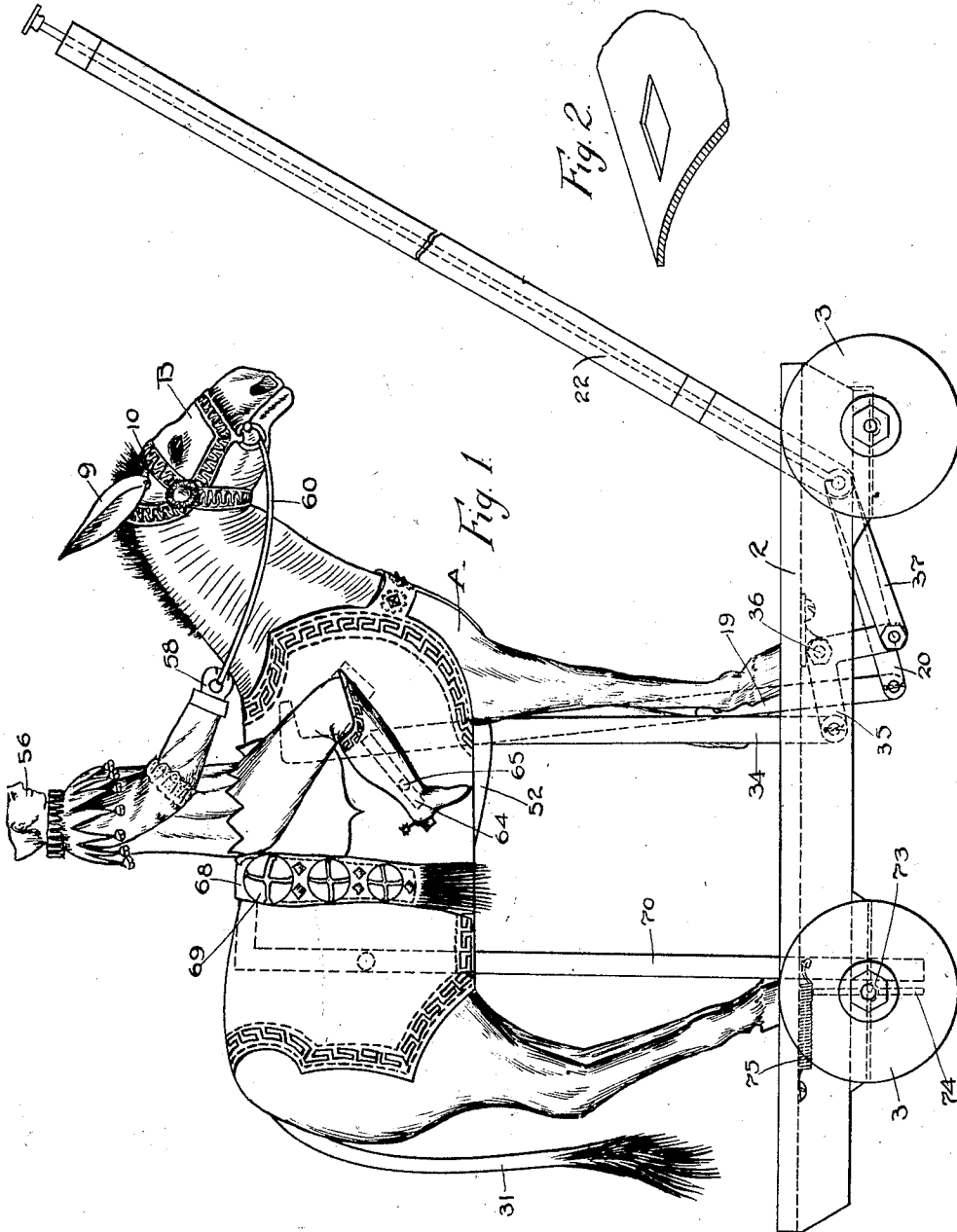


E. M. ERDMANN.
TOY.
APPLICATION FILED APR. 8, 1912.

Patented Dec. 17, 1912.
4 SHEETS—SHEET 1.

