

No. 709,342.

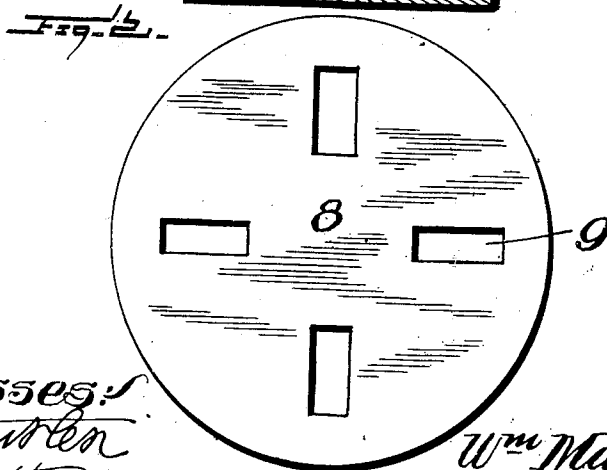
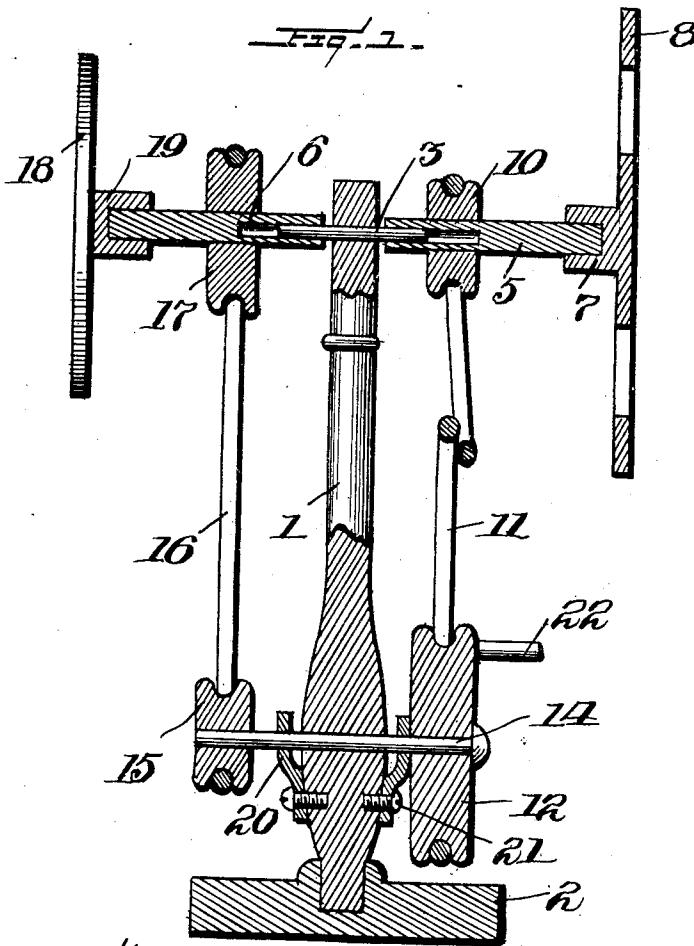
Patented Sept. 16, 1902.

W. MAXWELL.
TOY BIOGRAPH.

(Application filed May 21, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
J. H. Burden
E. J. Potter

By

Inventor,
Wm Maxwell,
H. C. Everett & Co.
Attorneys

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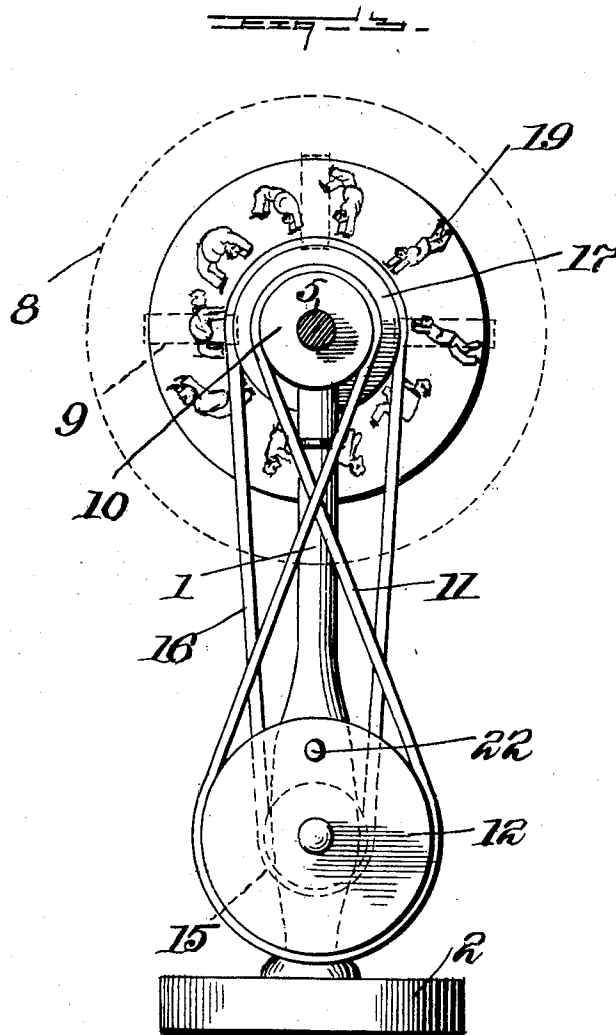
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C. C. Potter

Inventor,
Wm. Maxwell.
By J. C. Everett & Co.
Attorneys:

UNITED STATES PATENT OFFICE.

