

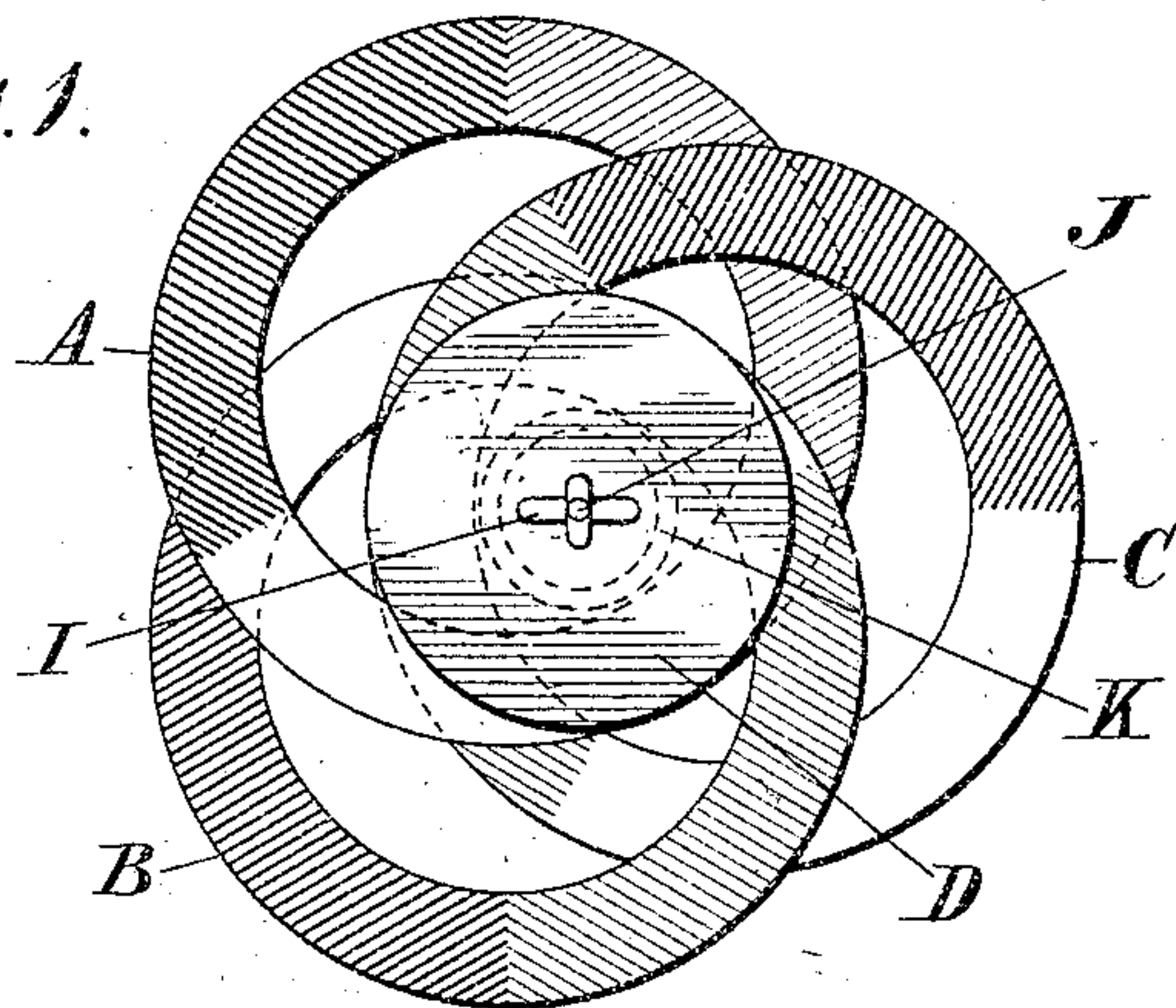
No. 880,322.

PATENTED FEB. 25, 1908.

