H. L. CASSARD.

CLIMBING BALL TOY.

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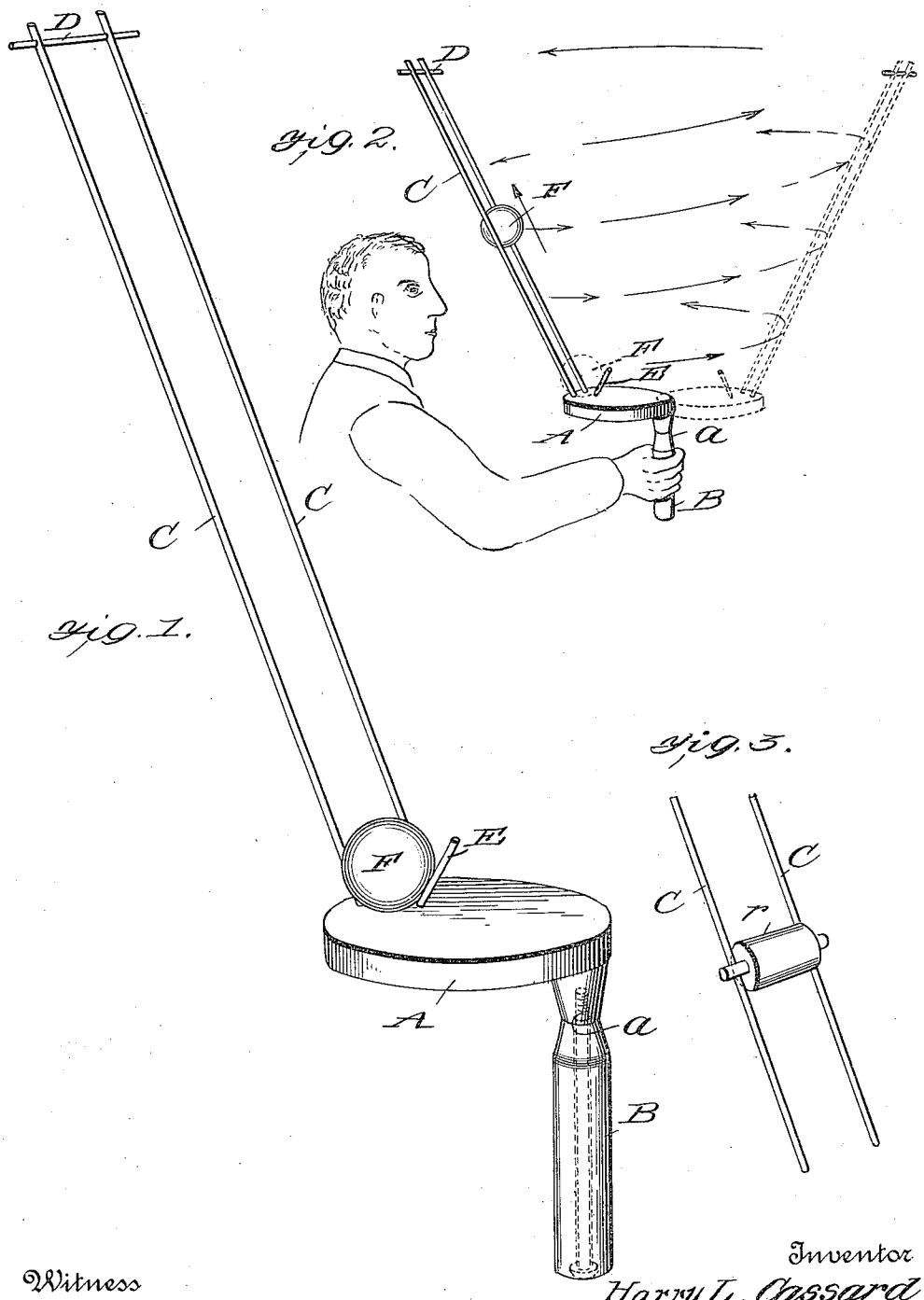


Fig. 1.

Fig. 2.

Fig. 3.

