July 19, 1949. J. M. ROMERO ET AL 2,476,915

MECHANICAL RIDING TOY

Filed Nov. 13, 1944

Fig. 1

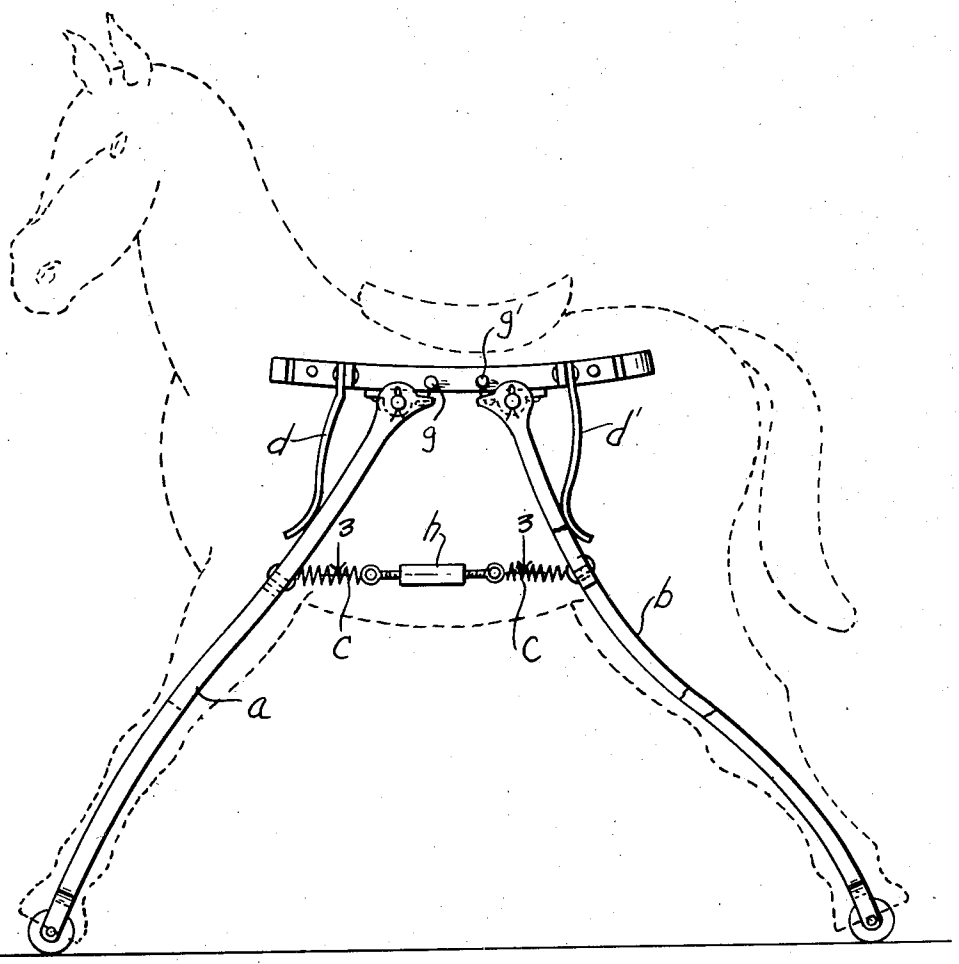


Fig. 2

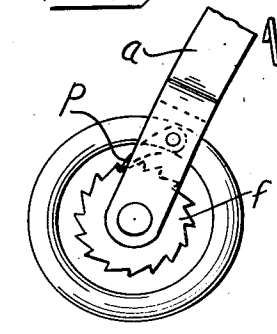
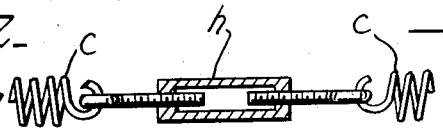


Fig. 3



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MECHANICAL RIDING TOY

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Mexico City, Mexico

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2 Claims. (Cl. 272—53)

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This invention relates to a mechanical riding toy, of original design and construction.

