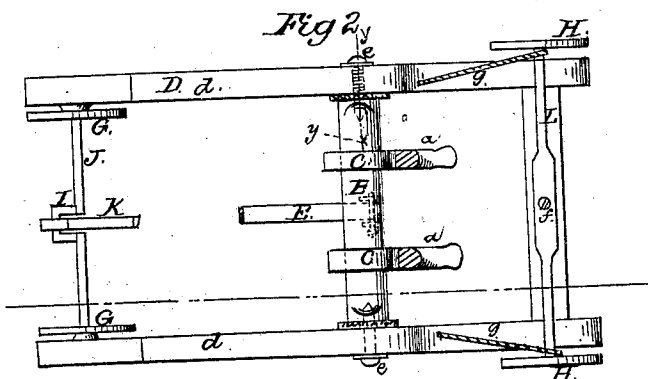
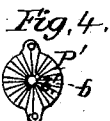
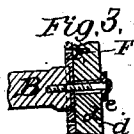
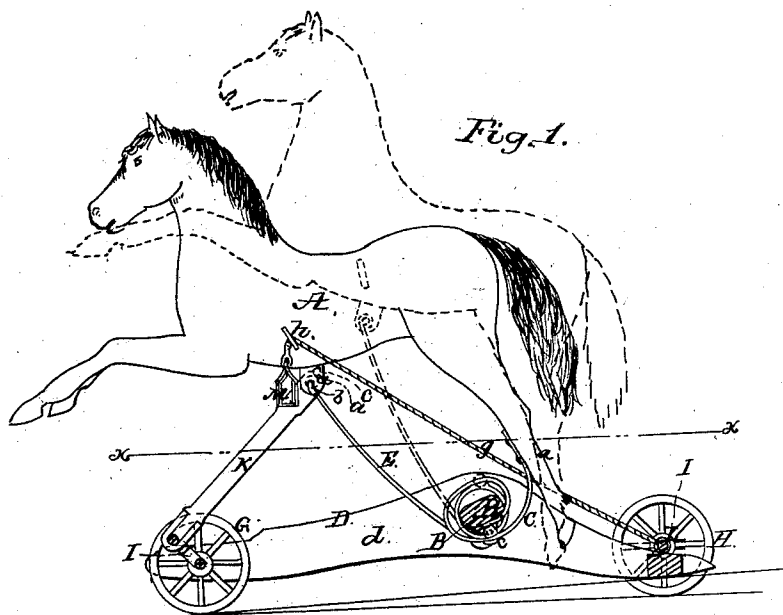


J. A. CRANDALL.

Velocipede.

Patented Feb. 5, 1861.

No { 298, }  
      { 31,302. }



WITNESSES;

*James Lamb*  
*Lewis A. Tucker*

INVENTOR:

*John A. Crandall*

# UNITED STATES PATENT OFFICE.

JESSE AMOR CRANDALL, OF NEW YORK, N. Y.

## ROCKING-HORSE.

Specification of Letters Patent No. 31,302, dated February 5, 1861.

To all whom it may concern:

Be it known that I, JESSE AMOR CRANDALL, of the city, county, and State of New York, have invented a new and Improved Toy or Implement for Children, the Same being a Rocking-Horse or Rocking Vehicle and a Velocipede; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side elevation of my invention. Fig. 2, a horizontal section of the same, taken in the line *x, x*, Fig. 1. Fig. 3, a section of a portion of the same, taken in the line *y, y*, Fig. 2. Fig. 4, a detached face view of a plate pertaining to the same. Fig. 5, an end view of a shaft pertaining to the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a toy horse the back legs *a, a*, of which are secured to a shaft B, by coil-springs C, C. The shaft B, is secured transversely in a frame D, as hereinafter described and to said shaft there is also secured a spring E, which extends upward in an inclined position, and is attached to the under side of the horse as shown at *a'*, in Fig. 1. The spring E, is slightly curved and its ends may be secured to the horse and to the shaft B, by pins *b*, passing through eyes at the ends of the spring and through lugs or ears *c*, attached to the horse or shaft.

The coil springs C, C, and the spring E, are so adjusted or arranged that they will keep the horse when not subjected to a load in an inclined or rampant position and when a child is on the horse, the latter by a very slight exertion of the former will vibrate or rock back and forth.

The spring E, performs two functions: to wit, that of assisting the springs C, C, in sustaining the horse and as a check to prevent the horse vibrating too far back. If the spring E, were not employed, the springs C, C, would require to be quite heavy or strong as they would necessarily sustain the whole weight of the horse and its load and an elastic cord or other device as shown in my patented article of May 17th 1859, would be necessary to prevent

the backward movement of the horse. This latter arrangement, the cord, is not so desirable as the spring as will be seen from the above description, the cord rendering heavy springs C, necessary, and not allowing so easy and agreeable a rocking motion as when the spring E, is employed.

The ends of the shaft B, are notched or toothed radially as shown at *a\**, Fig. 5, and corresponding teeth *b\**, are made in plates F, which are secured to the inner surfaces of the side pieces *a, a*, of the frame. The teeth *b\**, of plate F, are shown clearly in Fig. 4, and through each side piece *d*, of the frame and through the center of its plate F, a screw *e*, passes and these screws pass into the ends of the shaft B, and keep the teeth in the ends of the shaft, and those on the plates F, interlocked with each other. By this arrangement the shaft B, is prevented from casually turning. The shaft B, may be turned at any time to regulate the position of the springs C, C, to suit the load on the horse by unscrewing one of the screws *e*, so that the teeth at the ends of shaft B, may be disengaged from those of the plates F. Instead of the teeth on the ends of the shaft B, and on the plate F, pins may be used on one and corresponding holes made in the other to receive the pins. This latter arrangement however would be equivalent to the former one.

The frame D, is mounted on wheels G, G, H, H. The wheels G, G, at the front part of the frame D, have a crank I, on their axle J, and a rod K, is connected to said axle. The axle L, of the back wheels H, H, is connected to the frame D, by a king bolt *f*, and to each end of the axle L, a cord *g*, is attached, said cords passing through eyes *h, h*, at the sides of the horse and having stirrups M, secured to their ends.

When it is desired to use the device as a velocipede, the rod K, is connected at its upper end to the under side of the horse A, at or near the same point where the upper end of the spring E is attached and a child by rocking the horse A, as before will cause the rod K, and crank I, to rotate the front axle J, and the device will be propelled along the wheels G, G, being attached to the axle J. The device is guided by the action of the feet in the stirrups M, the cords *g, g*, moving or turning the axle L.

I do not claim separately the attaching of a toy-horse, seat or receptacle to coil springs

to enable the former to vibrate or rock, for such device has been previously used and may be seen in my patent previously al-  
luded to. Neither do I claim the combina-  
5 tion of a rocking horse or rockers with a mounted frame irrespective of the construc-  
tion and arrangement herein shown and de-  
scribed; but,

I do claim as new and desire to secure by  
10 Letters Patent.

1. The arrangement and combination of the springs C, E, and seat or horse A. with the connecting rod K and axle J of a veloci-

pede, substantially as herein shown and de-  
scribed whereby the springs will assist the  
15 crank I in passing its centers.

2. Having the stirrups M and their straps connected with the steering axle, substan-  
tially in the manner herein shown and de-  
scribed, so that the velocipede may be  
20 guided by the stirrups all as set forth.

JESSE AMOR CRANDALL.

Witnesses:

LEWIS A. TUCKER,  
M. M. LIVINGSTON.