H. V. HARTZ.

Whirligig.

No. 215,000. Patented May 6, 1879.

Fig. 1.

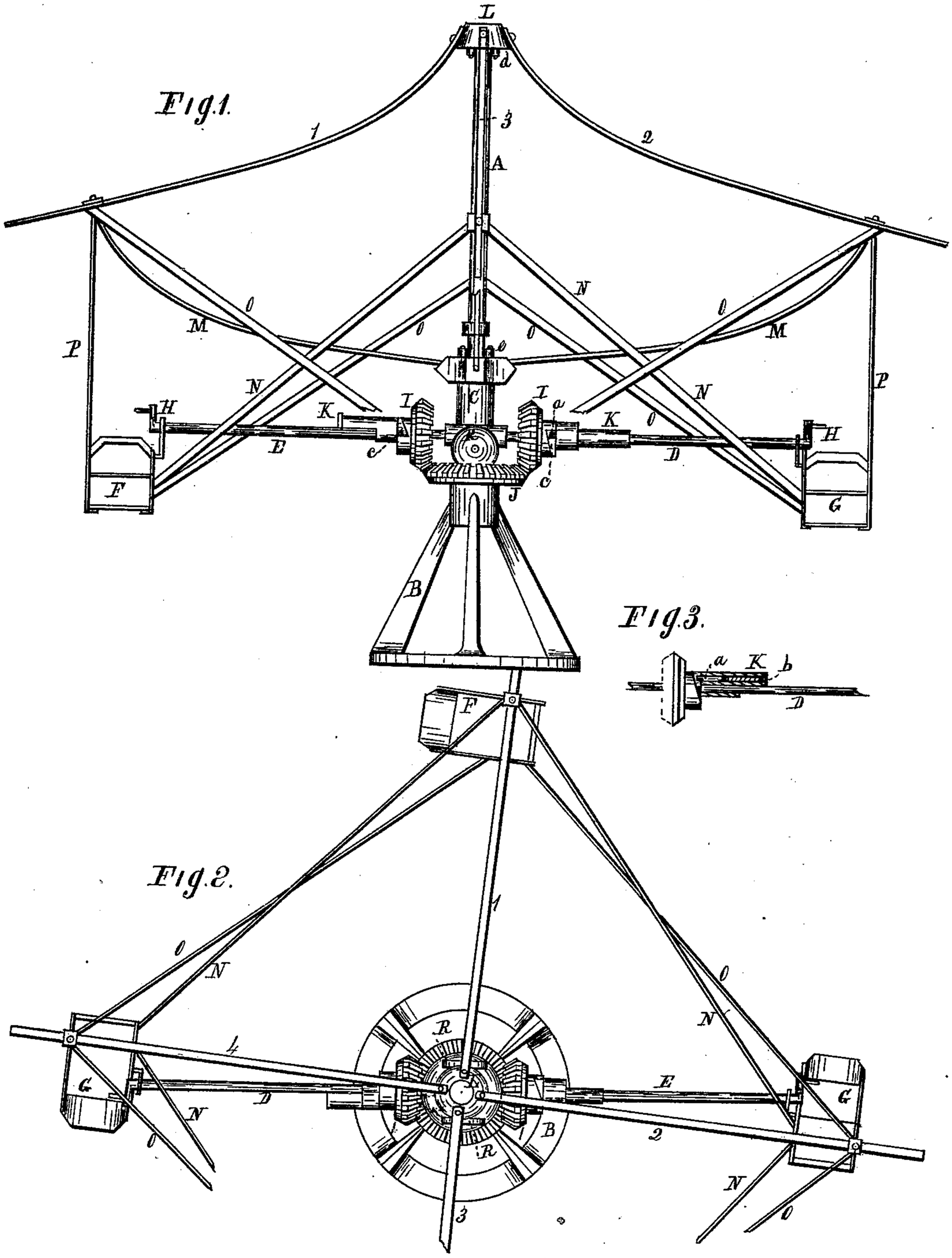

Fig. 3.

Fig. 2.

Witnesses.

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HENRY V. HARTZ, OF CLEVELAND, OHIO.

IMPROVEMENT IN WHIRLIGIGS.

Specification forming part of Letters Patent No. **215,000**, dated May 6, 1879; application filed February 3, 1879.

