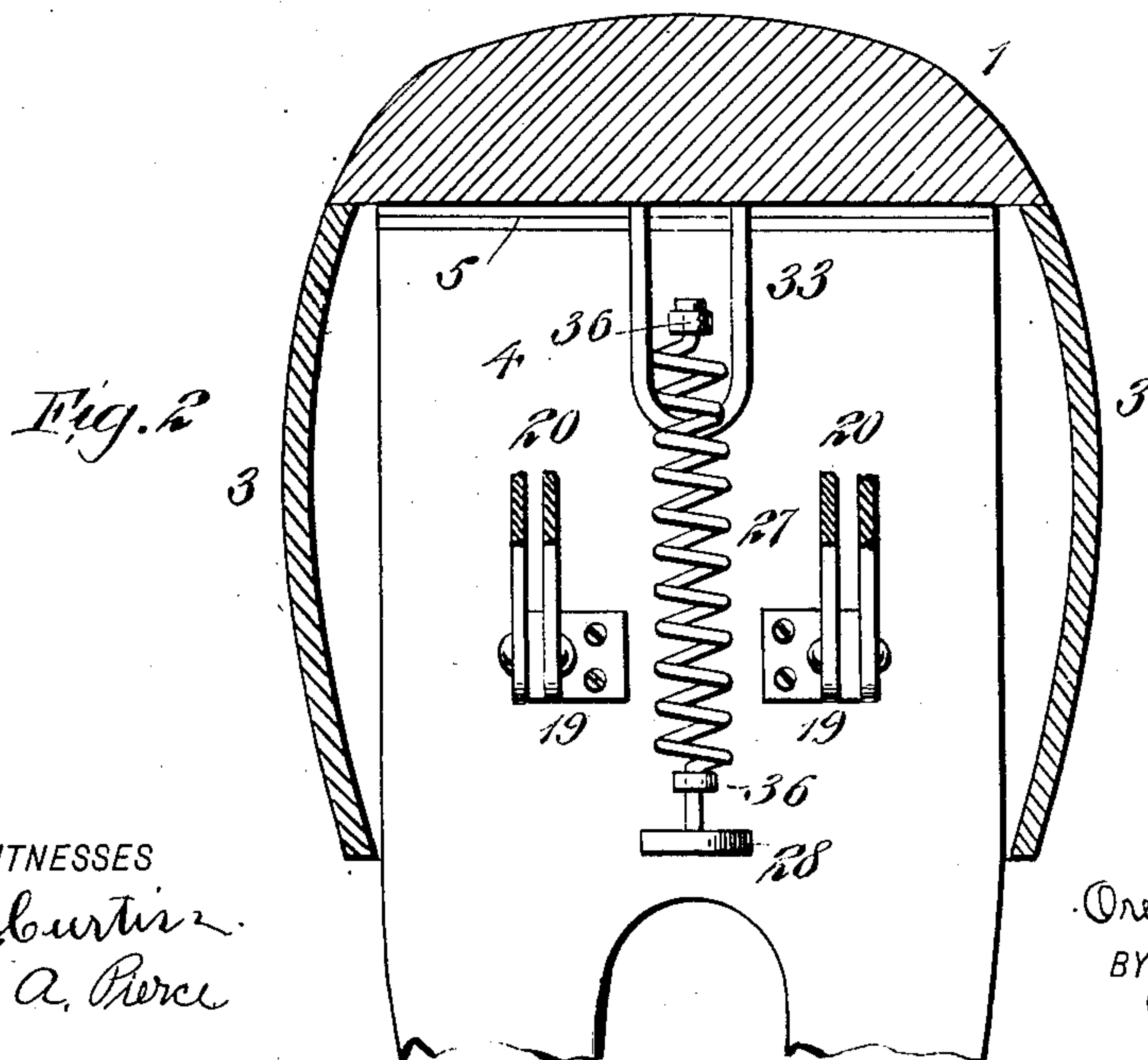
