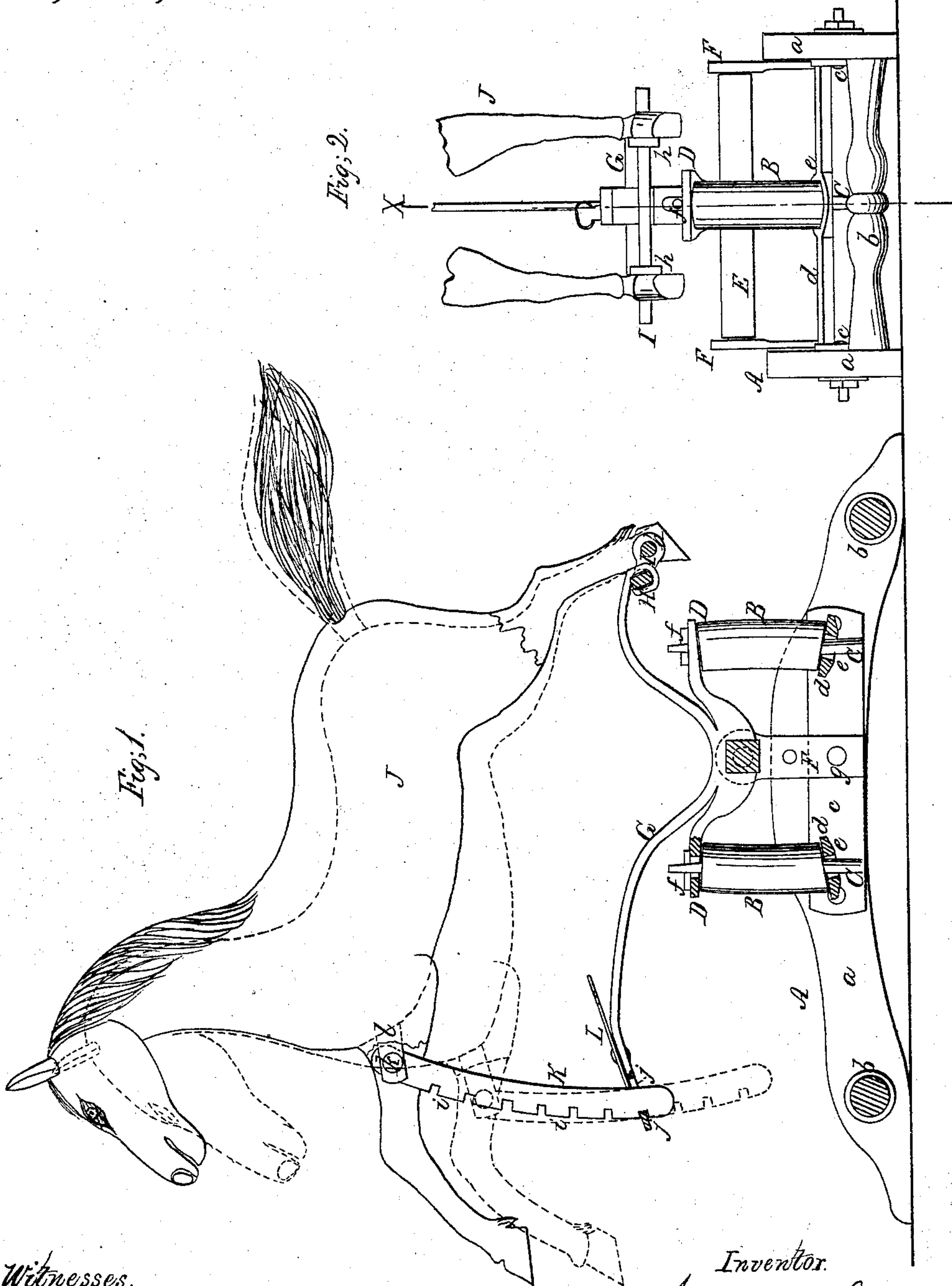


*J. A. Crandall,*

*Hobby Horse,*

*No. 1,570,*

*Patented Feb. 9, 1864.*



*Witnesses.*  
*W. J. Tompkins.*  
*L. M. Anway.*

*Inventor.*  
*Jesse A. Crandall.*



# UNITED STATES PATENT OFFICE.

JESSE A. CRANDALL, OF NEW YORK, N. Y., ASSIGNOR TO MARY CRANDALL, OF SAME PLACE.

## SPRING ROCKING-HORSE.

Specification forming part of Letters Patent No. 41,570, dated February 9, 1864.

*To all whom it may concern:*

Be it known that I, JESSE A. CRANDALL, of the city, county, and State of New York, have invented a new and Improved Spring Rocking-Horse; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a back view of the lower part of the same.