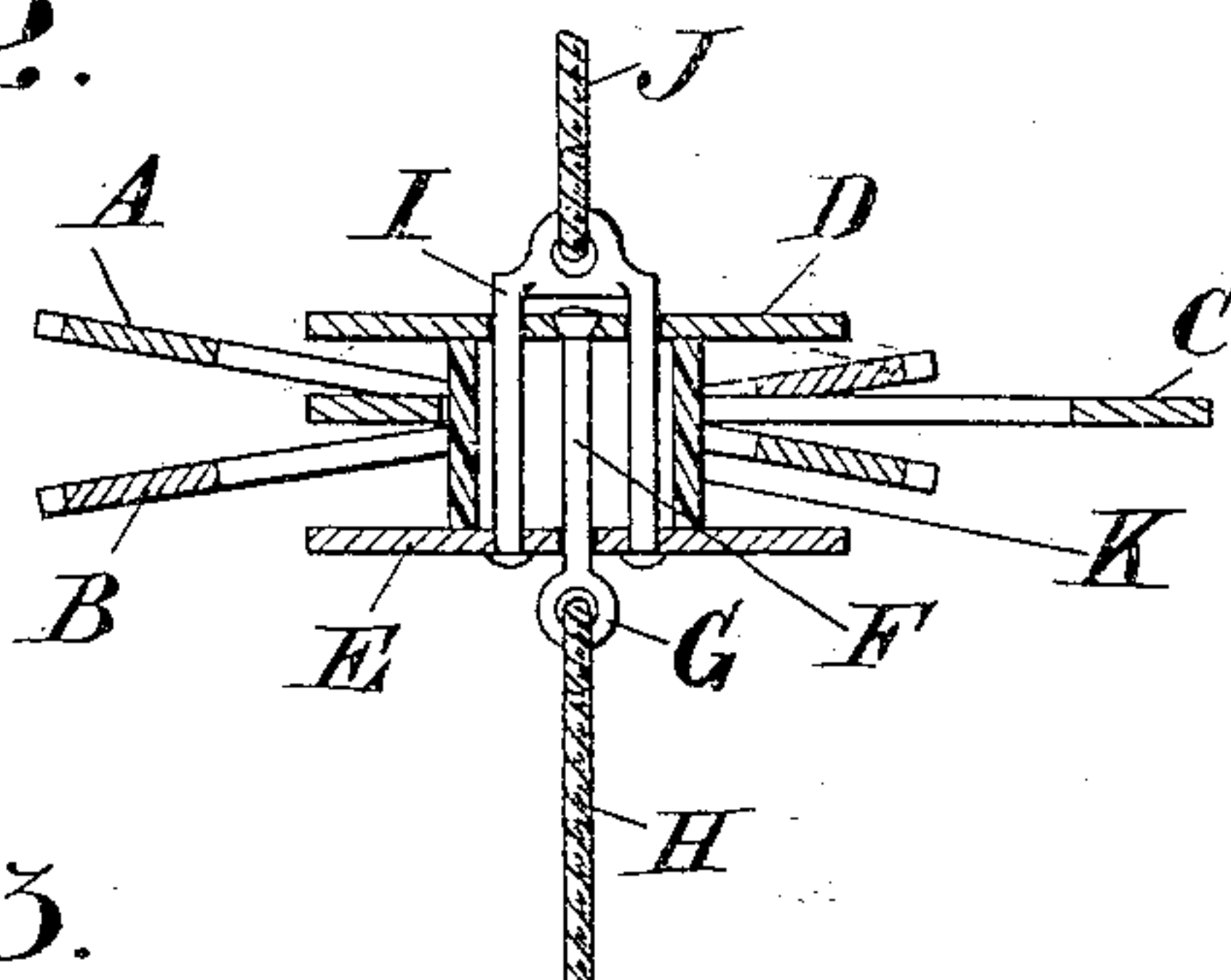
A. L. NEWELL,  
CHROMATIC TOY.

APPLICATION FILED AUG. 23, 1907.