1,047,396.



WITNESSES

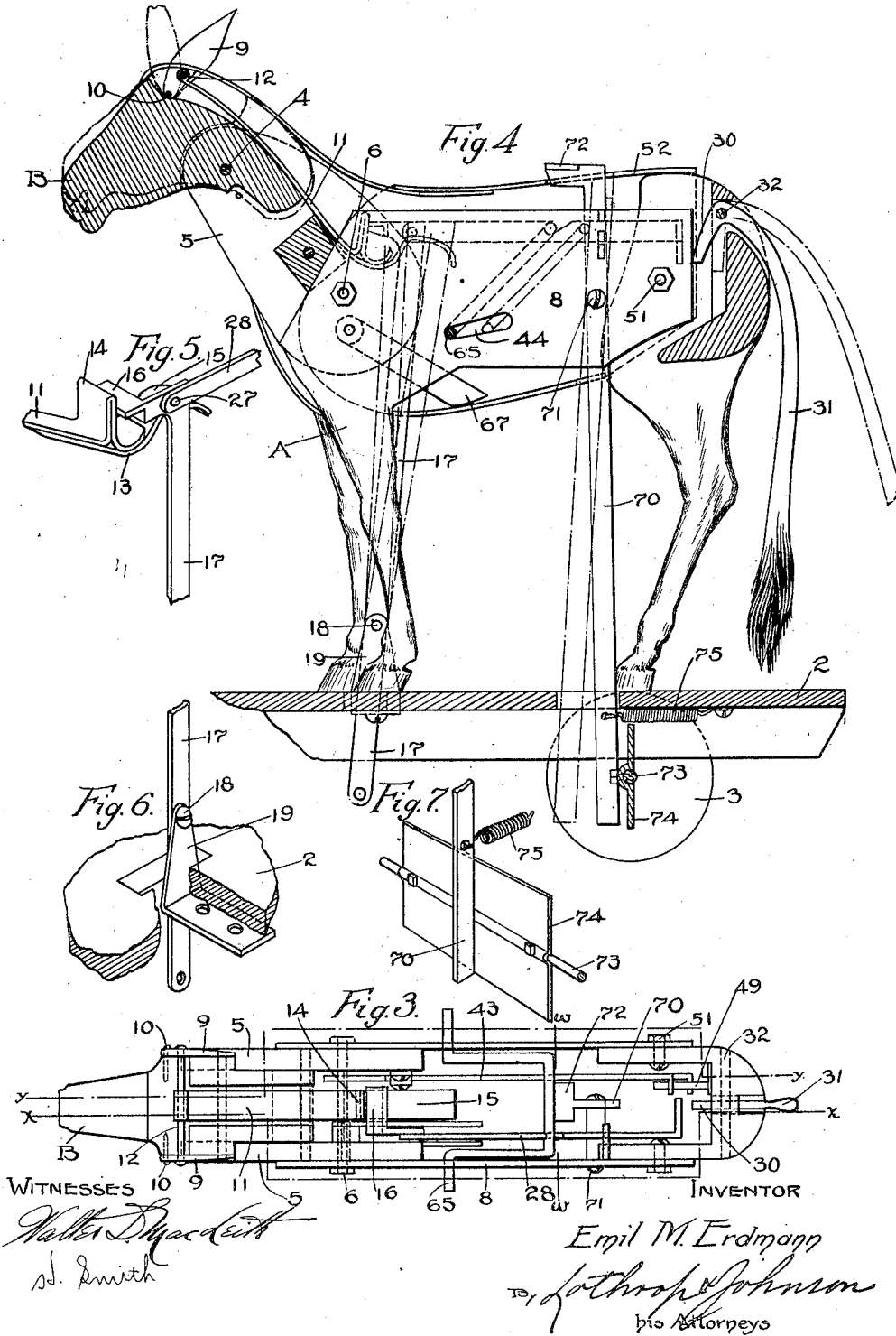
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4 SHEETS—SHEET 2.