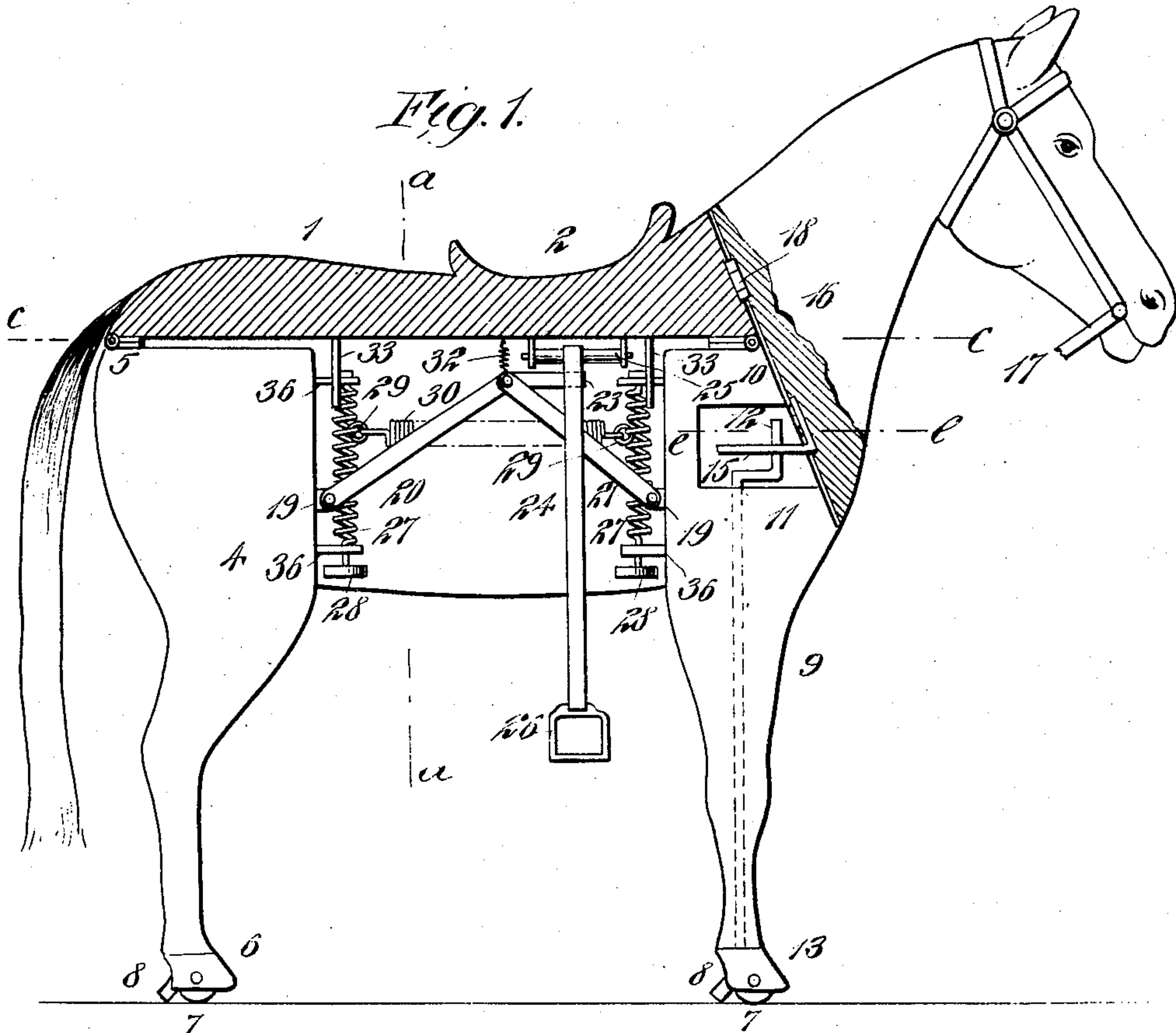