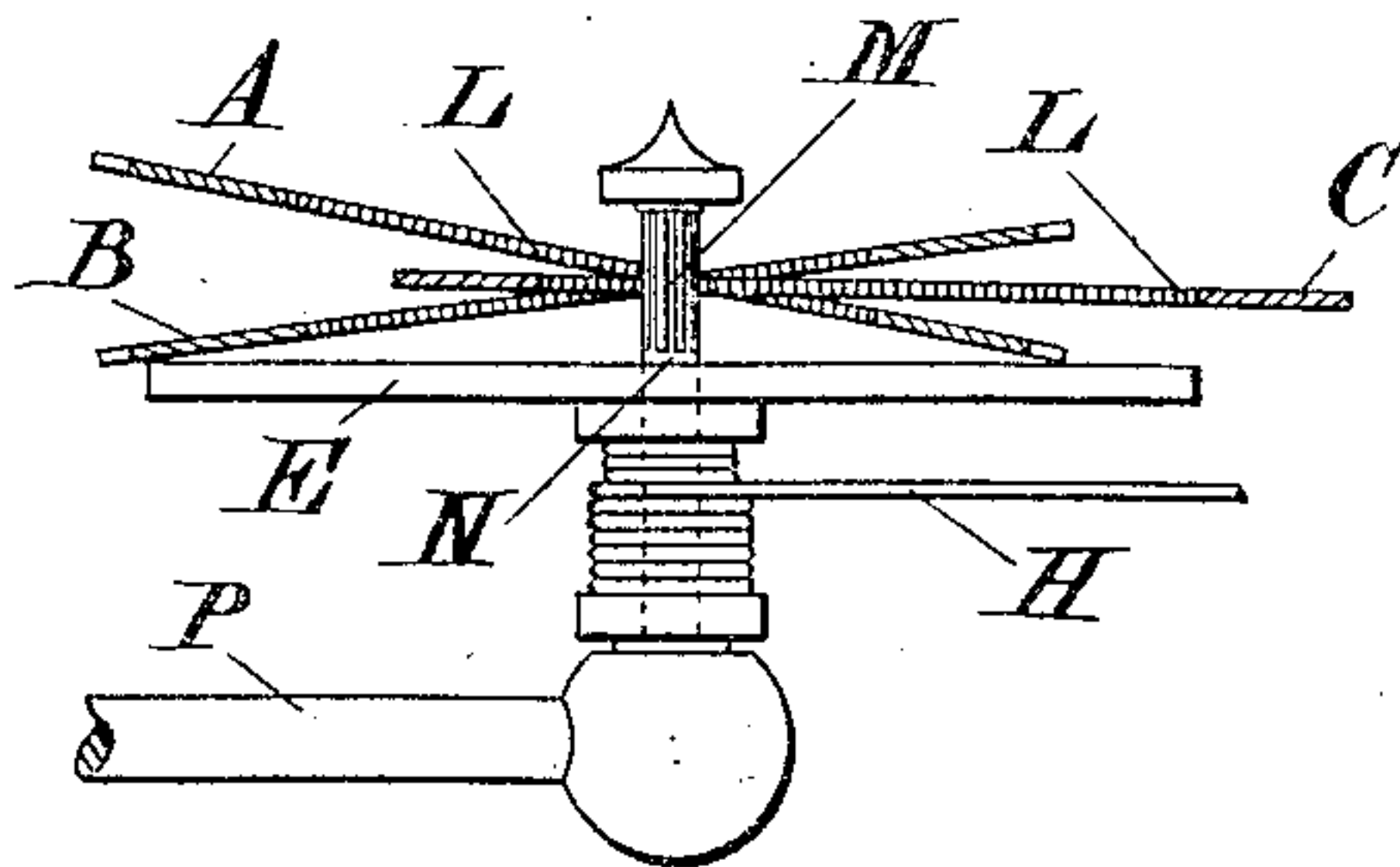
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses,  
*J. B. Keefe*  
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# UNITED STATES PATENT OFFICE.

ALFRED LEONARD NEWELL, OF EALING, ENGLAND.

## CHROMATIC TOY.

No. 880,322.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed August 23, 1907. Serial No. 389,893.

*To all whom it may concern:*

Be it known that I, ALFRED LEONARD NEWELL, a subject of the King of Great Britain, residing at 10 Lyncroft Gardens, Ealing, Middlesex, England, have invented certain new and useful Improvements in Chromatic Toys, of which the following is a specification.

This invention relates to that class of toys or apparatus which carry colored disks which are revolved to give color or chromatic effect, and consists principally of the employment of two or more rings instead of disks, each ring being interlaced with each other and colored with various colors, either individually or separately, or they may be transparent.

Figure 1 is a side elevation of a toy constructed in accordance with my present invention; Fig. 2 represents an axial section of the device shown in Fig. 1; and Fig. 3 shows another form of the device.