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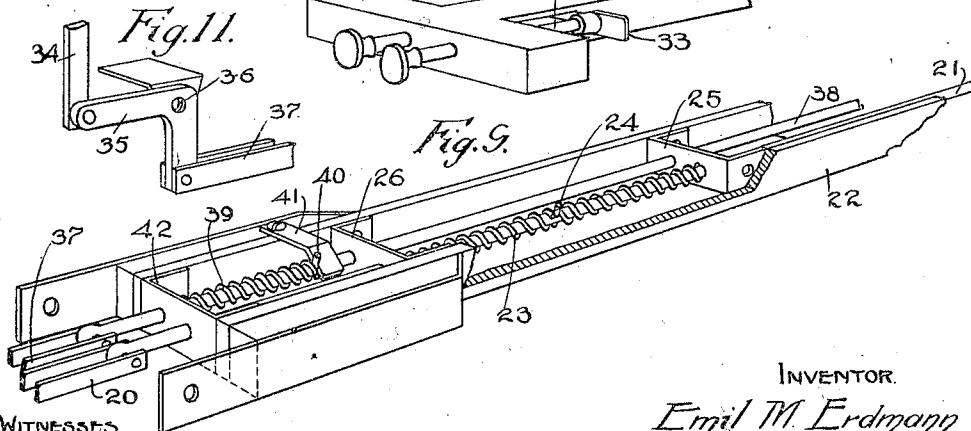
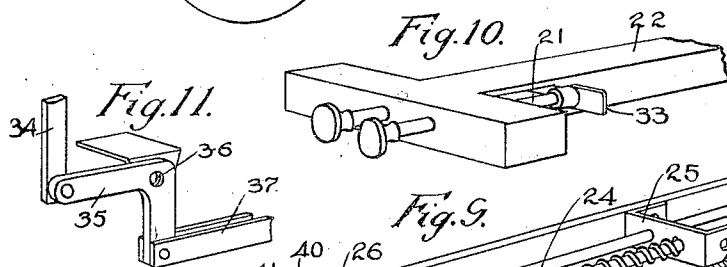
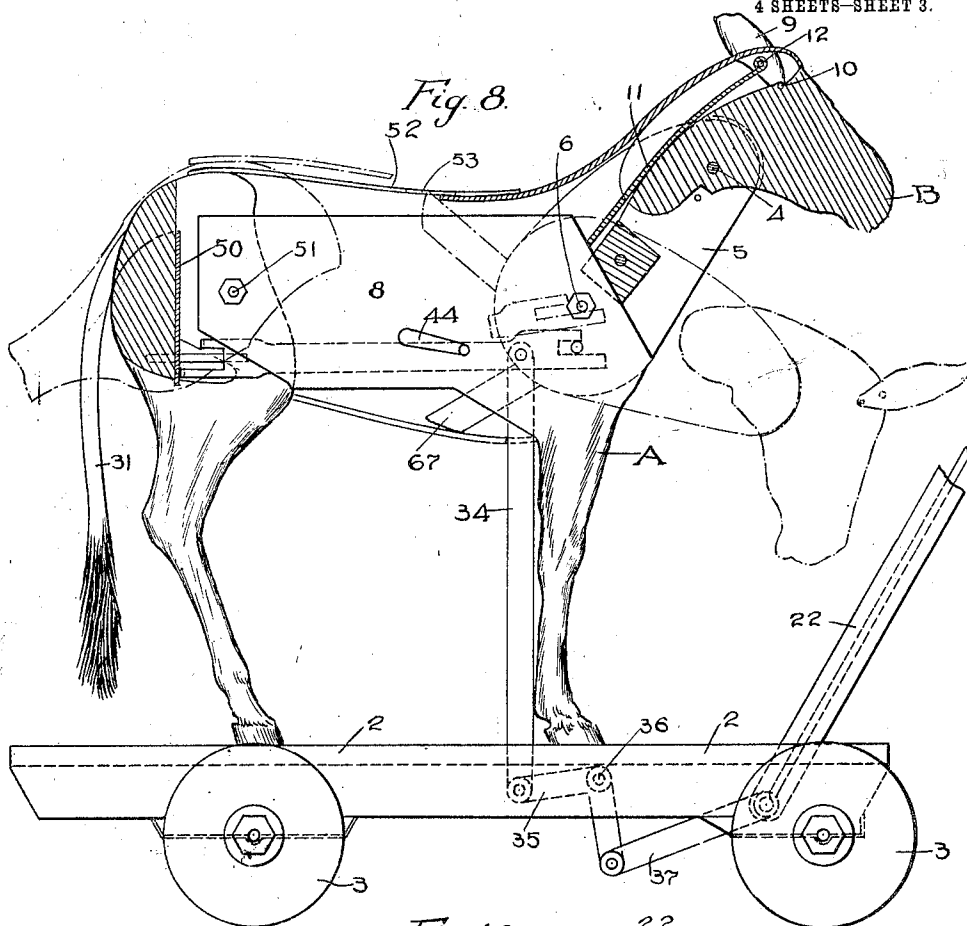
TOY.

