E. B. MORGAN.

MECHANICAL TOY.

APPLICATION FILED SEPT. 6, 1919.

1,360,970. Patented Nov. 30, 1920.

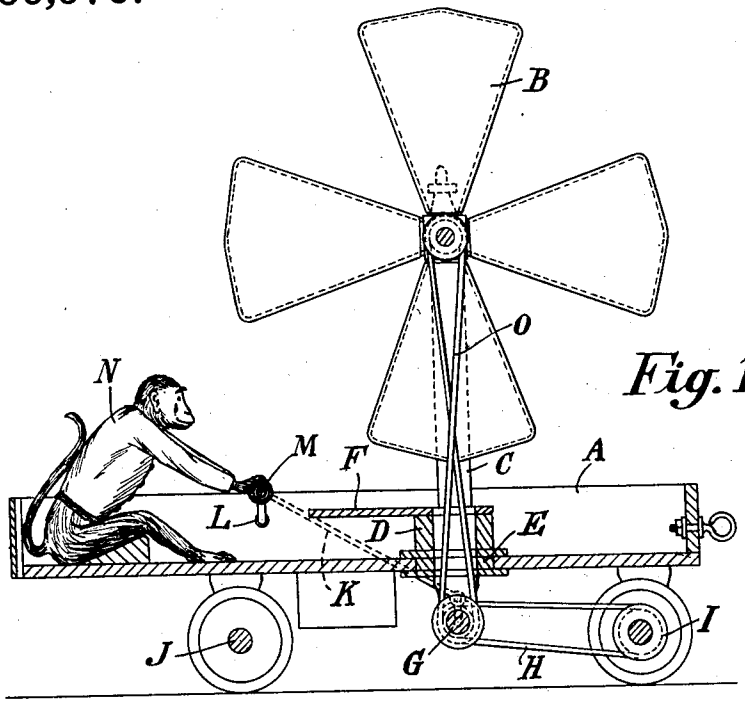


Fig. 1.

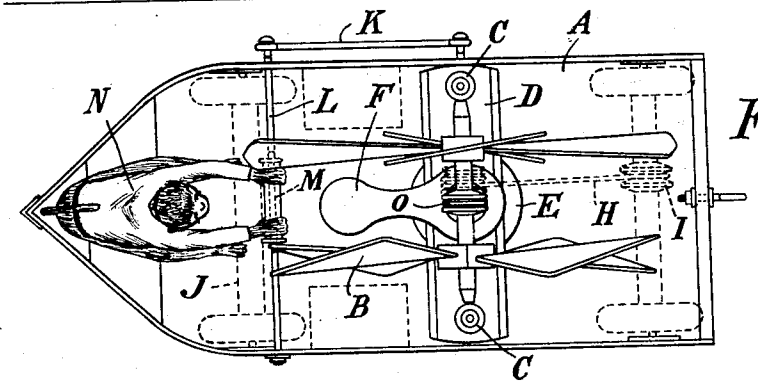


Fig. 2.

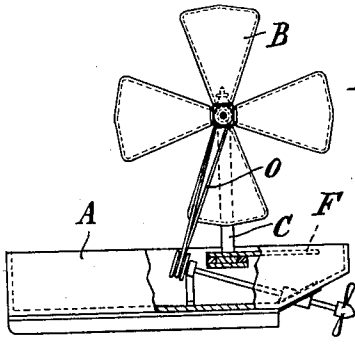


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

EVAN BERNARD MORGAN, OF LIVERPOOL, ENGLAND.

MECHANICAL TOY.

1,360,970. Specification of Letters Patent. Patented Nov. 30, 1920.

Application filed September 6, 1919. Serial No. 322,132.

To all whom it may concern:

Be it known that I, EVAN BERNARD MORGAN, a subject of the King of Great Britain, residing at Liverpool, in the county of Lancaster, in the Kingdom of England, have invented a certain new and useful Improved Mechanical Toy, of which the following is a specification.

This invention has for its object a new or improved toy of that type in which the principle of the windmill, and also at the same time the principle of an ordinary carriage or boat, is applied.

On a carriage or boat of any sort, I place a small windmill which is best made with a revoluble axis so that the sails can be turned by the child in any direction that may be required, and so that the boat or carriage can go forward or backward with the side wind. I connect the spindle of the windmill with the axle of the car, or the shaft of the boat propeller by means of gearing, belting, or cord, or other connecting device. As the force of the wind is frequently sidewise, in order to prevent the toy upsetting, I form the boat or carriage wider than usual and also sometimes with a tolerably heavy weight near the ground like a keel in a boat. The toy can be of any size, and can be used for traveling in.

In more expensive toys of this nature, I extend the spindle and thereon fix a small crank and fasten to the deck the hind feet of an articulated doll or monkey, or the like, with its hands fixed to the sleeve on the crank. As the wind is always best at a particular angle it can be placed on the ground at start at that angle.

The mode of action is as follows:—

The boat or carriage is brought out on to a smooth surface in windy weather. The wind turns the windmill and thus causes the propeller of the boat or the wheels of the car to revolve and the toy to move forward, and also the monkey to appear very busy driving it. At other times, instead of bringing it out in windy weather, it may be used on the smooth floor of a room. The boat, if there be a boat, is on wheels. The child pulls the boat or car by a string. This causes the windmill to revolve and also works the doll or monkey.

In order that the invention may be more fully understood, I append the accompanying drawings in which:—

Figure 1 is a sectional elevation of the toy, and

Fig. 2 a plan.

Fig. 3 a side elevation, partly in section, of a boat.

In these A is a wagon shaped something like a boat, but if it is to be used only on land any shape can be used. B is a windmill. In this particular instance two windmills are shown on the same shaft, but one windmill can be used. C—C are two pillars firmly fixed to the small platform D oscillating on a hollow trunnion E. This hollow trunnion has a handle F so that the child can move it to a small angle so as to more easily catch the wind. G is a shaft carrying the pulleys of the band O and the band H. This band H goes over a pulley I on the back axle. J is the front axle. N is the monkey or doll, and K is the band or wire from the intermediary axle to an axle L above the deck of the box A which axle carries a crank M with a sleeve on the crank pin, to which sleeve the hands of the monkey are fastened, the monkey being fastened on the deck. When the toy is used as a boat, instead of having wheels I bring the belt C or bevel gearing down to a propeller shaft so as to run the propeller as shown in Fig. 3.

In conclusion I am well aware that it is an old idea broadly to place a windmill on a boat to drive the propeller, and in practice on a large scale this has always proved a failure, and also that it has been suggested to put a horizontal windmill or helicopter on a flying machine in the supposition that they can get power from it to propel the aeroplane forward and lift it up, and I make no claim for such things broadly.

I declare that what I claim is:—

1. As a new article of commerce a mechanical toy consisting of a body, a vertical framework thereon, bearings on said framework, a spindle in said bearings, vanes attached to said spindle, a transverse driving shaft on said body, transmitting means connecting said spindle with the driving shaft, and means for turning the framework on its axis to change the angle of the vanes relative to the axis of the toy.

2. In a traveling windmill toy having a

relatively broad floor, a driving shaft mounted thereon, means for connecting the windmill to said driving shaft, a weight attached to the lower exterior side portions of the toy thereby eliminating the tendency of the toy to upset, due to side winds as the toy is propelled forwardly.

In witness whereof, I have hereunto signed my name this 23rd day of August 1919, in the presence of two subscribing witnesses.

EVAN BERNARD MORGAN.

Witnesses:

A. E. ODELL,

JOHN EDWARD SHORT.