

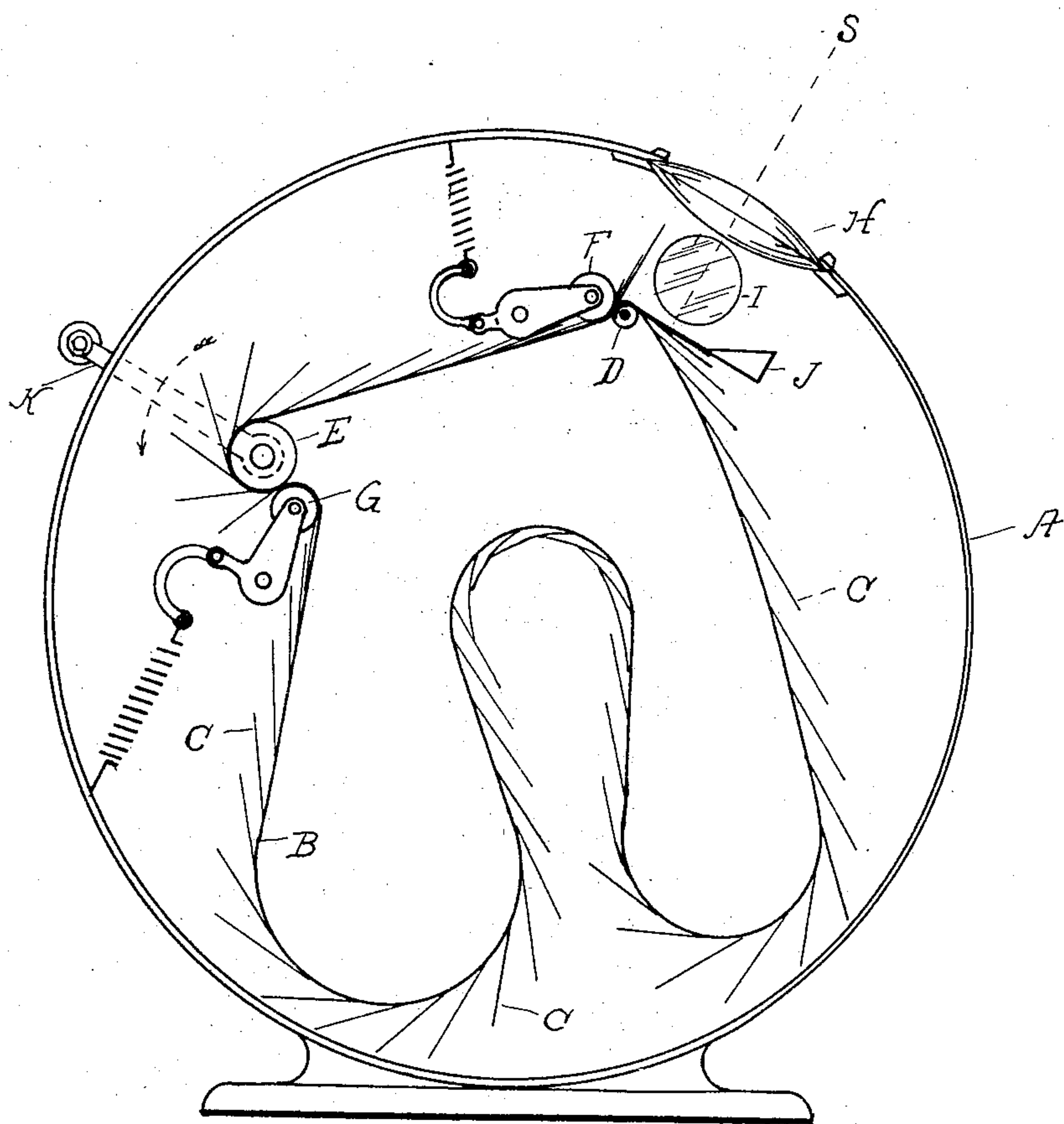
No. 765,580.

PATENTED JULY 19, 1904.

G. L. JENKINS.
MOVING PICTURE APPARATUS.

APPLICATION FILED MAR. 7, 1904.

NO MODEL.



Grace L. Jenkins.
INVENTOR

WITNESSES:

Herbert P. Emery
C. J. Jenkins

UNITED STATES PATENT OFFICE.

GRACE L. JENKINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

MOVING-PICTURE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 765,580, dated July 19, 1904.

Application filed March 7, 1904. Serial No. 196,844. (No model.)

To all whom it may concern:

Be it known that I, GRACE LOVE JENKINS, of Washington, District of Columbia, have invented a new and useful Improvement in Moving-Picture Apparatus, of which the following is a full, clear, and exact description.

My invention is designed for synthetically exhibiting a series of pictures representing successive phases of an animated scene, so as to faithfully reproduce the same.