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Patented Dec. 17, 1912.

4 SHEETS—SHEET 3.



WITNESSES
Walter Mac Keith
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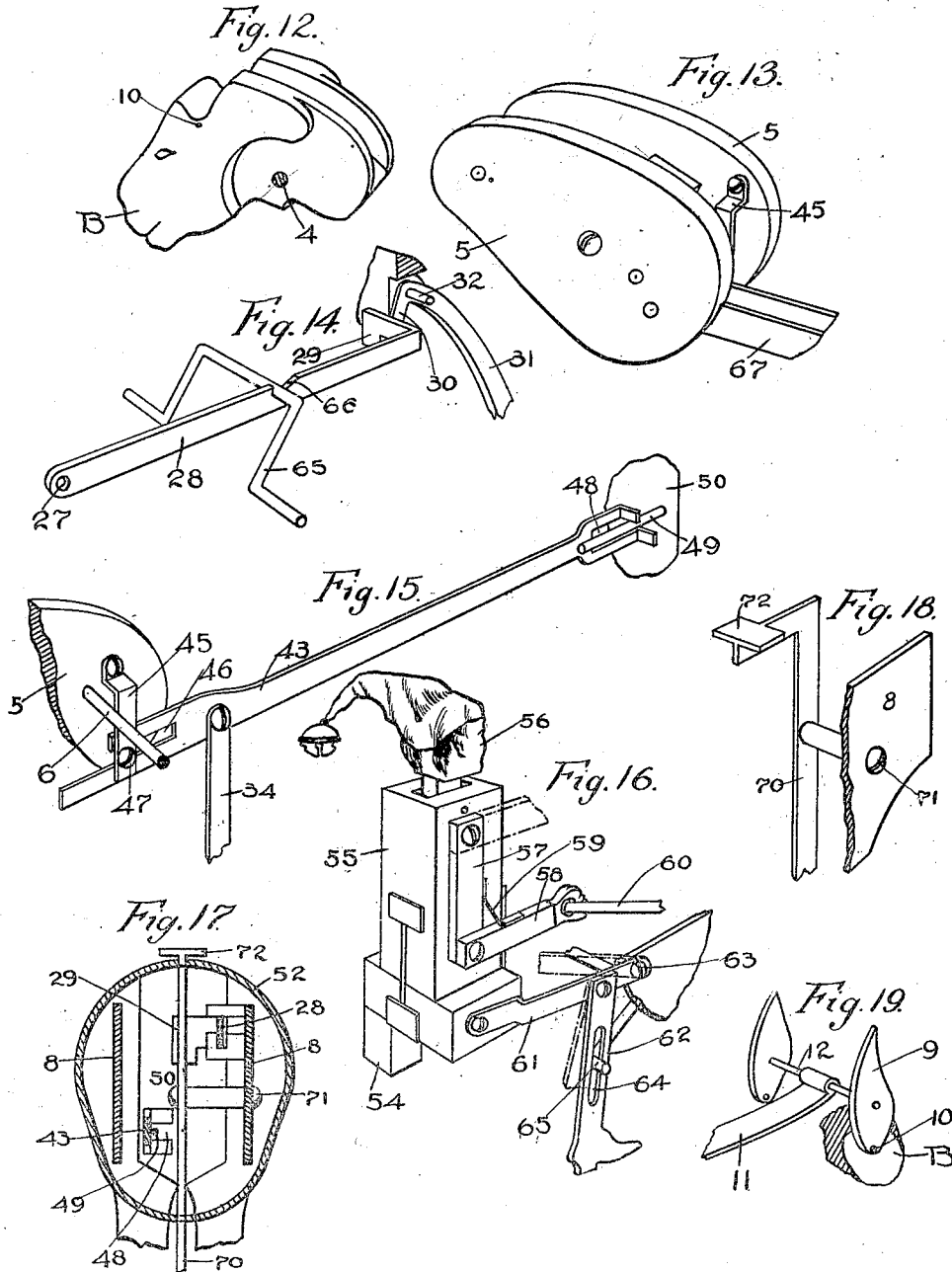
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1,047,396.

