

1,250,266.

Patented Dec. 18, 1917.

FIG. 2.

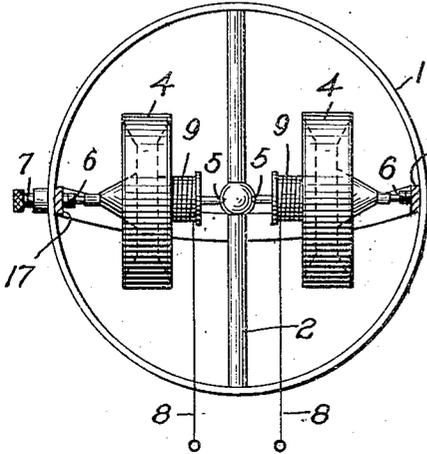


FIG. 1.

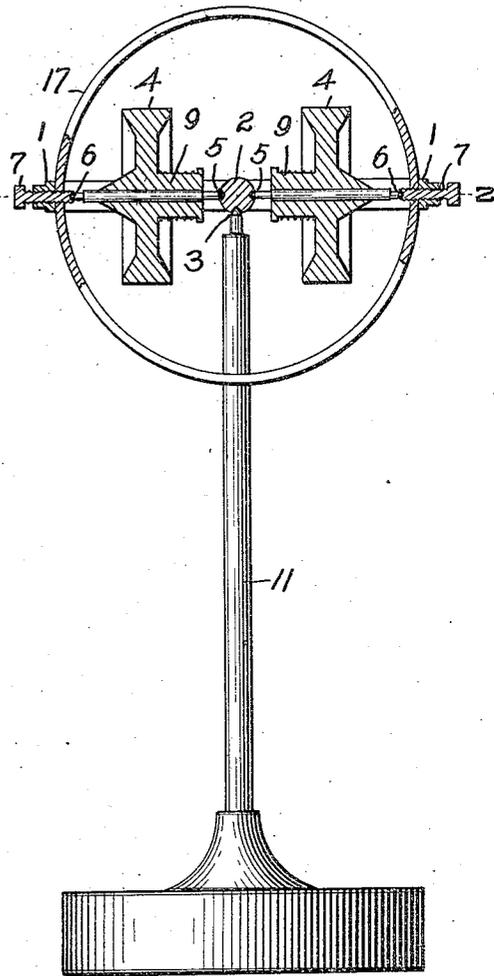


FIG. 3.

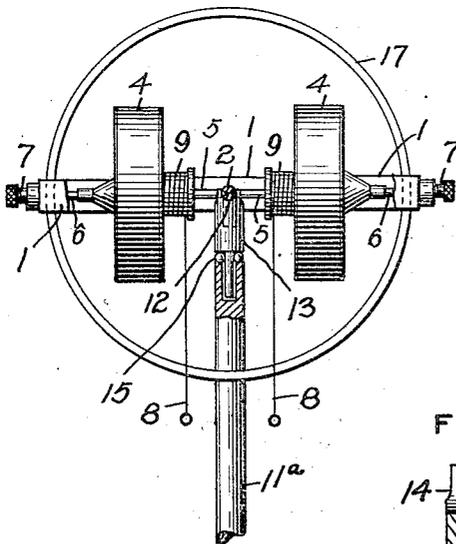
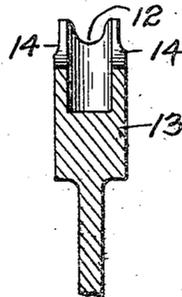


FIG. 4.



WITNESSES

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TOY.

1,250,266.

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Application filed August 7, 1917. Serial No. 184,835.

To all whom it may concern:

Be it known that I, WILLIAM A. BANKS, a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Toys, of which the following is a specification.

This invention relates to toys, and more particularly to a toy operating on the principle of a gyroscopic top.

The purpose of the invention is to provide a toy of the character specified which contains novel features of attractions for the child, and which requires a certain amount of skill in order to properly operate the same.

The toy comprises the combination and arrangement of parts hereinafter described.

In the accompanying drawings, Figure 1 is an elevational view of the toy, parts being shown in broken section; Fig. 2 is a plan view of the same, partly in horizontal section, line 2—2, Fig. 1; Fig. 3 is an elevation, partly in broken section, showing a modification; and Fig. 4 is a sectional elevation of the swiveling support of the same.