To all whom it may concern:

Be it known that I, HENRY V. HARTZ, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Whirligig; and I do hereby declare that the following is a full, clear, and complete description of the same.

This invention relates to whirligigs for exercising and amusing children, the construction and operation of which are substantially as follows, reference being had to the accompanying drawings, making a part of the description, in which—

Figure 1 is a side elevation of the whirligig. Fig. 2 is a plan view. Fig. 3 is a detached section.

Like letters of reference refer to like parts in the several views.

A is a standard, fixed in the top of a frame, B, whereby it is secured to the floor of a room or to the ground. C is a sleeve fitting loosely on the standard. In two opposite sides of the sleeve the inner ends of the shafts D and E, respectively, have their bearings, the outer ends of which have their bearings in an arm projecting from the chairs F and G, substantially as shown in Fig. 1. The outer end of each shaft is provided with a crank, H, within easy reach of a child seated in the chair, and whereby the shafts are turned for whirling the gig. On the inner ends of each of the said shafts is loosely fitted a beveled pinion, I. The pinions are made to engage a corresponding beveled wheel, J, firmly secured to the top of the frame B, above alluded to. The pinions are made to revolve with their respective shafts by a clutch consisting of a bolt, *a*, sliding in a sleeve, K, fixed to the shaft. Behind said bolt is a spring, *b*, Fig. 3, whereby the bolt is forced out of the sleeve into a notch, *c*, made in the side of a collar forming a part of the pinion. Said notch has a square shoulder facing the direction the pinion revolves, against which the end of the bolt lodges, and carries around with it the pinion. By the engagement of the pinion with the beveled wheel J the gig is revolved on turning the shaft. Fig. 3 shows the said bolt in its engagement with the pinion, also the spring and a section of the shaft.

L, Fig. 1, is a cap, to which are made fast one end of the radial arms 1 2 3 4, Fig. 2. Said arms are supported in position, respectively, by the braces M, the lower ends of which are secured in the sleeve C, above referred to. The arms are stayed sidewise by the braces N and O, thereby making the structure or frame strong and secure for supporting the seats or chairs F G and others.

The riding chairs or seats are suspended from the arms 1 2 3 4 by hangers P and the ends of the side braces, as shown in the drawings. To the side of the sleeve C are pivoted the rollers R R. Said rollers revolve upon the surface of the beveled wheel J, upon which the whirligig is mainly supported, allowing the pinions to revolve without undue weight upon them; hence there is no unnecessary frictional wearing of the gearing.

To prevent the upper end of the sleeve from wearing upon the standard is the purpose of the anti-friction rollers *e*, secured to the end of the sleeve and on four opposite sides of the standard, so that the side pressure exerted upon the sleeve will bring the rollers to bear upon the standard and rotate around upon it with little or no frictional wearing of the parts. The cap L, above alluded to, is also provided with anti-friction rollers *d*, Fig. 1, thereby relieving the standard from being pressed and rubbed upon by the cap as the gig revolves.

The operation of the whirligig will be readily understood, and is substantially as follows: Four or less number of children take their places in the chairs. Those in the seats near the cranks operate the gig by turning the cranks, which sets it whirling around with more or less speed, as the energy of the crank-motion may be. Should the children stop turning, the gig will continue to revolve for some time, while the shaft stops; hence a child is in no danger of being struck by the crank, though the gig continues to whirl around.

This stopping of the crank is due to the inclined plane of the notch *c*, which, as the pinion revolves, pushes the end of the bolt out of

the notch into the sleeve; hence, though the pinion continues to rotate and the gig to revolve, the shaft will be at rest, and therefore a child is in no danger of being struck by the crank.

By virtue of the spring at the back of the bolt said bolt is forced into the notch each time that the pinion revolves, bringing the notch to the bolt, but which is as continuously forced therefrom by the inclined plane so long as the shaft remains at rest, but which, however, will revolve with the pinion and rotate it by turning the crank.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In whirligigs, the combination of the shaft D, pinion I, wheel J, sleeve C, rollers R, friction-rollers *e*, and standard, arranged to operate in the manner substantially as described, and for the purpose set forth.

2. In whirligigs, the shaft D, sleeve K, bolt, and spring, in combination with the pinion I, provided with a notch for the engagement and disengagement of said bolt, substantially as and for the purpose set forth.

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Witnesses:
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