The apparatus belongs to that general class of exhibiting-machines in which the picture-carriers are elastic cards attached by an edge to a band so moved past the point of observation that each card acts to obscure those following while the picture thereon is being momentarily exhibited.

The pictures of the series are usually secured by photography in a moving-picture camera in the manner well known to those skilled in this art. I preferably attach the picture-cards by an edge to the band so that they overlap and lie at an acute angle to the plane of the band. Again, some scenes are of greater duration than others and require more pictures and longer bands. I have therefore devised the apparatus herein disclosed in order that bands of different lengths may be used in the same machine, a machine of small dimensions compared to any other known machine which would accommodate a similarly long band.

The invention consists in the employment of the devices described in this specification and illustrated in the accompanying drawing, a side elevation, and in which—

A is a casing or inclosing box of convenient dimensions and of a lateral width slightly greater than the width of the band B, conveniently referred to as the "picture-band," to which the picture-cards C C C are attached. This band is supported in position by the roller D and advanced by the cylinder E, to both of which the band is pressed by the spring-actuated rollers F and G, respectively. The case is provided with a magnifying-lens H, so located that through it the pictures can be seen as each comes into position.

I is a window for illuminating the pictures,

and rotation is imparted to the cylinder E by the crank K. When cylinder E is rotated in the direction of the arrow, the band, by the traction between the surfaces of the cylinder and the band, is drawn forward under the roller F and over the roller D. The latter being of small diameter gives the cards at this point a sharp bend as they pass over it, because the outer ends of the cards are caught and momentarily arrested by the detent J. As the cards slip from beneath the detent their elasticity causes them to spring into a vertical position, exposing the picture on the next succeeding card throughout the entire series. As each thus follows the other in rapid succession the pictures thereon, viewed along the sight-line S, are mentally blended by the observer into one continuous picture, which is a faithful reproduction of the original scene. The bending of the cards over the small roller D would tend to detach them from the band as they pass. However, the roller F, bearing continuously against the base of the cards as they are drawn over the roller D, entirely overcomes this and relieves the cards of all strain, so that they never work loose or come off. It will also be observed that the inclosing casing is larger than would be required for the accommodation of the band-actuating mechanism alone, the additional space being provided for the accommodation of the unstrained or slack portion of the band, which lies in folds therein. Should the case be enlarged laterally to accommodate additional machinery—as, for example, a motor—that part of the band which lies in folds would be received in a narrow open box or the like of proper width to hold the picture-band in alinement. Where the casing is sufficiently narrow, as shown, it acts as the container itself. Obviously where the band is not endless the slack portion might be stored on spools.

The picture-band might be perforated, cylinder E have teeth for engaging the perforations, and roller G grooved to fit over the teeth without departing from the spirit of my invention.

The picture-cards are shown attached to the band rather far apart in order not to confuse

the drawing, although in actual practice they are very close together—attached by a very narrow edge to the band.

What I claim, therefore, as my invention, and wish to protect by Letters Patent, is—

1. In moving-picture apparatus, the combination of a movable band having flexible picture-cards attached at an acute angle thereto, means for advancing the band, means for bending the cards in succession so as to expose the pictures thereon to view, and means for relieving the strain between the band and the picture-cards at the point of bending.

2. In moving-picture apparatus, the combination of a movable band having flexible picture-cards attached at an acute angle thereto, means for advancing the band, means for bending the cards in succession so as to expose the pictures thereon to view, means for relieving the strain between the band and the cards at the point of bending, said band having a strained and a slack portion, and means for holding the slack portion of the band.

3. In moving-picture apparatus, the combination of a movable band having elastic picture-cards attached thereto, means for supporting the band at the point of exposure, and means for pressing the band against the said support.

4. In moving-picture apparatus, the combination of a movable band having elastic picture-cards attached thereto, a rotating cylinder for advancing the band, and means for pressing the band against the cylinder.

5. In moving-picture apparatus, the combi-

nation of a movable band having elastic picture-cards attached thereto, means for supporting the band at the point of exposure, means for pressing the band against said support, a rotating cylinder for advancing the band, and means for pressing the band against said cylinder.

6. In moving-picture apparatus, the combination of a movable band having elastic picture-cards attached thereto, means for supporting the band at the point of exposure, means for pressing the band against said support, said band having a strained and a slack portion, and means for storing the slack portion of the band.

7. In moving-picture apparatus, the combination of a movable band having elastic picture-cards attached thereto, means for supporting the band at the point of exposure, means for pressing the band against said support, a rotating cylinder for advancing the band, means for pressing the band against said cylinder, said band having a strained and a slack portion and means for storing the slack portion of the band.

8. In moving-picture apparatus, the combination of a flexible band having elastic picture-cards attached at an acute angle thereto, said band having a strained and a slack portion, a narrow box for storing the slack portion of the band.

GRACE L. JENKINS.

Witnesses:

HERBERT C. EMERY,
C. F. JENKINS.