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4 SHEETS—SHEET 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

EMIL M. ERDMANN, OF LONG PRAIRIE, MINNESOTA.

TOY.

1,047,396.

Specification of Letters Patent. Patented Dec. 17, 1912.

Application filed April 8, 1912. Serial No. 689,328.

To all whom it may concern:

Be it known that I, EMIL M. ERDMANN, a citizen of the United States, residing at Long Prairie, in the county of Todd and State of Minnesota, have invented certain new and useful Improvements in Toys, of which the following is a specification.

My invention relates to improvements in toys, its object being particularly to provide an improved mechanical animal toy, so constructed that a variety of movements may be easily produced such as causing the toy animal to nod its head and wag its ears, and also throw up its rear legs, and also cause a supported rider to be thrown and to kick the sides of the mechanical animal.

To this end the invention consists in the features of construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a side elevation of my improved toy; Fig. 2 is a detail view of part of a saddle plate; Fig. 3 is a top view of the working mechanism of the toy; Fig. 4 is a section on line $x-x$ of Fig. 3; Figs. 5 and 6 are part of the actuating mechanism for the head and ears of the toy; Fig. 7 is a detail of part of the actuating mechanism for ringing a plurality of bells carried by the toy; Fig. 8 is a section on line $y-y$ of Fig. 3; Fig. 9 is a detail view, broken away, of part of the main actuating rods and levers; Fig. 10 is a detail view of the free end of an actuating handle; Fig. 11 is a detail of a bell crank support forming part of the actuating mechanism; Fig. 12 is a detail view of the head-piece of the toy; Fig. 13 is a detail view of supporting and actuating cams for the head-piece; Fig. 14 is a detail view of actuating mechanism for the legs of the driver; Fig. 15 is a detail view of part of the actuating mechanism for the head and tail of the toy; Fig. 16 is a detail view, broken away, of the framework construction of the rider; Fig. 17 is a vertical section of the toy animal; Fig. 18 is a detail view of part of the mechanism shown in Fig. 17; and Fig. 19 is a detail view of the ears.

Referring to the drawings A represents a toy mule shown mounted upon a carriage 2 provided with carrying wheels 3.

B represents the mule's head having pivotal support 4 between the outer ends of parallel members 5, said members having

