June 17, 1924.

1,498,223

B. ZSARNAY

MECHANICALLY ROCKING HORSE

Filed April 13, 1922

2 Sheets-Sheet 1

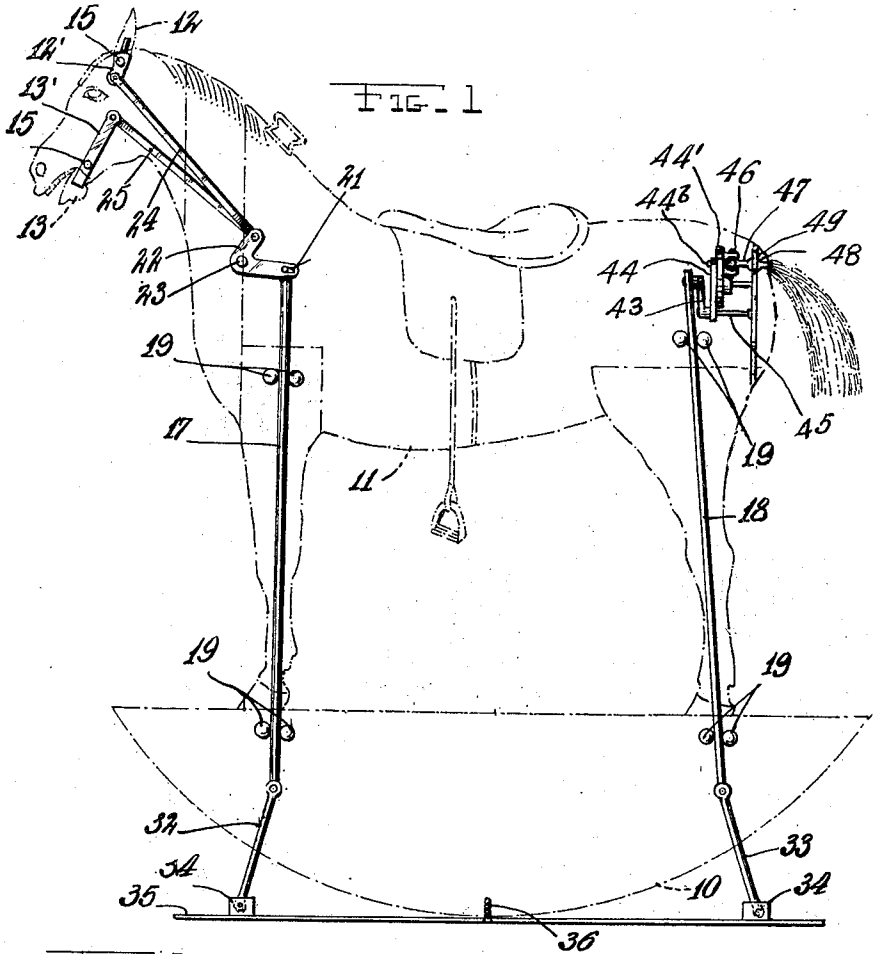


FIG. 1

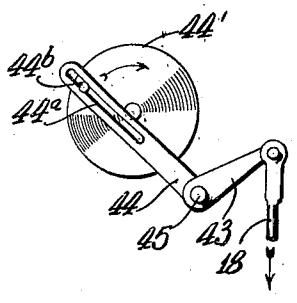


FIG. 5

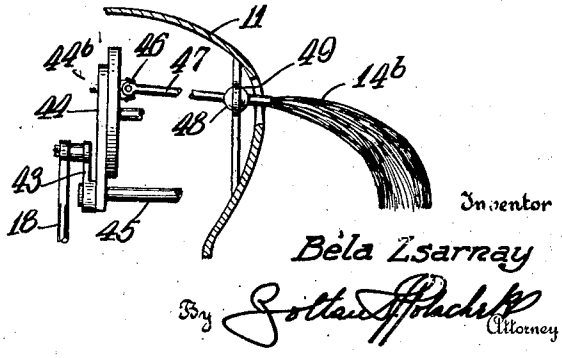


FIG. 6

Inventor

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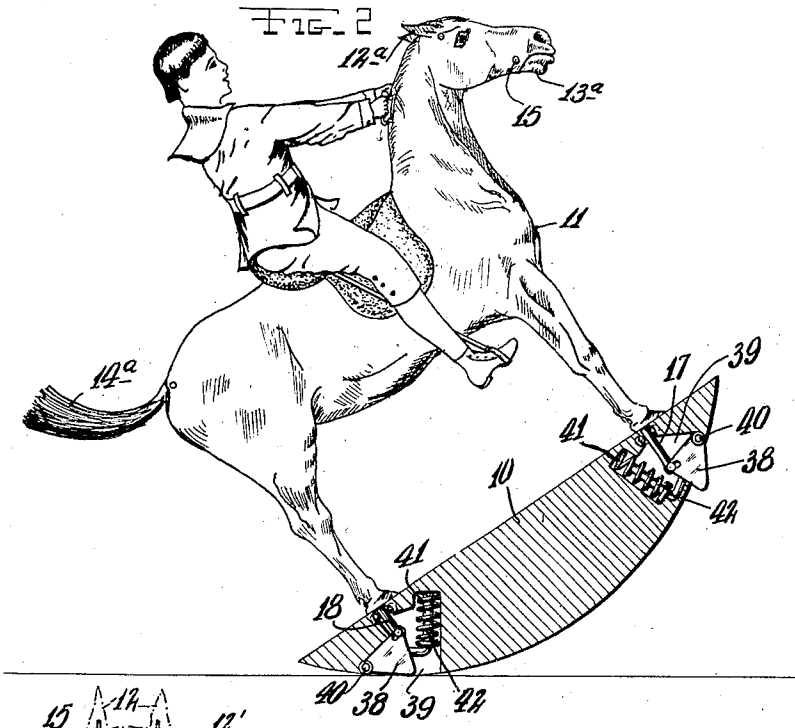
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B. ZSARNAY

MECHANICALLY ROCKING HORSE

Filed April 13, 1922 2 Sheets-Sheet 2

FIG. 2



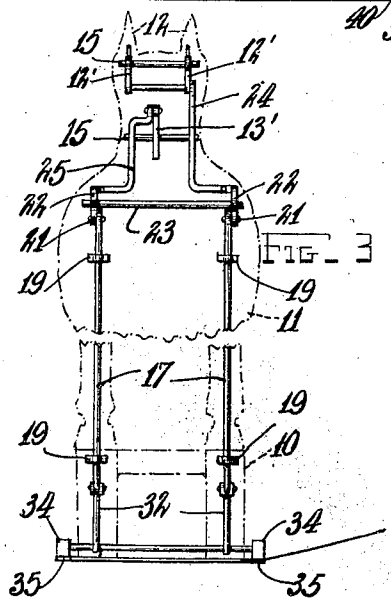


FIG. 3

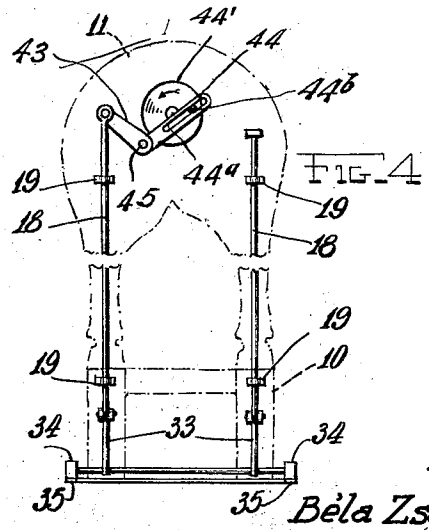


FIG. 4

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Patented June 17, 1924. 1,498,223

UNITED STATES PATENT OFFICE.

BÉLA ZSARNAY, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO ABRAHAM LEWIS, OF NEWARK, NEW JERSEY.

MECHANICALLY-ROCKING HORSE.

Application filed April 13, 1922. Serial No. 552,134.

To all whom it may concern:

Be it known that I, BÉLA ZSARNAY, a citizen of Hungary, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Mechanically-Rocking Horses, of which the following is a specification.

This invention relates generally to toys, having particular reference to a toy of the type known as a rocking-horse.

The invention has for an object to provide a novel construction of rocking-horse adapted to cause rocking movement of the toy as a whole to impart individual movement to certain parts, representing certain members, of the horse proper.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawings is a side view illustrating my invention embodied in a rocking-horse.

Fig. 2 is a part side view and part longitudinal vertical sectional view illustrating a modified embodiment of the invention.

Fig. 3 is a front view, showing the type of operating mechanism for the various parts which is illustrated in Fig. 1.

Fig. 4 is a rear view thereof.

Fig. 5 is a detail front elevation of the mechanism for moving the tail of the horse.

Fig. 6 is a side view thereof.

