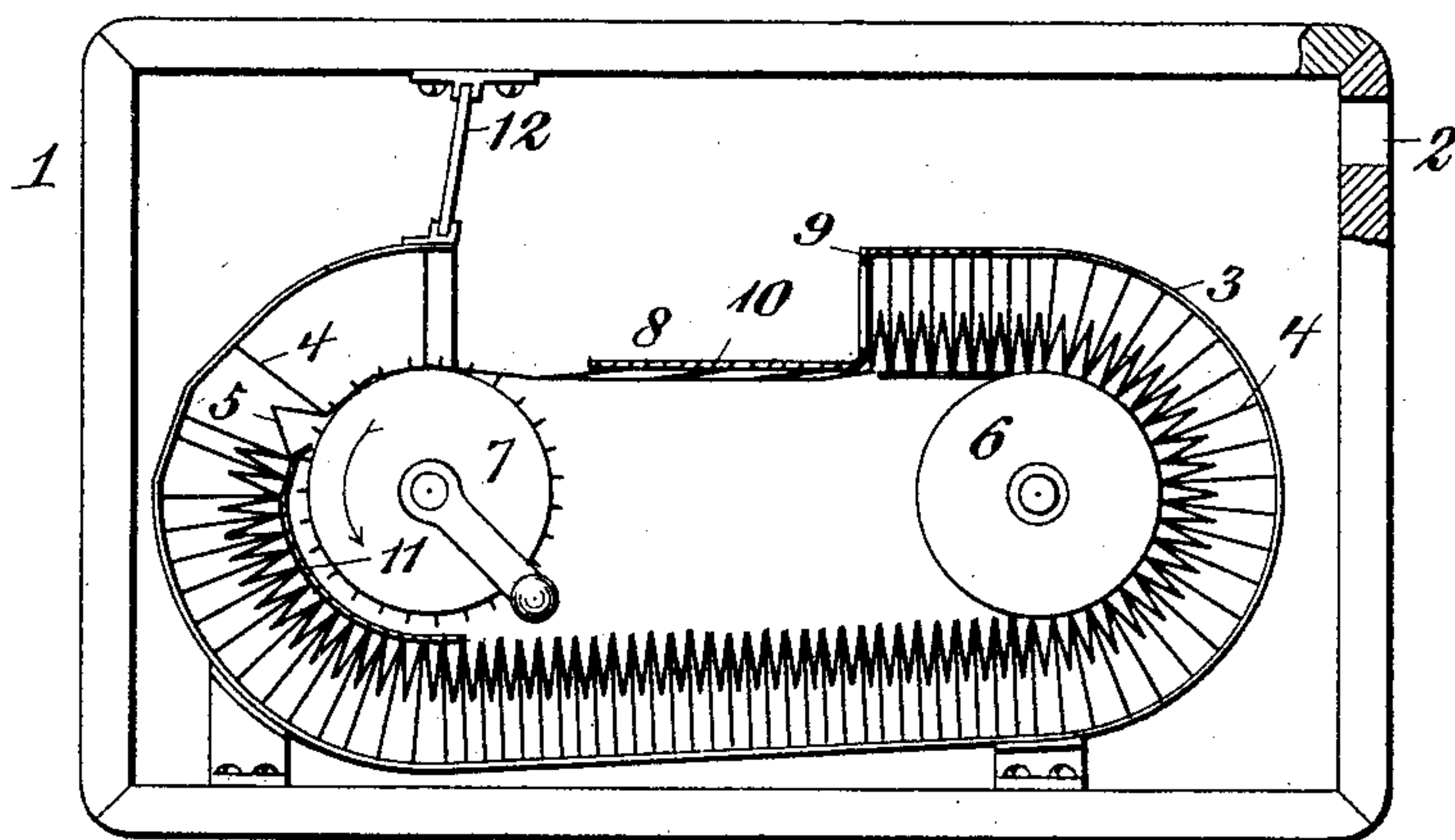
Patented Nov. 7, 1899.

