June 12, 1928. 1,673,538

E. H. THUILLIER

RACING TOY

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Fig.1

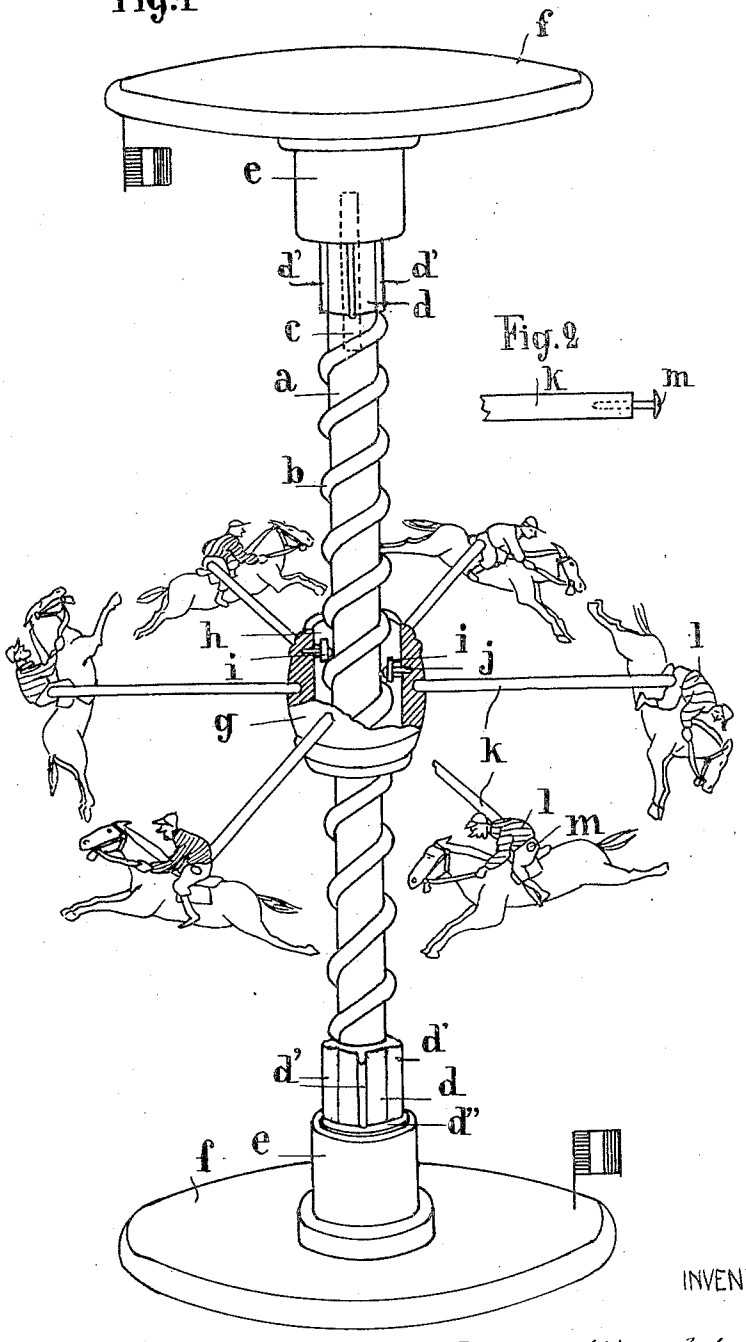


Fig.2

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UNITED STATES PATENT OFFICE.

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RACING TOY.

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The present invention has for its object an improved racing game or toy and is characterized in that a central support provided with arms like a merry-go-round and supporting objects or figures suitable for racing is slidably and rotatably mounted on a vertical post which passes centrally through it, the post being provided with a helicoidal cam which engages the sliding support so that the figures rotate round it in moving down under gravity. The post is preferably provided at each end with a rotary member with which, at the end of the race the merry-go-round can freely turn, and it is also provided with a base so that the post can be set up as desired on one end or the other, the objects or figures being rotatably mounted at the ends of the arms and their centres of gravity being arranged so that they take up an upright position whether the post is set up on one end or the other.