PROGRESSING HOBBY HORSE.

APPLICATION FILED OCT. 12, 1906. RENEWED JAN. 14, 1909.

Patented Aug. 3, 1909.

2 SHEETS--SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

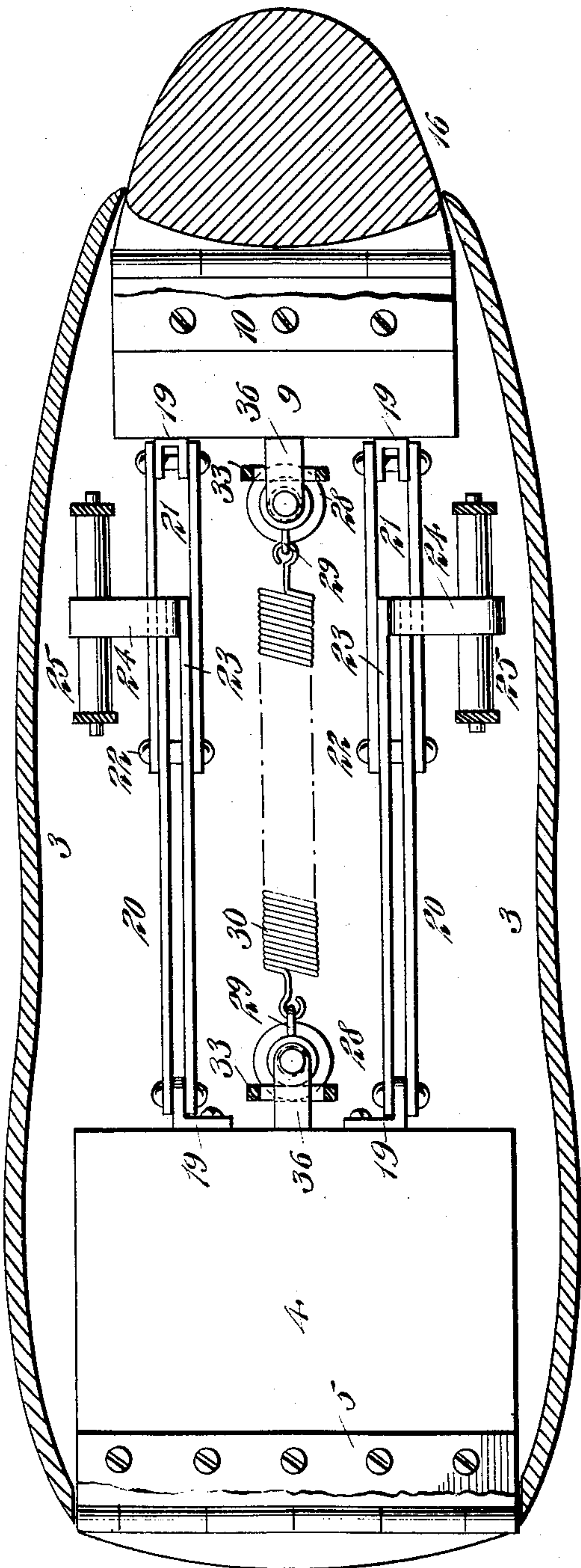


Fig. 3.

