

H. THOMASS.
Toy-Propellers.

No. 147,448.

Patented Feb. 10, 1874.

Fig: 1

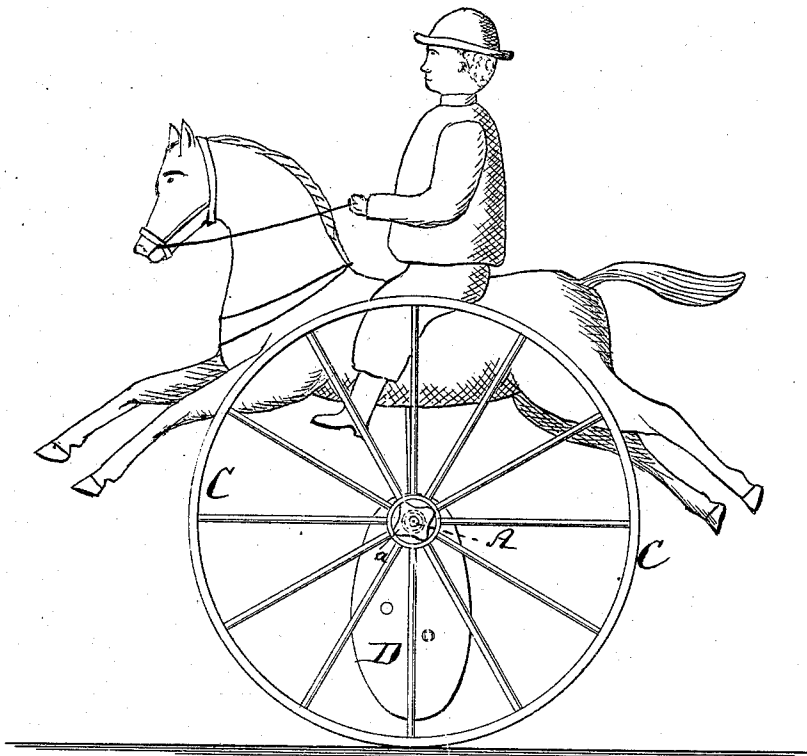


Fig: 2.

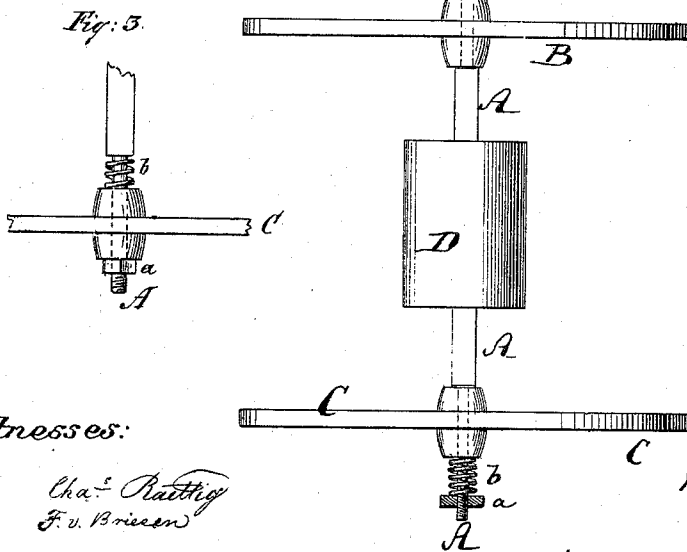
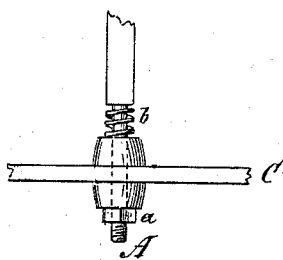


Fig: 3.



Witnesses:

Cha. Rathig
F. v. Briesen

Inventor:

Hermann Thomass
by
A. v. Briesen
his attorney

UNITED STATES PATENT OFFICE.

HERMANN THOMASS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TOY PROPELLERS.

Specification forming part of Letters Patent No. 147,448, dated February 10, 1874; application filed January 24, 1874.

To all whom it may concern:

Be it known that I, HERMANN THOMASS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Toy Propeller, of which the following is a specification:

This invention relates to that class of toys which is provided with clock-work for revolving the driving-wheels, and producing a forward movement of the toys on their supports. The object of the present invention is to so arrange a toy of the class named that it will be moved by its clock-work in a circle of variable diameter, and also in a straight direction.

To effect this object, I combine with one of the wheels of the toy, which is loose on the driving-axle, a spring and a nut, the nut being screwed upon the axle to crowd the spring against the loose wheel or the wheel against the spring. The more the spring is compressed by the nut, the more friction will the axle experience in attempting to turn loose in said wheel, and the larger will in consequence be the circle described by the toy, while a smaller circle will be described when the spring is more expanded; and if the spring is compressed to its full capacity, the wheel will no longer be loose on the axle, and the toy will move in a straight direction. The facility of causing the variation of the circle does not only make the toy more amusing, but adapts it also for use in small apartments, or even on top of tables or other limited supports.

In the accompanying drawing, Figure 1 represents a side view of the improved toy; Fig. 2, a top view, partly in section, of the same; and Fig. 3, a top view of part of the toy, showing a modification of the invention.

Similar letters of reference indicate corresponding parts in all the figures.

The letter A in the drawing represents the driving-axle of the toy, carrying two wheels, B and C, and connected with a suitable clock-work, D, whereby it is revolved. The wheel B, I prefer to secure fast upon the axle; but the wheel C is loose thereon, so that if the axle is revolved the toy will describe a circle, of which the wheel B describes the circumference,

while the wheel C takes up the slip necessary to leave it nearer the center of the circle. By a nut, *a*, which is screwed upon the axle, a suitable spring, *b*, is crowded with more or less pressure against the wheel C. When, as has already been stated, the spring *b* is compressed to a greater extent, the circle described by the toy will be larger in proportion to the increased pressure of the spring against the wheel, while quite a small circle can be obtained by leaving the spring more or less uncompressed. When the spring is compressed to its fullest extent, the wheel C will by the nut be locked to the shaft, and not turn loose thereon, and the toy will in consequence move in a straight line. The spring *b* may be placed between the nut *a* and the wheel C, as in Fig. 2, or the wheel may, as in Fig. 3, be placed between the spring and the nut, the effect being substantially the same in both cases. The spring and nut attachment, may, if desired, be applied to one wheel only, as shown, or to both wheels, in which last-named case the toy may be set to describe a circle toward either side, as may be desired, or also to move in a straight line.

The improvement is applicable to all self-moving toys, such that move on firm supports, and have two, three, or more wheels, as well as such as float in water.

The clock-work or other power which causes its propulsion may either be suspended from the axle of the toy, as shown, or be supported by the toy in other manner.

I do not herein lay claim to the use of a loose and fast wheel on the axle of a toy, or unfastening the loose wheel, as such has already been shown in the patent granted to William Sellers, on the 11th day of February, 1873, No. 135,851; but

I do claim as my invention—

In a toy propeller, the combination of the axle A and loose wheel C with the spring *b* and nut *a*, substantially as and for the purpose described.

HERMANN THOMASS.

Witnesses:

A. V. BRIESEN,
CHAS. RAETTIG.