Witness
F. C. Barry
Noah Lerner.

Inventor
Harry L. Cassard
By Edw. W. Byrn.
Attorney

UNITED STATES PATENT OFFICE.

HARRY L. CASSARD, OF PHILADELPHIA, PENNSYLVANIA.

CLIMBING-BALL TOY.

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To all whom it may concern:

Be it known that I, HARRY L. CASSARD, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Climbing-Ball Toys, of which the following is a specification.

My invention is in the nature of a toy designed to both amuse and instruct, and it consists in a whirling or gyratory disk or plate having a swiveling and eccentric handle and two parallel guide rods rising from the disk at an incline to its plane, in combination with a ball or rolling object, whereby when the disk is whirled around by the manipulation of the handle the ball, responding to centrifugal action, climbs the guide rods in opposition to gravity, as hereinafter more fully described with reference to the drawing, in which:

Figure 1 is a perspective view of the toy. Fig. 2 shows its use in practice, and Fig. 3 shows a modification of the rolling body.

In the drawing A represents a disk or base plate of any suitable material, to which there is connected on its lower side, in eccentric relation, a handle B, the connection between the disk and the handle being a swiveling one, as seen at *a*. Rising from the disk A on one side of the center of the same there are two parallel guide rods or wires C C connected together at the top by a crossbar D or by any other means and spaced apart a uniform distance. These guide rods are preferably not fixed to the disk at right angles to its plane, but at a slight inclination to the same, as best seen in Fig. 2. F is a light ball of wood, hollow rubber, or any other material, of a size large enough to ride on the parallel rods C C easily, as upon a track, without passing between the same.

On the disk near the guide rods and midway between the same there is rigidly attached an inclined pin or stop bar E which is spaced apart from the guide rods just far enough to form a retaining seat on the disk, so that the ball does not accidentally roll off when first placed on the same.

To operate the toy the ball is placed upon the disk in the position shown in Fig. 1, and then the handle B, being grasped in one hand, the disk having its center of gravity eccentric to the handle, is whirled around by reason of the swiveling connection at *a* in the manner shown in Fig. 2. Centrifugal action, asserting its influence upon the ball, causes it to climb up the track formed by the inclined rods C C against the ordinary tendency of gravitation, the rise and fall of the ball being regulated at will by the energy of the revolution. This can be regulated to a nicety to cause the ball to rise, or to remain stationary aloft, or descend at will, which is just difficult enough to stimulate the interest of the operator and also serves to demonstrate in the physical laboratory some of the laws of physics in centrifugal action and gravitation and the relation which these two bear to each other. For such use the toy has a large educational value.

It is not necessary that the rolling body should be made in the form of a spherical ball, but it may be in the form of any freely rolling body which properly tracks upon the parallel guides or ways. Thus, as in Fig. 3, the rolling body may assume the form of a roller *r* or it may be constructed as a toy automobile, a wagon or other form.

What I claim is:

1. A gyratory toy comprising a base plate, an eccentric handle, parallel guides rising from said plate, and a rolling body tracking upon said guides.

2. A gyratory toy comprising a base plate, an eccentric handle, parallel guides rising from said plate, a rolling body tracking upon said guides, and a retaining device located on the base plate for holding the rolling body in position.

3. A gyratory toy comprising a base plate, an eccentric handle, parallel guides rising from said plate, and a rolling body tracking upon said guides, the guides being arranged at an inclination to the plane of the base plate.

4. A gyratory toy comprising a basic seat for a rolling body, an eccentric swiveling handle, parallel guides rising from the basic seat, and a freely rolling body tracking on the guides.

5. A gyratory toy comprising a basic sup-

port with eccentric swiveling handle, a guide fixed to the basic support, and a ball rising and falling on said guide from centrifugal action.

6. A gyratory toy comprising a basic support with eccentric swiveling handle, a guide fixed to the basic support, and a ball rising and falling on said guide from centrifugal action, the guide being attached to the basic support at an inclination to its plane.

In testimony whereof I affix my signature.

HARRY L. CASSARD.

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