

United States Patent Office.

JOHN B. CUZNER, OF BRIDGEPORT, CONNECTICUT.

Letters Patent No. 112,325, dated March 7, 1871.

IMPROVEMENT IN TOY-HORSES AND CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN B. CUZNER, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in a Toy-Horse and Carriage.

My invention relates to an imitation horse and carriage, propelled by a spring and gearing.

My improvements consist—

First, in constructing a toy-horse and carriage so that the horse and front wheels of the carriage may be adjusted and secured in varying positions relatively to the carriage-body and hind wheels, to cause the toy to run in a circle or straight line, while presenting a natural appearance, as hereinafter described.

Second, in the combination, with a toy-horse and carriage, of mechanism for propelling the carriage and vibrating the pivoted legs of the horse, as hereinafter described.

Third, in the combination of the horse, its pivoted legs, rods connecting one pair of legs with a double crank-shaft, revolved in bearings supported by the carriage, and rods inside the horse extending from the front to the hind legs, as hereinafter described.

Fourth, in pivoting the feet or hoofs of the horse to the legs, to allow them to swing to clear obstructions and imitate closely the natural movements of the horse, as hereinafter described.

In the accompanying drawing—

Figure 1 is a side elevation, and

Figure 2, an inverted plan of my improved toy.

The carriage-body A is mounted upon four wheels, B B b b', the three former, in this instance, being loose, and the latter, b', fast on its axle.

A bifurcated reach, C, extends from the hind axle to a casing, D, which incloses the gearing for propelling the toy, and is fastened to the front axle.

The reach is attached to the casing by a screw-bolt or spindle and nut, d—in this instance a little in rear of the front axle.

By loosening the nut the casing, and with it the front axle and its wheels, may be turned to the right or left, and the nut then tightened, if found necessary to tighten it, to hold the parts in the position desired, so as to cause the toy to run in a circle.

The casing D carries a drum, E, inclosing a coiled spring for imparting motion to a spur-wheel, F, which is provided with the usual detent and ratchet, and drives a small pinion, G, keyed to the same shaft with a larger pinion, H, which in turn drives another small pinion, I, fast on a shaft with a large pinion, J, meshing with and driving small pinions, K L, respectively secured on the front axle and on a double crank-shaft, M, turning in suitable bearings in the forward end of the casing D.

Rods N, in imitation of traces, extend from the crank-shaft M to the shoulders of the horse O, and

are connected by pins, o, passing through guide-slots, o', with the pivoted legs P P of the horse.

The pivots o are attached at their inner ends to rods, p, inside the body of the horse, connecting the front legs P P with the hind legs P' P', which are pivoted like the front legs.

The feet p' are pivoted to the legs so as to swing over obstructions.

Imitation shafts, Q, extend from the carriage or casing to the shoulders of the horse.

The driver is mounted on the carriage and holds the reins.

The driving-mechanism is set by winding up the spring.

The nut d, if too tightly screwed to allow of the turning of the casing, is loosened, and the casing turned either to the right or left when it is desired to run the toy in a circle.

The front axle and the horse turn with the casing.

If the nut is too loose to hold the parts in this position it should be tightened.

The toy is then placed upon the floor, or it may be placed upon a table, and is caused to run by the spring and gearing.

The legs are moved back and forth by the cranks and connecting-rods, and, as the feet are pivoted to the legs so as to swing to pass any uneven spots in the carpet or floor, they may move very close to or even touch the surface over which they pass without materially retarding the movements of the toy.

I do not broadly claim the joint in the carriage, the propelling mechanism, or the pivoted legs, as these have heretofore separately been used.

I claim as my invention—

1. The combination of the carriage-body, the hind wheels fixed thereto, the reach, the front wheels and axle pivoted to the reach, the driving mechanism, and the horse mounted on the front axle, all these parts being constructed and operating as set forth.

2. The combination of the carriage, the horse, its pivoted legs, and the mechanism to propel the toy and move the legs of the horse, all these parts being constructed to operate substantially as set forth.

3. The combination of the double crank-shaft, the horse, its pivoted legs, the trace-rods connecting the crank-shaft and the front legs of the horse, and the rods extending inside the body of the horse from the front legs to the hind legs, all these parts being constructed to operate as set forth.

4. The combination of the pivoted legs and pivoted feet, constructed and operating as set forth.

In testimony whereof I have hereunto subscribed my name.

JOHN B. CUZNER.

Witnesses:

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