pivotal support 6 in the framework of the body. Ears 9 have pivotal support 10 upon the sides of the head. For the purpose of actuating the ears I provide a strap spring or arm 11 supported at its forward end upon the rod 12 connecting the ears. The rear end of the arm is formed with a downwardly bent portion 13 supporting an upwardly extending flange 14, the free end of the arm beyond the flange 14 being bent upwardly and downwardly as shown in Figs. 4 and 5. The arm intermediately of its ends rests upon the rear end of the animal's head back of the pivot 4. Standing behind the flange 14 is the forwardly bent end 16 of a lever arm 17, which lever arm has fulcrum support 18 upon a bracket 19 secured to the base 2. The lower end of the lever 17 is connected by a link 20 to a rod 21 slidably supported in the handle 22. The rod 21 is held in inoperative position by a coil spring 23, said coil spring being centrally anchored upon the rod by a pin 24 and bearing at its front and rear ends, respectively, against cross bars 25 and 26 supported by the handle. The upper end of the lever arm 17 has pivotal connection 27 with a bar 28, the rear end 29 of the bar 28 being laterally bent to stand adjacent to the inner side of the downwardly bent inner end 30 of the tail 31. The tail 31 has pivotal support 32 in the hind quarters of the toy animal. Thus by pushing the rod 21 inwardly against the tension of its spring the lever arm 17 will be turned upon its pivot against the flange 14 to turn the ears forwardly upon their pivots and to turn the head into the dotted line position shown in Fig. 4 through the medium of the strap spring. The reciprocation of the rod caused by pushing it inwardly and allowing it to be returned to normal position by its spring will therefore impart a wagging motion to the ears and a nodding movement to the head. Upon the rod adjacent to its outer end is supported a finger piece 33 by which the rod may be shoved forwardly against the tension of the spring. As the rod is shoved forwardly the lever arm 17 will be oppositely turned upon its pivot to bring the rear end of the bar 28 into actuating engagement with the downwardly bent inner end of the tail, lifting the same into the dotted line position shown in Fig. 4. A wagging movement may thus be imparted to the tail.

In order to throw the head downwardly into the position shown in Fig. 8, and to throw the hind legs into the kicking position shown in said figure, I provide the lever 34 having pivotal support at its lower end upon one end of a bell crank 35, said bell crank having pivotal support 36 in the base 2, the opposite end of the bell crank being pivotally connected to one end of a link 37. The opposite end of the link 37 is connected with the rear end of a rod 38 slidably supported in the handle. The rod 38 is held normally in forward position by a spring 39 surrounding the rod, the spring being anchored at one end upon the rod by a pin 40 adapted to bear against a bracket 41 supported by the handle, the opposite end of the spring bearing against the cross bar 42 carried by the handle. The upper end of the lever 34 is pivotally connected to a horizontally extending bar 43. The bar 43 at its forward end is slidably positioned inside the guide 45 secured to the inner side of one of the cams 5 and is formed with a slot 46 receiving a pin 47 connecting the lower end of the guide with the cam. The rear end of the bar is formed with a slot 48 into which loosely extends a pin 49 extending inwardly from the vertical plate 50 secured upon the inner side of the rear leg portion of the animal, said rear leg portion having pivotal support 51 in the side plates 8. Thus by pushing the rod 38 rearwardly against the tension of the spring 39 the forward end of the bar 43 will be lifted as indicated by dotted lines in Fig. 8, which will, through the medium of the sliding connection with the bar 43 and members 5, throw the head downward into the dotted position shown in Fig. 8. Thus when the forward end of the bar 43 has been raised by the lever 34 to the position shown in Fig. 8 the continued raising of the lever 34 will, by reason of any further lifting of the front end of the bar 43 being stopped by the pin 6, result in lifting the rear end of the bar 43, bringing said bar to raised horizontal position. This will cause the rear end of the bar 43 to be moved upwardly and outwardly as it passes from the incline to the raised horizontal position throwing the rear leg portion outwardly and upwardly upon its pivot 51. The pin 49 fits loosely enough within the slot 48 to permit this result. The parts will be returned to normal position by the spring 39 when the inward pressure upon the rod 38 is released.

Arranged upon the top of the toy animal is a loose saddle 52 having pivotal support at its forward end on the pin 6. Through a hole 53 in the saddle extends the downwardly projecting lower end 54 of a toy rider 55. The general construction of the toy rider is shown in Fig. 16. The rider consists of the body portion pivotally supporting a head 56. Besides the body por-