WILLIAM MAXWELL, OF PITTSBURG, PENNSYLVANIA.

TOY BIOGRAPH.

SPECIFICATION forming part of Letters Patent No. 709,342, dated September 16, 1902.

Application filed May 21, 1902. Serial No. 108,397. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MAXWELL, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Toy Biographs, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in toy biographs, and has for its object the provision of novel means whereby pictures or colors may be exhibited on a disk through a shutter.

15 Another object of the present invention is to provide a device that will give considerable amusement to children; furthermore, one that will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its use.

A still further object of the present invention is to provide a device with a removable disk with any number of pictures or series of pictures and which may be exhibited in a manner to present an illusion to the eye, the pictures appearing through the shutter in a manner as though the pictures were moving figures.

30 With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, to be hereinafter more fully described, and specifically pointed out in the claims.

35 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

40 Figure 1 is a vertical sectional view of my improved toy biograph. Fig. 2 is a front elevation of the shutter. Fig. 3 is a front elevation of the device, showing the shutter in dotted lines.

45 In the drawings the reference-numeral 1 represents a standard, which is secured to a suitable base 2. In said standard, at its upper end, is secured a stationary shaft 3, upon which are secured rotatable shafts 5 and 6, the shaft 5 being secured to the hub 7 of the disk-shutter 8, having a series of openings 9

formed therein. The said shaft 5 also carries a small pulley 10, which is affixed thereto. Over the said pulley passes a belt 11, 55 this belt extending over a driven pulley 12, which is mounted upon the shaft 14, extending through the standard 1, and which carries on its other end a small pulley 15. This said pulley 11, passing over the pulleys 10 12, 60 is crossed in order to rotate the shutter in one direction, and the belt 16, passing over the pulley 17 of the shaft 6, serves to rotate the disk 18, which carries the pictures 19, in the opposite direction, said disk 18 being likewise provided with a hub 19^a, which serves to fasten the disk to the shaft 6. Spring-plates 20 are secured on each side of the standard 1, and these plates are fastened by means of screws 21, which serve to properly 70 space the pulleys 12 and 15. The said pulley 12 has secured thereto a crank-handle 22, by which the said pulleys 12 and 15 are rotated, thereby transmitting the opposite rotary movement to the shafts 5 and 6, which 75 carry the shutter 8 and disk 18, respectively.

The pictures are arranged on the inner face of the disk 18, adjacent the margin thereof, in a progressive series.

The operation of my improved toy is as 80 follows: By rotating the crank-handle 22 and by reason of the pulley 12 being larger than the pulley 10 the shutter 8 will rotate more rapidly than the disk 18, which is operated through the medium of the pulley 15, which 85 is much smaller than the pulley 12, and the large pulley 17. By this means a differentiating movement is produced of the shutter and disk carrying the pictures, and by reason of the belt 11 being crossed an opposite 90 rotation of the shutter and disk is obtained, as will be readily apparent from the foregoing description, taken in connection with the accompanying drawings. As the device is operated the figures may be easily seen 95 through the openings 9 of the shutter 8, and an illusion of the eye is obtained by rapidly presenting the figures upon the disk 18, which will appear as though the figures were moving from one position to the other as one 100 figure, and the successive figures are produced and presented through the openings 9 of the shutter.

The many advantages obtained by the use

of my improved toy will be readily apparent, and it will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a device of the type set forth, the combination of a standard, a stationary shaft secured in the upper end of the said standard, rotatable shafts journaled on the ends of the said fixed shaft, a shutter secured on the outer end of one of the said rotatable shafts, a disk secured on the said other rotatable shaft, and means for rotating the said shutter and disk in opposite directions, substantially as described.

2. In a toy biograph, the combination of a standard, a shaft fixed in the upper end of

the said standard, rotatable shafts journaled on the ends of the said fixed shaft, pulleys secured on the said rotatable shaft, a shutter, and a disk secured on the ends of the said rotatable shafts, a shaft journaled in the lower end of the said standard, a large and small pulley secured on the opposite ends of the said last-named shaft, spring-plates secured to the opposite sides of the standards adjacent the last-named pulleys, and means whereby said first-named pulleys and shafts are rotated in opposite directions at different speeds, substantially as and for the purpose specified.

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

WILLIAM MAXWELL.

Witnesses:

JOHN NOLAND,
E. E. POTTER.