W. K. L. DICKSON.  
CONSECUTIVE VIEW APPARATUS.

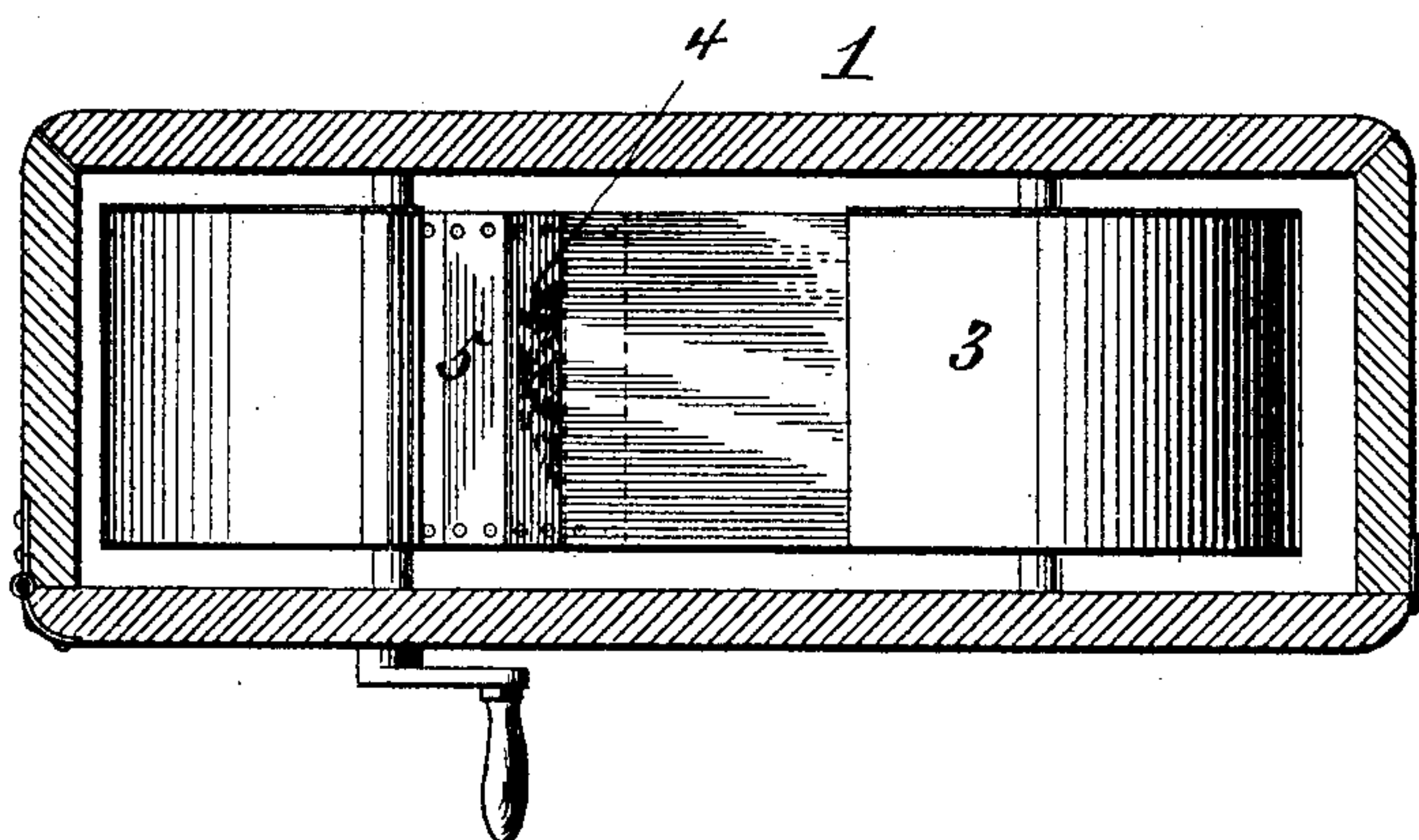
(Application filed Sept. 27, 1897.)

(No Model.)

*Fig. 1,*



*Fig. 2,*



WITNESSES:

*D. H. Haywood*  
*H. Q. Lane*

INVENTOR

*W. K. L. Dickson*

BY

*E. M. Marble & Sons*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

WILLIAM KENNEDY-LAURIE DICKSON, OF NEW YORK, N. Y., ASSIGNOR TO  
THE AMERICAN MUTOSCOPE AND BIOGRAPH COMPANY, OF SAME PLACE.

## CONSECUTIVE-VIEW APPARATUS.

SPECIFICATION forming part of Letters Patent No. 636,642, dated November 7, 1899.

Application filed September 27, 1897. Serial No. 653,281. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM KENNEDY-LAURIE DICKSON, a subject of the Queen of England, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Consecutive-View Apparatus; 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.

My invention relates to consecutive-view apparatus, and particularly to consecutive-view apparatus of the type of the mutoscope covered by Letters Patent No. 549,309, dated November 5, 1895, and issued to Herman Casler.

My invention consists in the novel means employed for passing a succession of views through the field of the apparatus in such manner that each view is clearly visible to the eye for a brief instant of time and in the novel combination, construction, and arrangement of the parts.

The objects of my invention are, first, to provide a simple and comparatively inexpensive apparatus for reproducing to the eye the movement of objects by means of a series of views thereof, and, second, to make the apparatus simple, durable, and comparatively inexpensive. These objects are attained in the invention herein described, and illustrated in the drawings which accompany and form a part of this specification, in which the same reference-numerals indicate the same or corresponding parts, and in which—

Figure 1 is an elevation and partial section of the apparatus, the side of the inclosing case having been removed; and Fig. 2 is a plan view of the apparatus, the inclosing case being sectioned.