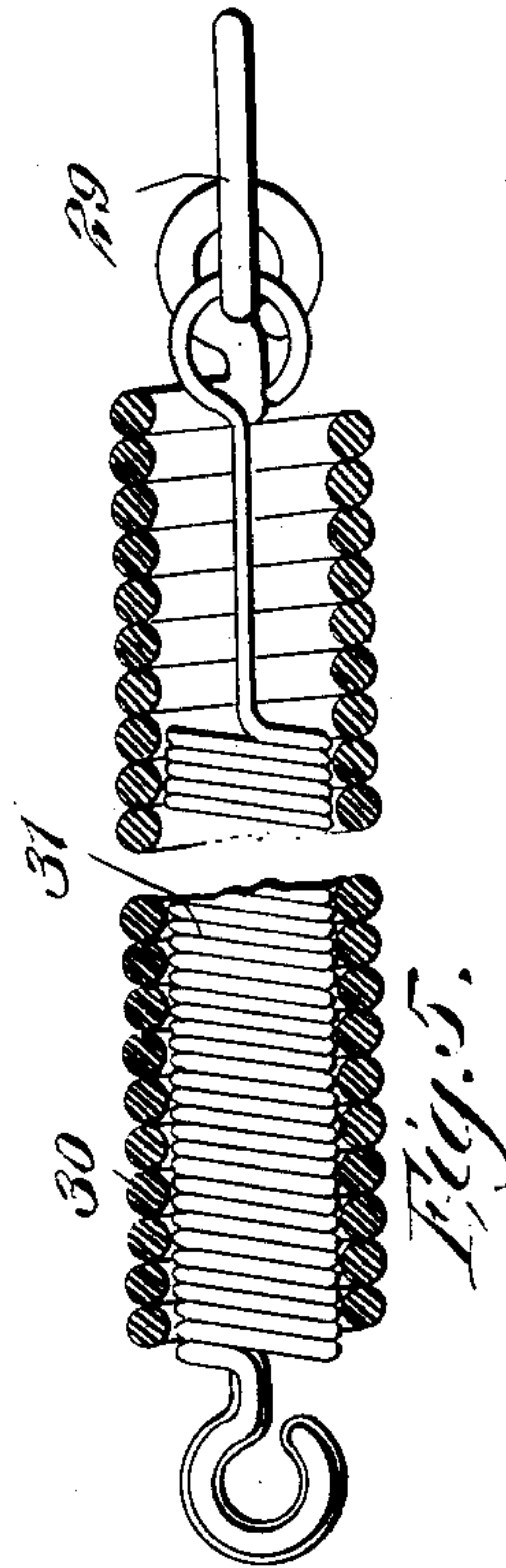


Fig. 5.

