

E. C. PHELPS.
Toy Locomotives.

No. 147,516.

Patented Feb. 17, 1874.

Fig. I

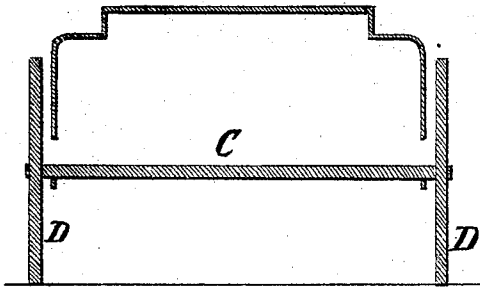


Fig. II

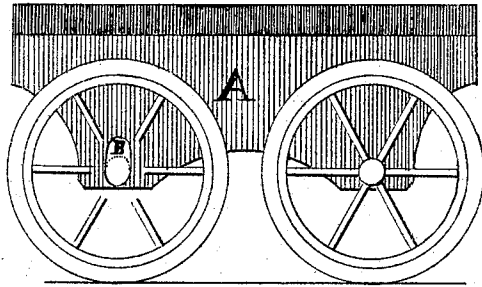
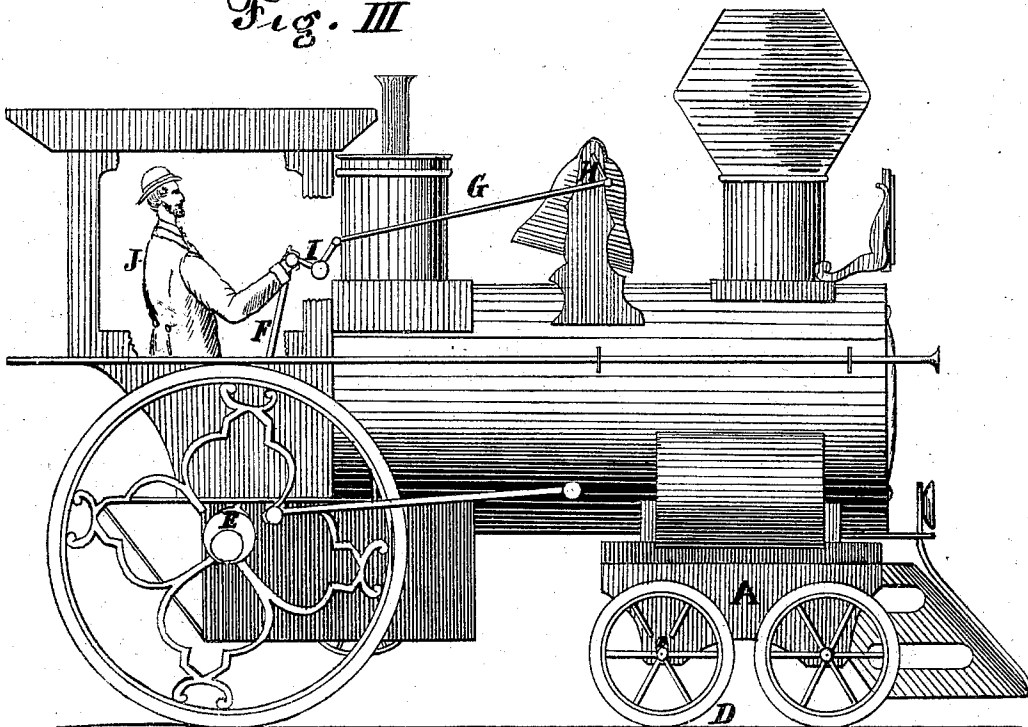


Fig. III



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN C. PHELPS, OF CROMWELL, CONNECTICUT, ASSIGNOR TO STEVENS
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IMPROVEMENT IN TOY LOCOMOTIVES.

Specification forming part of Letters Patent No. **147,516**, dated February 17, 1874; application filed
September 1, 1873.

To all whom it may concern:

Be it known that I, EDWIN C. PHELPS, of Cromwell, county of Middlesex and State of Connecticut, have invented certain Improvements in Toy Vehicles, of which the following is a specification:

The first part of my invention relates to the connection and adjustment of the shaft or axle of one set or more of wheels of any toy vehicle in which more than one set of two wheels are used, for the purpose of relieving the friction of the carrying burden of the toy when it performs a circular journey, and also of overcoming the resisting force of obstructions which it may encounter while performing the same, and enabling it to run in regular circles in traveling over uneven surfaces.

In the annexed drawing, Figure 1 is the shaft or axle, with the wheels attached to the same. Fig. 2 is the slotted adjustment-bolsters, through which the shaft or axle passes, which are attached to the truck-plate of the toy vehicle, and may be so constructed as to form a part thereof. Fig. 3 represents a toy with the adjustment-bolsters attached, with the wheels upon the axle.

A is the adjustment-bolsters, B is the adjusting-slots of the same, C is the shaft or axle, and D is the wheels.

When a toy vehicle, that is propelled by the force of a spring and a train of geared wheels, or other propelling power which it carries, is put in motion, and by any device is made to perform its journey in a circle, if the carrying burden is thrown upon the middle set or sets of wheels much friction is produced thereby, and the toy is essentially impeded. If the toy is caused to travel in a circle by deflecting its forward wheel or wheels, if more than one set of wheels are thus deflected the circular journey of the toy is liable to become zigzag or tortuous by slight obstructions and the unevenness of the surface over which it travels, by which the forward wheel or wheels are lifted from their bearings by the wheel or wheels immediately in their rear, which changes the angle of the line of deflection

with the rear wheels of the toy vehicle, and consequently changes the circle of its journey.

In the improvement described in this specification, these difficulties are entirely obviated by the shaft or axle being made self-adjusting in the slots of the adjustment-bolsters, which are of such width as to freely admit the diameter of the shaft or axle, but whose length is several times the diameter of the axle, thus relieving it from any carrying burden, and free to adjust itself to the unevenness of the surface over which the wheels travel, and to easily pass over any slight obstruction which they may encounter. While by their own weight they are made to revolve, and thus give the appearance of real carrying-wheels, they cannot act to change the angle of the line of deflection with the rear wheel or wheels of the vehicle, thus permitting it to perform its journey in regular circles.

The second part of my invention relates to a device attached to the shaft or the axle of the carrying-wheels of the toy vehicle, or some shaft of the propelling machinery of the same, consisting of a cam or crank and connecting rods or levers, by which motion is communicated to a figure, causing it to act in the capacity of a bell-ringer.

In the accompanying drawing, E is the cam. F is the rod connecting the cam with the figure. J is the figure. I is the rocking arm, which connects the figure with the bell-rod. G is the rod, which connects the rocking arm with the bell-shaft, which terminates in a crank. H is the bell-shaft, upon which the bell is mounted.

When the toy vehicle is started on its journey by the force of its propelling power, motion is imparted to the wheels, upon whose shaft is the cam E, through which motion is imparted by the rod F to the figure and rocking arm, and through the rod G to the bell-shaft, which causes the bell to ring until the propelling force of the motive power is exhausted.

I claim as my invention—

1. In a toy locomotive, or other vehicle, the

slotted adjustment-bolsters A, substantially as described, whereby the shaft or axle becomes self-adjusting, as and for the purpose set forth.

2. The cam E, the connecting-rods F and G, and the rocking arm I, in combination with a bell, whereby motion is imparted to a figure

mounted upon a toy locomotive or other vehicle, substantially as and for the purpose herein described.

EDWIN C. PHELPS.

Witnesses:

OLIVER C. BROWN,
JASON WATERS.