The spring rocking-horses now extensively used, and which have superseded the horses mounted on rockers, have the hind legs of the horse or equivalent parts of a riding-frame connected with a cross-bar of the base-frame by one or two volute springs, so that that the same spring or springs yield to and resist the impulse in both directions. The springs under such an arrangement are not only expensive, but are liable to break, in consequence of the strain to which they are exposed in resisting the entire strain alternately in opposite directions.

The object of my said invention is to avoid the defect above pointed out and to reduce the cost of construction; and to this end my said invention consists in mounting the horse or equivalent riding-frame on a rocking shaft which is journaled in a base-frame, and arranging springs before and behind the rock-shaft, so that when the front part of the horse or equivalent riding-frame is forced down the spring or springs in front of the rock-shaft shall yield to such impulse and gradually arrest and then force it back for the reverse impulse, which will be in turn met in like manner by the spring or springs behind the rock-shaft; and my said invention also consists in connecting one end of the horse or equivalent riding-frame with one arm of the rock-shaft by a hinge or turning joint and the other end thereof with an opposite arm of the said rock-shaft by a shifting notched sector, or equivalent thereof, so that the inclination of the horse or equivalent riding-frame relatively to the base-frame may be readily changed.

To enable those skilled in the art to fully

understand and construct my invention, I will proceed to describe it.

A represents a base or framing, which supports the whole of the device, said base or framing being composed of two parallel bars, *a a*, connected by cross-bars *b*. To the inner surface of each bar *a* there is attached a metal plate, *c*, in which plates the ends of two metal cross-bars, *d d*, are permanently secured. These bars *d* have each an expanded circular part, *e*, at their centers to form bearings for springs B, one on each. These may be spiral wire springs, or they may be constructed of india-rubber tubes. I prefer the latter, and such are represented in the drawings. These springs B have each a metal rod, C, passing vertically through them, said rods also passing loosely through the circular parts *e* of the bars *d*, and their upper parts passing through the ends of the arms D D, which project from opposite sides of a rock-shaft, E, the upper ends of the rods C having each a pin, *f*, passing through it above its arm D.

The rock-shaft E has its bearings in upright plates F F, which are attached to the centers of the metal plates *c* by bolts *g*, and said upright plates F have each a number of holes made in them, through any one of which the bolts *g* may pass, to admit of the plates F being adjusted higher or lower, in order that the arms D may compress the springs B to a greater or less extent, as desired.

To the rock-shaft E there is permanently attached, at right angles, a curved metal bar, G, one end of which projects considerably farther from the rock-shaft than the opposite end, as shown in Fig. 1. The bar G is of curved form, and to its back and shorter end there is attached a cross-bar, H, the ends of which are bent backward at right angles to form ears *h h*, in which the ends of a shaft, I, are fitted loosely, the shaft I being parallel with the bar H, and having the hind feet of the horse J fitted upon it. The front part of the horse is supported by a curved or segment metal bar, K, the front edge of which is notched, as shown at *i*. This bar K passes through a slot, *j*, in the front end of the bar G, and is secured therein by pressing the bar



K forward, so that the front edge of the slot *j* will fit into one of the notches *i*, the bar being retained in a forward position by means of a button, L, secured to the bar G directly back of the segment-bar K.

The upper end of the segment-bar K is connected by a pivot, *k*, with a bar, *l*, which projects from the front part of the body of the horse J, and it will be seen that by turning the button L so that the bar K may be slipped off from the front edge of the slot *j* of the bar G the horse may be adjusted in a more or less rampant position, as desired, and then, by means of the button L and notches *i*, secured in the desired position.

By this arrangement of the two springs B B, rock-shaft E, and arms D D, with the horse-supporting bar G attached to the rock-shaft, a very agreeable rocking motion may be produced by a very slight exertion of the rider on the horse, as the latter is nicely balanced and the springs not liable to be overtaxed by any degree of rocking, however violent. The rods C retain the springs in proper position. No checks are required to limit the movement of the horse in either direction, in consequence of the springs B B being at opposite sides of the rock-shaft, and the strength of the springs may be graduated

to suit the weight of the rider by raising or lowering the plates F.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Mounting the horse or equivalent riding-frame on a rocking shaft, mounted substantially as herein described, in combination with the springs placed in front and behind the rock-shaft, substantially as herein described, the spring or springs on one side of the rocking shaft yielding to and resisting the impulse given in one direction, and the spring or springs on the opposite side yielding to and resisting the impulse given in the opposite direction, substantially as specified.

2. Connecting the horse or equivalent rocking frame with the arms of the rock shaft, or equivalent thereof, at one end by a hinged or turning joint and by a notched sector, or equivalent therefor, substantially as described, by means of which the inclination of the horse or riding-frame relatively to the base-frame can be readily increased or decreased, as set forth.

JESSE A. CRANDALL.

Witnesses:

A. G. TOMPKINS,

L. M. ANWAY.