For the toy in which the rings are revolved by the action of pulling strings, such as I show in Fig. 1, elevation, and Fig. 2 cross section of the annexed drawings, I inclose the rings A, B, C, between two wheels or disks D, E, each being carried by one axle F which passes through each ring D, E, and one end G extends at one side for receiving one length of string H. The two wheels D, E, are also connected so as to revolve together by a frame I, which also passes through each ring and projects from the other side of the device for receiving the other length of string J, and between the wheels I mount a rubber or wire spring cushion or buffer K.

The axle F has end on action on one wheel or disk D and the frame I end on action on the other wheel or disk E. If now the strings H, J, be pulled after twirling the appliance round, the wheels D, E, will be brought together and the rings A, B, C, gripped, and all will revolve together or in fixed relation about the buffer K as an axis giving a given chromatic effect, but when the cords H, J, are slackened to allow of the return revolutions, the spring or rubber K will force the wheels D, E, apart, thus freeing the lateral gripping action on the interlaced rings A, B and C, and by reason of the momentum of the rings and their frictional engagement with the central buffer or device K, they will continue to move about the axis of the buffer as a center, and will also rotate

about their respective geometrical axes, thus producing a variation in the chromatic effect.

In other kind of apparatus, such as I show in Fig. 3 side elevation, where one string H revolves the appliance (or strings are not employed,) the rings A, B, C, may have a roughened or toothed inner edge L, which during the rotation of the disk or frame E on which they are situated, come into contact with a lug, teeth M on a projecting axle N, or tooth wheel on the disk, and so be retarded to obtain a change of position, thus insuring a constant change of color effect.

In Fig. 3, P is the hand hold and the rings A, B, C, lie on the disk E, and revolve with same. When the rings are transparent, a revolving or fixed colored screen is arranged behind.

What I do claim and desire to secure by Letters Patent is:—

1. A device of the class described, comprising a plurality of differently colored rings interlaced with one another, and means for revolving the rings relatively to one another.

2. A device of the class described, comprising a plurality of colored rings interlaced with one another, means for revolving the rings while the latter remain substantially in fixed relation to give a certain chromatic effect, and means for revolving the rings relatively to one another to give a chromatic effect different from that first mentioned.

3. A device of the class described, comprising a plurality of differently colored rings interlaced with one another, means for revolving the rings while the latter remain in fixed relation, and means cooperating with the inner circumferences of the rings for revolving them relatively to one another.

4. A device of the class described, comprising a plurality of colored rings interlaced with one another, means arranged to engage a side of each ring for revolving the rings while in substantially fixed relation to one another, and means cooperating with the inner circumferences of the rings for revolving them relatively to one another.

5. A chromatic device of the class described, comprising a disk, means for revolving the latter, a plurality of differently colored rings interlaced with one another and having a frictional engagement at their sides with the said disk to cause rotation of the rings about the center of the disk as an axis, and a device rotatable with the disk



and cooperating with the inner circumferences of the said rings for causing the latter to rotate independently about their respective geometrical axes when the speed of rotation of the disk varies relatively to the speed of rotation of the rings about the center of the disk as an axis.

6. A toy of the character described, comprising a pair of disks mounted coaxially and movable axially to one another, a plurality of colored rings having portions interposed between said disks, means for proximating and revolving said disks to engage and rotate the rings, and means cooperating with the inner circumferences of the rings for rotating them relatively to one another.

7. A toy of the class described, comprising a pair of disks mounted coaxially and movable toward and from one another, a plurality of differently colored rings having portions interposed between said disks, means for proximating and revolving the disks to engage and rotate the rings, and a yieldable cushion interposed between the disks for supporting the latter and cooperating with the

inner circumferences of the rings for rotating the rings relatively to one another.

8. A device of the class described, comprising a pair of axially movable disks, a plurality of differently colored rings having portions interposed between said disks, an axle attached to one of the disks, a frame attached to the other disk, the axle and frame permitting relative axial movements of the disks, operating cords attached to the axle and frame, an annular cushion surrounding the axle and frame and having its ends engaging the disks for supporting the latter, the periphery of the cushion cooperating with the inner circumferences of the rings for causing relative rotation of the latter when the disks are separated.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALFRED LEONARD NEWELL.

Witnesses:

RICHARD CORE GARDNER,

LYNWOOD F. GARDNER.