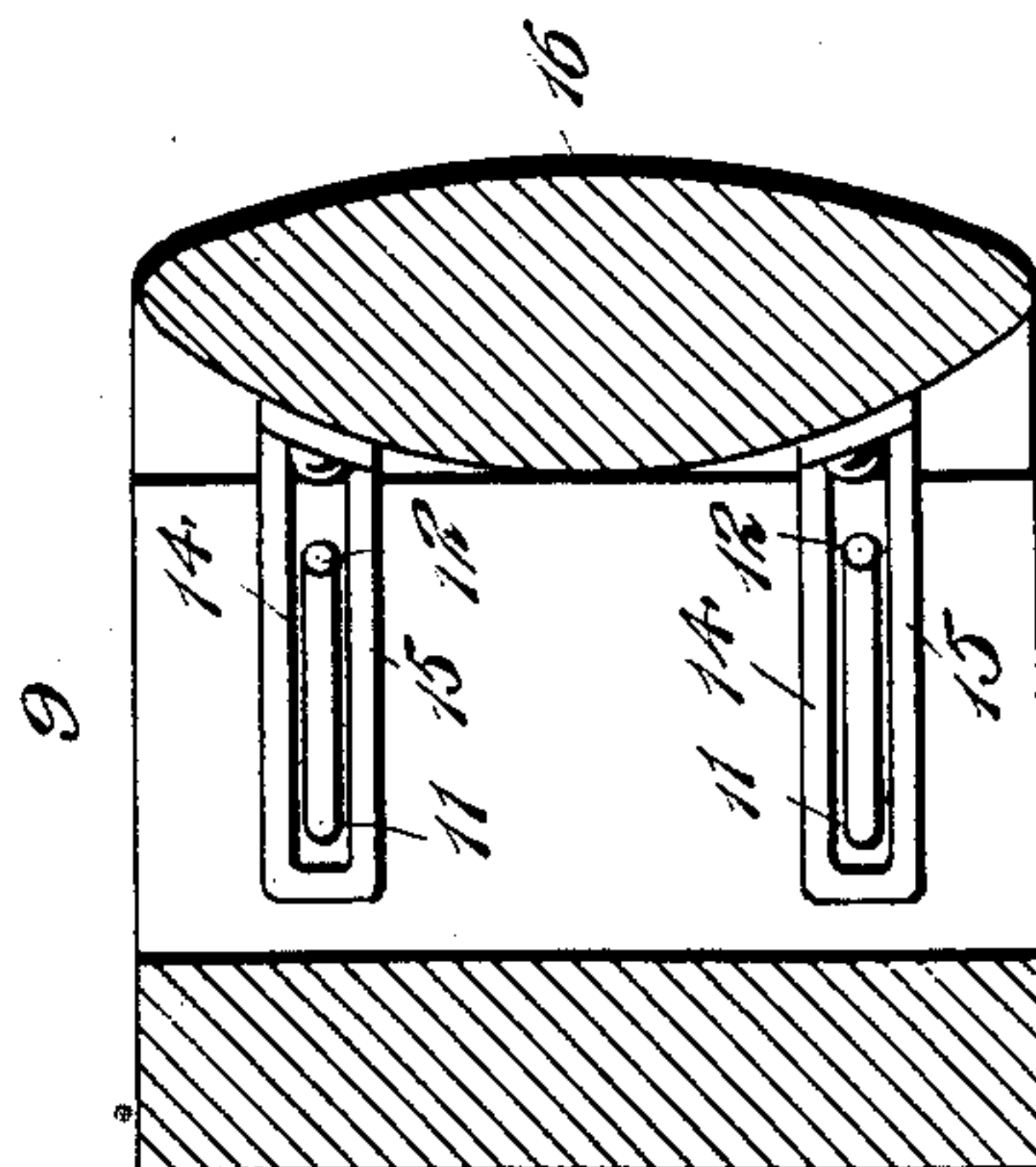


Fig. 4.

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# UNITED STATES PATENT OFFICE.

OREN W. BADGER, OF NEW YORK, N. Y.

## PROGRESSING HOBBY-HORSE.

No. 930,265.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed October 12, 1906, Serial No. 338,562. Renewed January 14, 1909. Serial No. 472,372.

*To all whom it may concern:*

Be it known that I, OREN W. BADGER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Progressing Hobby-Horses, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates especially to hobby-horses designed to be actuated and caused to move forward by the weight of the rider, and has for its object the provision of a horse which may be readily used by riders of varying weights, and wherein the means for operating are made particularly effective.

To attain the desired end, my invention consists essentially in a progressing hobby-horse in which is comprised a hollow body; front and rear leg-pieces hinged to the interior of the back portion of the body; adjustable spring mechanism extending between the front and rear leg-pieces, and means for causing a forward movement of the horse when the weight of the rider is transferred from the saddle mounted on the body, to the stirrups; all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a side elevation of my progressing hobby-horse, with the side wall of the body removed. Fig. 2 is an enlarged, vertical, sectional view at line *a-a* of Fig. 1. Fig. 3 is a horizontal sectional view at line *c-c* of Fig. 1, looking downward. Fig. 4 is an enlarged, horizontal, sectional view, at line *e-e* of Fig. 1. Fig. 5 is an enlarged, detail view of the horizontal spring mechanism.

Similar numerals of reference, wherever they occur, indicate corresponding parts in all the figures.

1 is the back-piece of the horse body, and 2 is a saddle mounted thereon.

3 are thin side-pieces, fastened to and depending from the back-piece.

4 is the rear leg-piece, hinged to the piece 1 at 5.

The feet 6 are supported on wheels 7, and are provided with stops 8 which engage the floor when the horse is being operated, and while allowing the feet to move forward, prevent any retrogression or backward movement.

9 is the front leg-piece, hinged to the piece 1 at 10.

11 are rods, having cranks 12 at their upper extremities, and extending longitudinally through the front legs to the feet 13, which are separate from the legs, and free to move horizontally, independent of the movement of the legs, this movement being described and claimed in United States Letters Patent No. 818,826, dated April 24, 1906, issued to Adrian Hitt, and assigned to me. The cranks 12 extend through slots 14 in plates 15 fixed to the neck 16, said neck being hinged to the piece 1 at 18, and free to move from side to side, when pulled upon by the bridle rein 17.

Secured to the leg-pieces within the body, are eyes 19, and pivoted thereto are toggle-bars 20 and 21, pivoted together at 22. Bars 20 are provided with extensions 23 to which stirrup-straps 24 are connected, said straps passing over rollers 25 mounted on the back-piece, and down to stirrups 26. The rollers 25 permit a side movement of the stirrup-straps, as well as a vertical movement.

Mounted in bearings 36 on the front and rear leg-pieces, are spirals or screws 27, each provided with a manipulating hand-wheel 28. On the screws 27 are located links, 29, engaging a strong outer spring, 30, and a weaker inner spring 31.

32 is a spring passing from the piece 1 to each toggle.

33 is a yoke which limits the movement of the leg-pieces on the hinges connecting them to the back-piece 1.