The invention aims to provide, in a manner as hereinafter set forth, a riding toy, moving first its front legs forward, the hind legs also moving forward immediately afterwards, returning the riding toy to its original position, said movements of the legs of the horse obeying to the downward and upward movement of the rider.

Similar toys as known up to date cannot move from one place to another unless someone besides the rider pulls or pushes the toy. Such a riding toy has no animation and has really very little attraction for children.

The mechanical riding toy of our invention is very different from similar toys, because ours acquires animation and can be moved by the rider from place to place, such motion depending on the ability of the rider.

The invention consists of a novel design, construction, arrangement and combination of parts as will be more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a side elevation partly broken away and partly in section of a mechanical riding toy-horse with the combination of springs and "one way" wheels, so that said horse can move only forward.

Figure 2 is a detailed side elevation of a wheel and its arrangement that allows said wheels to roll in one direction only.

Figure 3 is a detailed section taken on the line 3—3 of Figure 1.

The mechanical horse consists of a pair of front legs *a* which swing from their upper parts on a bolt, said bolt acting as an axis. This pair of legs has corresponding wheels at the lower ends. Said wheels have a ratchet gear *f* and a pawl *p* that prevents said wheels from moving backwards, consequently they can roll only forward. The back legs *b* have the same arrangement.

These two pairs of legs are kept in position due to the pull of a spring *c* which tends to bring them together. Said pairs of legs cannot go beyond certain convenient distance in either of their swinging movements due to the action of stop plugs or bolts *g* and *g'*. The coil spring *c* is made of two sections with a tensor *h* so as to increase or reduce within certain allowance the maximum supporting capacity of the horse.

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On either end of frame are two leaf springs *d* and *d'* which come in contact with their corresponding pair of legs when same swing open, reinforcing the action of springs *c* and snapping back to their original position.

A mechanical riding horse as described above would act as follows:

The rider stands up in the stirrups. The coil springs are designed to support a certain weight limit, for instance, each model has an allowance of ten or fifteen pounds which may be graduated with the tensor. If the rider is beyond this allowance, he would require the next model for heavier or lighter rider, as the case may be.

When the rider stands up on the stirrups, the horse will not move because the weight of the rider is slightly less than the capacity of the springs. But when the rider throws down his weight and also throws his body forward, his normal weight will increase in proportion to the speed of the movement and the springs will give way on account of the greater weight which they suddenly support. The hind legs cannot move backward, therefore the impulse will shift forward causing the front legs to swing forwardly. The back legs will also stretch as the body of the horse moves forward, but the corresponding wheels will not move. The rider, who has attained a normal riding position on the horse, throws his weight forward again and stands up in the stirrups.

At this moment, both pairs of legs have come in contact with the additional leaf springs so that the legs tend to regain their original position, such being possible because the weight that forced them apart has diminished and the action of the springs increased. In this movement the front legs cannot move backwards, therefore they will stand still, but the hind legs will advance. The horse will roll forward by inertia and the repeated movements of the rider will keep the horse going as the rider wishes.

What we claim is:

1. A mechanical riding toy comprising a frame, pairs of legs swingably carried by said frame, correlated means carried by said legs and said frame for limiting the inward swinging of said legs, resilient means fixed on said frame engageable with said legs for limiting the outward swinging of said legs, a spring connected between the front and rear legs biasing said legs inwardly and said frame to a raised position and a turn buckle intermediate the length of said spring for selectively varying the tension thereof.

2. A mechanical riding toy comprising a frame, pairs of legs swingably carried by said frame, cor-

related means carried by said legs and said frame for limiting the inward swinging of said legs, resilient means fixed on said frame engageable with said legs for limiting the outward swinging of said legs, a spring connected between the front and rear legs biasing said legs inwardly and said frame to a raised position, a turn buckle intermediate the length of said spring for selectively varying the tension thereof, wheels on said legs, and means for limiting the rotation of said wheels to one direction.

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