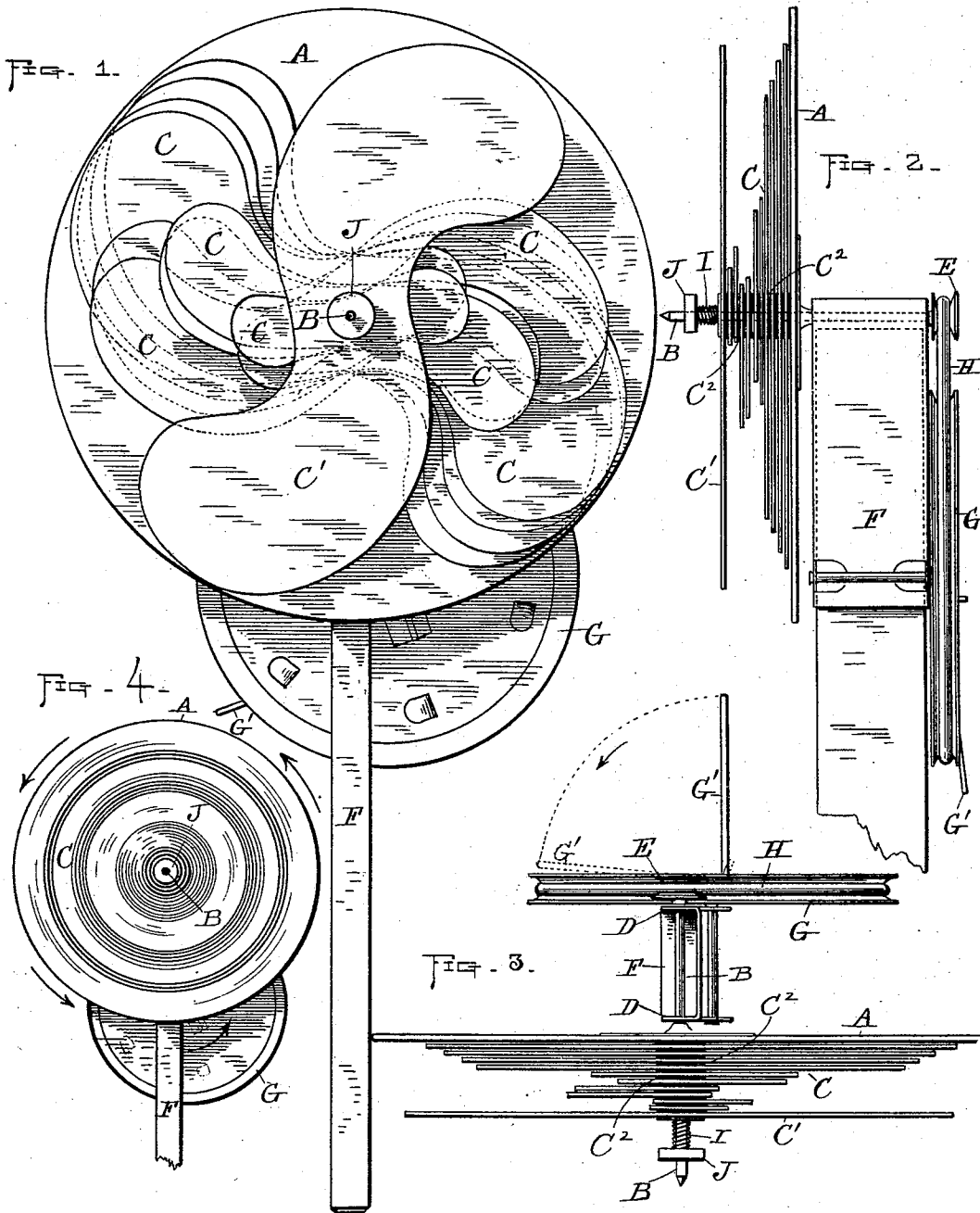


(No Model.)

A. WIGGINS.
TOY.

No. 472,722.

Patented Apr. 12, 1892.



Witnesses,
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UNITED STATES PATENT OFFICE.

ALFRED WIGGINS, OF WORCESTER, MASSACHUSETTS.

TOY.