When constructed and arranged in accordance with the foregoing description, the operation of my improved progressing hobby-horse is as follows: The spring mechanism between the leg-pieces is first adjusted in accordance with the weight of the rider; if a light weight, the screws 27 are rotated so as to carry the springs upward, lessening the distance between the bearings of the springs and the leg-hinges, which constitute the center of movement. For a heavier rider, the springs are moved downward, thus increasing the distance of the bearings from the center of movement, and consequently providing for a greater stretch of the springs. The rider places his feet in the stirrups, and as long as the weight of his body is supported by the stirrups, the toggles are held in the position shown in Fig. 1 of the drawing, and there is no action of the movable parts of the device. By transferring the weight of the body from the stirrups to the



saddle, the toggles are released, and the weight of the body causes the front legs to move forward, retrograde movement of the hind legs being prevented by the stops 8 coming in contact with the floor, and the legs will move on their hinges until the body is depressed as far as the yokes 33 will permit the legs to move. This action throws the front legs forward, stretching the spring mechanism connecting the leg-pieces, straightening out the toggles, and stretching the springs 32, while at the same time the stirrups are drawn upward close to the body of the horse. As the device begins to operate, the smaller, weaker spring first acts to retard and regulate the depression of the body, and then the larger spring comes into play, and at the same time the springs 32 act on the toggles. Not only does the spring mechanism insure a proper and gradual movement of the parts, but also materially assists in the reverse movement thereof when the horse progresses. When the legs are fully extended and the body depressed to the lowest point, the rider bears upon the stirrups, removing the weight of his body off of the saddle. This action brings the toggles gradually back to their initial positions, and as the stops 8 on the front feet prevent backward movement, the horse is drawn forward until all of the parts of the mechanism are back in their original positions, and repetitions of such actions of the rider cause the horse to progress, such forward movement being varied from a straight line by drawing the head to the right or left, as desired, causing the feet 13 to partially rotate horizontally, and varying the angle of movement of the wheels 7 with respect to the direct line with the horse-body.

Having now fully described my invention, what I claim as new therein and desire to secure by Letters Patent, is:

1. A progressing hobby-horse in which is comprised a hollow body, front and rear leg-pieces hinged to the interior of the back-piece of the body; spring mechanism extending between the front and rear leg-pieces, and means for causing a forward movement of the horse when the weight of a rider is transferred from the saddle or back of the horse to the stirrups and a pair of stirrups.

2. A progressing hobby-horse in which is comprised a hollow body; front and rear leg-pieces hinged to the interior of the body; adjustable spring mechanism extending between the front and rear leg-pieces, and means for causing a forward movement of the horse when the weight of a rider is transferred from the saddle or back of the horse to the stirrups, and a pair of stirrups and means for varying the direction of progression.

3. A progressing hobby-horse in which is comprised a hollow body; front and rear leg-pieces hinged within the body; adjustable spring mechanism extending between the leg-pieces; means for causing a forward movement of the horse when the weight of a rider is transferred from the back of the horse to the stirrups, and a pair of stirrups and means for varying the direction of progression.

4. In a progressing hobby-horse, a hollow body, bearing a fixed saddle; leg-pieces hinged to the interior of the back-piece of the body; bars pivoted to the leg-pieces and to each other; stirrup-straps attached directly to the said bars in proximity to their pivotal connections, and a pair of stirrups, the whole combined and arranged substantially as shown and described.

5. In a progressing hobby-horse, the combination with the leg-pieces hinged to the back-piece, of bearings secured to the leg-pieces, screws mounted in said bearings and provided with manipulating hand-wheels, and spring mechanism extending between said screws, and carried thereby.

6. In a progressing hobby-horse, a hollow body, bearing a fixed saddle; leg-pieces hinged to the interior of the back-piece of the body; bars pivoted to the leg-pieces and to each other; stirrup-straps attached directly to the said bars in proximity to their pivotal connections and passing over roller bearings above the said bars, and then downward, and a pair of stirrups, the whole combined and arranged substantially as shown and described.

7. In a progressing hobby-horse, the combination with movable leg-pieces and toggles connecting said leg-pieces, of stirrup-straps connected to the toggles, and passing over rollers fixed above the toggles.

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

OREN W. BADGER.

Witnesses:

LOUIS F. BRAUN,  
A. M. PIERCE.