tion are pivotally supported upper and lower pivotally connected arm portions 57 and 58. The lower arm portion may have an elastic connection 59 with the body portion to keep it from dropping below the position shown in Fig. 16. Suitable reins 60 may connect the hands of the lower arm portion with the animal's head. Pivotally supported upon the sides of the body portion of the rider are the upper leg portions 61 which pivotally support the lower leg portions 62, the outer ends of the upper leg portions 61 having pivotal connection 63 with the side of the saddle. Projecting through longitudinally extending slots 64 in the lower leg portions are the ends of a crank arm 65, which crank arm rests in a notch 66 in the upper side of the bar 28. The ends of the crank arm also pass through horizontal upwardly and rearwardly inclined slots 44 in the side plates 8. Projecting rearwardly from the members 5 are the arms 67. The turning of the animal's head into the dotted line position shown in Fig. 8 will turn the arms 67 through the opening 53 in the saddle as shown in Fig. 8 to engage with the downward extension 54 of the rider to throw the rider upwardly and forwardly from the saddle. The turning of the hind legs of the animal into kicking position will, by reason of the curvature of the upper end of the hind leg portion, lift the rear end of the saddle, as shown in Fig. 8, to assist in the throwing of the rider. The actuating of the bar 28 rearwardly, as heretofore described to wag the tail, will draw with it the crank 65 and impart a kicking motion of the rider's feet against the sides of the animal.

Upon the saddle at the rear of the rider is a belt 68, supporting bells 69. A vertical bar 70 has fulcrum support 71 in the side plates 8 and at its upper ends extends through an opening in the saddle and is formed with a lateral offset 72 standing underneath the belt. The lower end of the bar 70 stands in front of the axle 73 of the rear wheels, and mounted upon the axle 73 is a plate 74, which as the axle is rotated by the drawing of the device, engages with, and forces forward, the lower end of the bar 70 against the tension of the spring 75 which connects the bar with the base. This turning of the bar 70 upon its pivot will agitate the belt 68 to ring the bells 69.

In operation, as heretofore pointed out, the shoving inward of the rod 21 will cause a wagging of the ears of the toy animal and also nodding of the head, through the medium of the arm 11. The drawing forwardly of the rod 21 will, through the medium of the bar 28, switch the animal's tail and simultaneously, through the medium of the crank 65, impart a kicking motion of the rider's feet against the sides of the animal. The shoving rearwardly of the rod 38 will,

as described, throw the animal's head and the hind legs into the dotted line position shown in Fig. 8. Simultaneously, through the medium of the rearwardly projecting arms 67 carried by the members 5 and the turning movement of the hind legs, the saddle will be lifted and the rider thrown forwardly. I thus, through the cooperating mechanism shown, secure a true imitation of the nodding movement of an animal's head and wagging of its ears and natural imitation of an animal throwing the rider accompanied by the animal throwing its head downward and its hind legs upwardly, raising the rear portion of the saddle.

While I have shown the operating parts actuated by mechanism supported by the draft tongue, it will be apparent that the operating parts may be otherwise actuated as from the wheels, and I do not restrict myself to the specific manner shown of actuating the operating mechanism.

I claim as my invention:

1. In a toy animal, the combination with a body portion, of a pivotally supported head carried thereby, ears pivotally supported upon said head, a controlling element operatively connected with said ears and head, and means for actuating said ears relatively to said head.

2. In a toy animal, the combination with a body portion, a head pivotally supported thereby, means pivotally supported by said head, a pivotally supported tail portion, and common actuating means for turning said head upon its pivot, for turning said ears relatively to said head, and for turning said tail portion upon its pivotal support.

3. A toy animal comprising a body portion, a head pivotally supported thereby, ears pivotally supported by said head, a pivotally supported tail portion, common actuating means operative to first turn said head upon its pivot and said ears relative to said head and to then turn said tail portion upon its pivotal support.

4. A toy animal comprising a body portion, a pivotally supported head, a pivotally supported tail portion, and common actuating means operative to first turn said head portion upon its pivot and to then turn said tail portion upon its pivotal support.

5. A toy animal comprising a body portion, a head pivotally supported thereby, ears pivotally supported by said head, an element connected with said ears and engaging with said head, and means for actuating said element to turn said head upon its pivot and said ears relative to said head.