In the drawings, 1 is the inclosing case, having an observation-opening 2.

3 is a guide for a series of picture-cards. As shown in the drawings, this guide has a generally oval form; but it may have any other suitable form.

4 4 are picture-cards mounted upon a flexible band or belt 5. The cards are fastened to the belt in any suitable manner, the dis-

tance between the points of attachment of two adjacent cards being about the same as the length of those cards. The belt passes over two pulleys 6 and 7, of which 6 is simply a guide-pulley, and 7 is the driving-pulley, having a crank by which it may be rotated, and provided with teeth to prevent slipping of the belt. The inner portion 11 of the guide 3 is somewhat eccentric to the roller 7, so that as the picture-cards and the belt are pushed into the guide 3 by the roller 7 the belt is detached from the roller.

The guide 3 is not a continuous oval, but is open at one point 8 for a considerable distance. At one end of the guide 3, which is the point at which the views are exposed, is a detent 9, which holds back the cards successively until they are drawn forward by the tension on the belt and slip under the detent. Just beyond this end of the guide 3 and in the open space 8 is a depressing-plate 10, which forces each card after passing the detent down into a horizontal position, thus preventing it from hiding the card next in rear. As soon as each card has passed the end of the plate 10 it springs up again. The cards as they pass from under the plate 10 are packed into the other end of the guide 3 by the roller 7, where they lie close together, as shown. The packing of the cards into the guide 3 by the roller 7 forces the cards already in the case through to the end thereof.

The number of cards and the length of the belt are so proportioned with reference to the guide 3 that when the cards are close together therein they fill the same from the roller 7 to the detent 9, as shown.

A mirror 12 above the mouth of the guide 3 reflects the image of the picture-card which is at the end of the guide 3 at any instant to the observation 2. Only the card which is directly against the detent at any instant is seen, and as this card is constantly changing as the roller 7 is rotated there is produced to the eye the appearance of motion.

My invention is not limited to direct-vision consecutive-view apparatus, but may be applied to other kinds of consecutive-view apparatus as well.

Having thus completely described my in-

95

100



vention, what I claim, and desire to secure by Letters Patent, is—

1. In a consecutive-view apparatus, the combination, with a series of view-carriers and a flexible band or belt upon which said carriers are mounted, at intervals, and which exceeds in length the length of the path of the cards through the apparatus, of a guide along which said carriers are closely packed, means for arresting the view-carriers momentarily, in a field of view, and driving mechanism for moving the carriers onward from said point of arrest and for moving them along the guide, substantially as described.

2. In a consecutive-view apparatus, the combination, with a series of view-carriers and a flexible band or belt upon which said carriers are mounted, at intervals, and which exceeds in length the length of the path of the cards through the apparatus, of a guide along which said carriers are closely packed, means for arresting the view-carriers, momentarily, in a field of view, rollers over which the belt passes, one of said rollers being a feeding-roller located beyond the point of arrest and adapted to draw the belt onward from said point of arrest and to move the carriers along said guide, and means for revolving said feeding-roller, substantially as described.

3. In a consecutive-view apparatus, the combination, with a series of view-carriers and a flexible band or belt upon which said carriers are mounted, at intervals, and which exceeds in length the length of the path of the cards through the apparatus, of a curved guide along which said carriers are closely packed, the ends of said guide facing each other, rollers over which the belt passes, one of said rollers being a feeding-roller located adjacent to one end of the guide and adapted to draw the belt from the other end of the guide and to move the carriers along said guide, means for rotating said roller, and a detent at the other end of said guide for ar-

resting the view-carriers momentarily, substantially as described.

4. In a consecutive-view apparatus, the combination, with a series of view-carriers and a flexible band or belt upon which said carriers are mounted, at intervals, of a curved guide along which said carriers are closely packed, the ends of said guide facing each other, rollers over which said belt passes, one of said rollers being a feeding-roller located adjacent to one end of the guide and adapted to draw the belt from the other end of the guide and to move the carriers along the guide, means for rotating said roller, a detent at the other end of the guide for arresting the view-carriers momentarily, and a depressing-plate between the ends of the guide adapted to depress each carrier after it has passed said detent and hold the same out of view during its passage through the field of view, substantially as described.

5. In a consecutive-view apparatus, the combination, with a series of view-carriers and a flexible band or belt upon which said carriers are mounted, at intervals, of a curved guide on which said carriers are closely packed, the ends of said guide facing each other, rollers over which said belt passes, one of said rollers being a feeding-roller located adjacent to one end of the guide and provided with teeth adapted to grasp the belt, whereby when said roller is rotated it draws the belt from the other end of the guide and moves the carriers along the guide, means for rotating said roller, means for disengaging the belt from said roller, and a detent at the other end of the guide for arresting the view-carriers momentarily, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM KENNEDY-LAURIE DICKSON.

Witnesses:

ELIAS B. KOOPMAN,  
E. SHOALS.