The toy comprises a frame of such construction that it can be easily balanced, said frame preferably being in the form of a ring 1 having a diametrical bar or cross member 2. These parts may be either formed in an integral structure, or may be built up, as desired. This, however, is only one form of frame that may be used. This frame is adapted to be supported at a fixed point at its center, to-wit, at the point 3. Mounted in this frame are a pair of heavy fly-wheels 4, 4, the axes of which extend radially from the central point 3 of the frame to its periphery. These fly-wheels can be mounted in the usual way of mounting such wheels in gyroscopic tops, such as by having the inner ends 5 of the fly-wheel shafts pointed or conical and set in conical sockets in the cross member 2, and having the outer ends 6 of their shafts conical and seated in conical sockets on the inner ends of screws 7 extending through threaded openings in the frame 1, and which permit the fly-wheel bearings to be adjusted.

These fly-wheels are provided with suitable means for imparting rotation thereto, such means being shown in the drawings as cords 8, which may be wrapped around the shafts or axes of the fly-wheels, but preferably each fly-wheel is provided on one side

with a hub 9 around which such cords are wrapped.

In order to secure the effect hereinafter described, it is necessary that one of these wheels rotate in one direction and the other in the opposite direction, and consequently these cords will be wrapped around the hubs of the two wheels in opposite directions.

The frame with the fly-wheels mounted therein is, as above stated, supported by the central point 3, and in a manner to permit the entire frame to rotate in a horizontal plane about said point of support. Consequently this point of support may be a conical socket in the lower face of the cross bar 2, adapted to receive the conical upper end of a support 11, as shown in Fig. 1, or the support may be of the form shown in Figs. 3 and 4 in which the cross bar is adapted to rest in notches 12 in the upper end of a member 13, which also has notches 14 at right angles to the notches 12 to provide clearance for the ends of the axes of the fly-wheels 4, and which member 13 is rotatably mounted in a support 11^a, and in a manner to reduce friction to a minimum, such as by means of the ball bearing 15 illustrated in Fig. 3.

In using the toy, the frame will be held in the hand, and the two cords wrapped about the hubs of the two fly-wheels, the cord on one fly-wheel being wrapped in the opposite direction from that on the other fly-wheel. Then when still holding the frame 1 in the hand, the cords are pulled very suddenly, thus setting the two wheels into rapid rotation, but in opposite directions. The frame is then placed upon the support and the rapid rotation of the fly-wheels in opposite directions, causes the frame to rotate in a horizontal plane around its center.

In order to increase the visible effect of this rotation and also protect the wheels in case the toy falls, it is preferred to rigidly attach to the frame 1, such as by soldering or welding, a hoop or ring 17, which lies substantially in a vertical plane, that is, normal to the ring.

Various modifications may be made in the construction and arrangement of the parts, and particularly in the shapes of the parts, without departing from the spirit of the invention.

What I claim is:—

1. A gyroscopic top comprising a frame adapted to be supported at its center, a pair of fly-wheels rotatably mounted in said

frame on axes radial to its center, means for imparting rapid rotary motion to said fly-wheels, and a member arranged to support said frame at its center and allow the same to rotate around said center in a horizontal plane.

2. A gyroscopic top comprising a horizontally disposed frame arranged to be supported at its center, a pair of flywheels rotatably mounted in said frame on oppositely arranged axes extending radially from the center of said frame, and means to support said frame at its center and allow the same to rotate therearound in a horizontal plane.

3. A gyroscopic top comprising a ring-like frame having a diametric member or bar, a pair of fly-wheels each having an axis extending radially from the center of

the diametric bar to the periphery of the ring frame, and a member forming a rotatable support upon which the central portion of the diametric bar rests.

4. A gyroscopic top comprising a frame adapted to be supported on its center, a pair of fly-wheels rotatably mounted in said frame on axes radial to its center, means arranged to support said frame at its center and allow the same to rotate in a horizontal plane, and a circular hoop connected to said frame and lying in a plane at right angles to the plane of said frame.

In testimony whereof, I have hereunto set my hand.

WILLIAM A. BANKS.

Witness:

GLENN H. LERESCHE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."