6. A toy animal comprising a body portion, a head pivotally supported thereby, ears pivotally supported by said head, a pivotally supported tail portion, an element connected with said ears and engaging with said head portion, a second element ar-

ranged intermediate of said first element and said tail portion, and means for actuating said second element to turn said head and ears through the medium of said first element and to thereafter operatively co-act with said tail to turn the same upon its pivot.

7. A toy animal comprising a body portion, a head pivotally supported thereby, ears pivotally supported by said head, an arm connected with said ears and engaging with said head on the inner side of its pivotal support, a pivotally supported lever operatively engaging at one end with said arm, and means for turning said lever upon its fulcrum to actuate said arm for the purpose set forth.

8. A toy animal comprising a body portion, a head pivotally supported thereby, ears pivotally supported by said head, a pivotally supported tail portion, an arm connected with said ears and engaging with said head portion at the inner side of the supporting pivot, a bar connected at one end with said arm and its other end arranged in cooperative relation with said tail portion, a fulcrumed lever engaging at one end with said arm, and means for turning said lever upon its fulcrum to actuate said arm and bar for the purpose set forth.

9. A toy animal comprising a body portion, a head pivotally supported thereby, ears pivotally supported by said head, a pivotally supported tail portion, an arm connected with said ears and engaging with said head portion at the inner side of its supporting pivot, a bar connected at one end with said arm and its other end arranged in cooperative relation with said tail portion, a fulcrumed lever engaged at one end of said arm, and means for actuating said lever comprising a tongue for said toy and a spring restrained slidable rod supported by said tongue and connected with said lever.

10. A toy animal comprising a body portion, a head pivotally supported therein, pivotally supported hind quarters, an element operatively arranged in connection with said hind quarters, and means for actuating said element to first turn said head downwardly upon its pivotal support and thereafter throw said hind quarters outwardly upon its pivotal support.

11. A toy animal comprising a body portion, a head pivotally supported thereby, pivotally supported hind quarters, a bar arranged intermediate of the support for said head and said hind quarters, said bar having pivotal slidable engagement with said head support and hind quarters, and means for actuating said bar for the purpose set forth.

12. A toy animal comprising a body portion, a head pivotally supported thereby,

- pivotally supported hind quarters, a bar arranged intermediate of the support for said head and said hind quarters, said bar having pivotal slidable engagement with said head support and hind quarters, and means for actuating said bar consisting of a fulcrumed lever connected at one end to said bar and a slidable spring pressed rod operatively connected with the opposite end of said lever.
- 10 13. A toy animal comprising a body portion, a surrounding loose saddle portion pivotally supported at its front end upon said body portion, a head pivotally supported in said body portion, pivotally supported hind quarters, a bar arranged intermediate of said head support and said hind quarters and operatively engaging therewith, and means for actuating said bar for the purpose set forth.
- 20 14. A toy animal comprising a body portion, a surrounding loose saddle, a toy rider supported upon said saddle, a head pivotally supported by said body portion, similarly supported hind quarters, common actuating means for turning said head and hind quarters upon their pivotal supports, and means actuated from the pivotal support of said head for lifting said toy rider from the seat.
- 30 15. A toy animal comprising a body portion, a surrounding loose saddle portion, a toy rider supported upon said saddle por-

tion a head pivotally supported by said body portion, similarly supported hind quarters, an element arranged intermediate of said head and hind quarters and operatively engaging therewith, means for actuating said element to turn said head and hind quarters upon their pivotal supports, and means simultaneously actuatable to lift said saddle and to throw said rider upwardly and forwardly from the animal.

16. A toy animal comprising a body portion, head supporting members having pivotal support in said body portion, pivotally supported hind quarters, a bar intermediate of said members and hind quarters and operatively engaging therewith, means for actuating said bar to turn said members and hind quarters upon their pivots, a rider pivotally supported upon said animal, and rearwardly extending arms carried by said members in position to engage with, and lift, said rider from the seat when said members are turned upon their pivot to lower the animal's head.

In testimony whereof I affix my signature in presence of two witnesses.

EMIL M. ERDMANN.

Witnesses:

H. S. JOHNSON,
H. SMITH.