In the invention as embodied in Fig. 1 of the drawings I provide a pair of segmental rockers 10 on which a horse 11 is rigidly mounted, this horse being of hollow construction so as to accommodate the various operating elements which as here shown are adapted to move the ears, jaw and tail of the horse as the latter rocks. The said ears, jaw and tail are indicated respectively at 12, 13 and 14. The ears and jaws are fixed on levers 12′, 13′ mounted in the horse, these levers 12 and 13 being fulcrumed between their ends as indicated at 15.

The operating means for these levers comprises the front and rear reciprocatory rods 17 and 18 extending respectively through one of the front and one of the rear legs of the horse, projecting at their upper ends into the body of the horse and at their lower ends into the rocker elements 10, these rods being guided between co-operating pairs of fixed pins 19.

The upper end of the front rods 17 have slot and pin connections such as 21 with one end of bell-crank levers 22 fulcrumed as at 23 in the neck of the horse, and having connected to opposite ends a pair of links 24 and 25 which are attached to the respective levers 12′ and 13′.

The means by which the rods 17 and 18 are caused to reciprocate longitudinally of themselves as the horse rocks on the segmental rockers 10 comprises pairs of rigid links 32 and 33 connected to the lower ends of the front rods 17 and rear rods 18 respectively. The lower ends of these links are pivotally connected to ears 34 fixed on opposite ends of a pair of flat spring strips 35 fixed midway between their ends as at 36 to the undersides of the rocker elements 10 and on which the latter are seated and adapted to roll.

It will be apparent that as the horse rocks forwardly, with a consequent depression of the front ends of the rocker 10, the rods 17 will be pushed upward and will cause the ears and jaw to move in one direction. Since the springs 35 are attached to the rockers midway between their ends it follows that as the rockers tilt the points 36 will be lifted and the front portion of the springs put under tension, thus acting to halt the forward rocking movement. The ears and jaws are moved in an opposite direction on reverse rocking movement as will be apparent. Movement of the tail is effected in a similar manner as will be apparent.

In the form of the invention shown in Fig. 2 the horse has movable ears 12^a, jaw 13^a, and tail 14^a corresponding to the ears 12, jaw 13 and tail 14, and is mounted on a single segmental rocker 10. In this construction the rods 17, 18, which operate the jaw, ears and tail through the mechanism already described connect to triangular arms 38 accommodated in recesses 39 in the rocker and hinged thereto as at 40. These arms are urged downwardly by coiled expansion springs 41 surrounding integral fingers 42 on the arms. As will be apparent, these

springs 41 act both to stop the rocking motion and to depress the rods 17, 18.

In Figs. 5 and 6 I have shown in detail the arrangement of parts for moving the tail of the horse in a circular path. In this construction the tail operating rod 18 connects at its upper end to one arm of a bell-crank lever element comprising the two arms 43 and 44 which is suitably fulcrumed on a pin or stud 45 fixed in the body of the horse. The arm 44 which, as will be understood, swings in a plane transverse to the horse, projects across the face of a disk 44′ rotatably mounted in the body of the horse and is formed with a longitudinal slot 44^a engaged by a pin 44^b fixed on the disk 44′. This disk has attached thereto by a universal joint 46 the forward end of a rearwardly extending rod 47 whose rear end passes freely through a ball 48 rotatably held in an annular socket 49 fixed in the body of the horse. The rear end of this rod passes through an opening 49 in the hindquarters of the horse and has the tail fixed thereto. It will be apparent that oscillatory movement imparted to bell-crank arm 44 will be imparted to the rod 47, giving the tail a motion similating the nature switching of the tail of a horse.

Having thus described my invention what I claim as new and desire to protect by Letters Patent of the United States is as follows:

1. A toy comprising a rocker, a horse mounted thereon and having a movable tail, a longitudinally extending rod on the rear end of which said tail is fixed, means supporting said rod to permit both of sliding and angular movement and means for oscillating the front end of said rod as the toy rocks, comprising a disk to which the front end of said rod is connected, a rod extending downwardly in the said toy and adapted to receive automatic longitudinal movement as the latter rocks, and an operative connection between the upper end of said rod and the said disk whereby longitudinal movement of the rod rotates said disk.

2. A toy comprising a rocker, a horse mounted thereon and having a movable tail, a longitudinally extending rod on the rear end of which said tail is fixed, means supporting said rod to permit both of sliding and angular movement and means for oscillating the front end of said rod, said means being adapted to operate automatically as the toy is rocked.

In testimony whereof I have affixed my signature.

BÉLA ZSARNAY.