The invention is illustrated in the annexed drawing in which:

Figure 1 is a perspective view with the central sliding member in section; and

Figure 2 is a view of the end of one of the arms.

Referring now to the drawing, the cylindrical post *a* is fitted with a helicoidal cam *b* in the form of a metallic thread or rib that extends spirally around it. At each end of the post is fixedly mounted a pin *c* around which freely turns a collar *d* provided with any suitable number of ribs *d'* of which four are shown in the construction illustrated. The other end of the pin *c* is fixed in a collar *e* rigidly secured to a disk or plate *f* adapted to form a base or stand.

A barrel-shaped hub or sleeve *g* having a central hole is traversed by the post *a* and its thread *b*. Two rollers *i* are rotatably mounted each on pins *j* fixed in the interior wall of the sleeve, and rest on the cam *b*, on opposite sides of the post. A number of radiating arms *k* are screwed into the sleeve *g* perpendicularly to its axis, and a figure *l*, in this case representing a horseman, is pivotally mounted by a pin *m* at the extremity of each of the arms *k*.

The toy being in the position illustrated in Figure 1, the rotating parts *g*, *k*, *l* descend under the action of gravity and in so doing move around the post *a* by reason of the rollers *i* engaging the cam *b*. On reaching the bottom of the track, the sleeve *g* telescopes over the collar *d*, whose ribs *d'* engage the rollers *i*, the rollers *i* placing themselves between the ribs. The bottom of the member *g* then rests on a large flange *d''* integral with the collar *d* and rotating on a small washer separating it from the collar *e*. The collar *d* is rotated by the momentum of the rotating parts and turns with them around the pin *c*.

In order to re-set the game when the rotary part is arrested, it is merely necessary to invert the apparatus, so that the disk *f* previously forming the base now forms the top. In this movement of inversion, the horsemen *l* pivot on the pins *m* and retain their normal position, the merry-go-round taking up its rotary course towards the new base.

The forms and accessory arrangements of the various parts of the means described, the dimensions, the constructional materials, and the details such as the form of the cam, the central rotary piece and the top and bottom supporting pieces, may vary without departing from the scope of the invention.

I claim as my invention:

1. A toy, comprising a support; a vertical post fixed thereto and provided with an external spiral thread; a collar rotatably fitted on the post immediately below the lower end of the thread and resting on said support, said collar having a plurality of external vertical ribs; a carrier sleeve, of substantially greater internal diameter than the post, mounted thereon for gravital movement and provided internally with a plurality of lateral projections adapted to engage and travel along said thread during the descent of the sleeve and thereby cause its rotation; and a plurality of figures pivotally carried by the sleeve, said sleeve adapted to telescope over said collar at the end of its descent, whereby its projections will be caused to engage the external ribs on the collar and thus rotate the same under the momentum of the sleeve and its figures.

2. An invertible toy, comprising a vertical post having a support fixed to each end; a collar rotatably fitted on the post at each end and engaging the adjacent support, each collar having a plurality of external vertical ribs; a thread wound spirally around the post between said collars and terminating in immediate proximity thereto; a carrier sleeve, of substantially greater internal diameter than the post, mounted on said post to move gravitally thereon and provided internally

with a plurality of lateral projections adapted to engage and travel along said thread during the descent of the sleeve and thereby cause its rotation; a plurality of radiating arms secured to said sleeve; a pivot pin mounted axially in the outer end of each arm; and a figure pivotally mounted on each pin to maintain its normal position irrespective of the direction of rotation of the sleeve, said sleeve adapted to telescope over the adjacent collar at the end of its descent, whereby its projections will be caused to engage the external ribs on the collar and thus rotate the same under the momentum of the sleeve and its arms and figures.

In testimony whereof I affix my signature.

EUGÈNE HIPPOLYTE THUILLIER.