SPECIFICATION forming part of Letters Patent No. 472,722, dated April 12, 1892.

Application filed June 15, 1891. Serial No. 396,302. (No model.)

To all whom it may concern:

Be it known that I, ALFRED WIGGINS, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Toys; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a front view of my said improved toy. Fig. 2 is a side or edge view thereof with a part of the handle broken off. Fig. 3 is a plan view; and Fig. 4 is a similar view to Fig. 1 on a smaller scale, showing how the color effects may be produced on the disk by the operation thereof, as will be hereinafter more fully described.

The object of this invention is to produce by means of a rapidly-rotating disk carrying a series of different-colored blades of various shapes and fitted loosely in front of said disk upon the axis thereof a continuous series of automatic color changes upon the face of said disk, the principle of which is applicable as a toy for amusement or as a means of advertising, show, or attraction.

To enable others to better understand the nature and purpose of said invention, I will now proceed to describe it more in detail, with reference to the accompanying drawings and letters of reference thereon.

The invention consists of a disk A, preferably of card-board, fixed to an axis or spindle B, passing centrally through said disk and projecting beyond the front face thereof, so as to form a central pin or pivot for the color-blades C (also preferably of card-board) to turn upon. That part of the axis or spindle coming back of the disk is sufficiently long to pass through suitable bearings D D and also to carry the small wheel E. These bearings are attached to or form a part of the supporting frame or handle F in such manner that power applied to the axis or spindle will cause the disk to rapidly rotate. The rotation of said disk may be effected by hand by means of a large driving-wheel G, which is fixed to a spindle also fitted to turn in suitable bearings on the frame or handle F, connection being made from said large drive-wheel to the small wheel E by

means of a suitable belt H, passed around the same. The drive-wheel is provided with a suitable handle G', whereby it may be turned by hand, the same being pivoted to the wheel, so that it may be swung in against said wheel out of the way when not in use, as shown by dotted lines in Fig. 3, and out at right angles, as shown by full lines, to turn the wheel. Although I have shown the drive-wheel as being turned by hand, I do not limit myself thereto, as power may be applied in any well-known way to effect the same result either by connection with the axis or spindle of the disk or the other driving parts.

The color changes before alluded to are produced by making the faces of the series of blades on the disk of various different colors, the outer blade C' being preferably black, as I find in practice the best result is thereby produced. The various color-blades are fitted to freely turn on the axis or spindle B, as previously stated, and are each separated one from another, so as to avoid friction and thus turn more easily, by means of suitable washers C², interposed between said blades, as is shown in Figs. 2 and 3. To effect the best result, a certain pressure must be applied to the color-blades. This may be done by means of a spiral spring I, fitted over the spindle between the outer blade and a stop J, preferably of leather, which fits upon the spindle sufficiently tight to hold it from slipping thereon from the pressure of the spring and yet be easily moved forward or back by hand to produce the desired pressure against the color blades or cards. In lieu of the spiral spring, rubber or any other equivalent may be used to produce the same result, and any suitable stop may be used on the spindle without departing from the principle of my invention. During rotation the color blades or cards gradually change and assume new positions, thus forming by the intermingling of the various colors a continuous variety and combination of color changes in circles, as indicated in Fig. 4, very beautiful kaleidoscopic effects being produced when the device is rotated at a high rate of speed. It is advantageous to inclose the disk and its color-blades, especially when of a large size, in a case (not shown) having

a glass front, through which the color changes may be seen. This prevents undue air-friction and gives greater steadiness of rotation, consequently requiring less power to operate
5 the same.

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

1. The combination of the disk A, color-
10 blades C C', and axis or spindle B with the separating-washers C², interposed between each of said color blades or cards, the adjustable stop J on spindle B, and spiral spring I or its equivalent, interposed between said stop

and the color-blades, substantially as and for 15 the purpose set forth.

2. The disk A, color-blades C', axis or spindle B, the separating-washers C² between said color-blades, adjustable stop J, and spring I, said washers, stop, and spring being fitted on 20 said axis or spindle, in combination with the drive-wheels G E, belt H, fitted thereover, operating-handle G', and the frame or support F, substantially as and for the purpose set forth.

ALFRED WIGGINS.

Witnesses:

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