(No Model.) 2 Sheets—Sheet 1.

A. PALMER.

MERRY-GO-ROUND.

No. 475,742. Patented May 24, 1892.

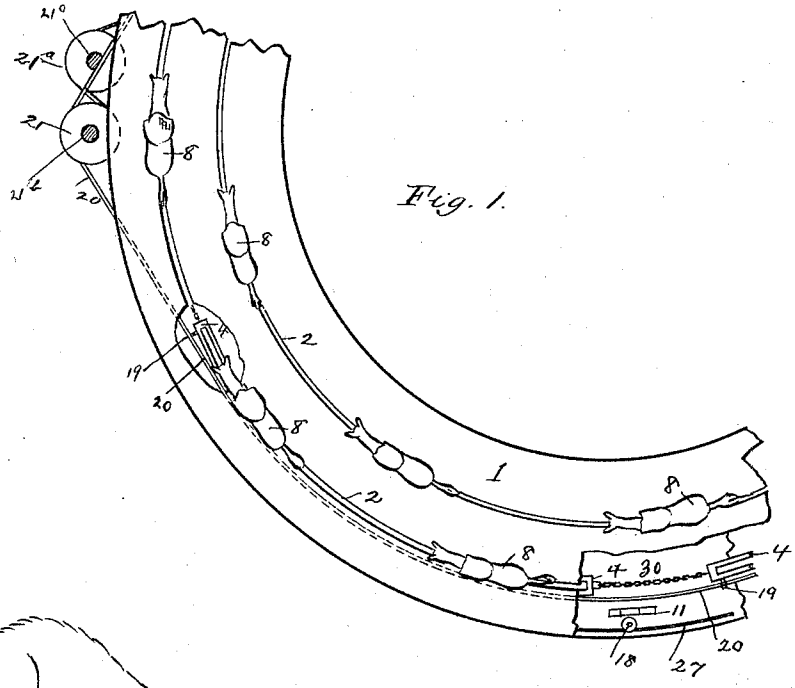

Fig. 1.

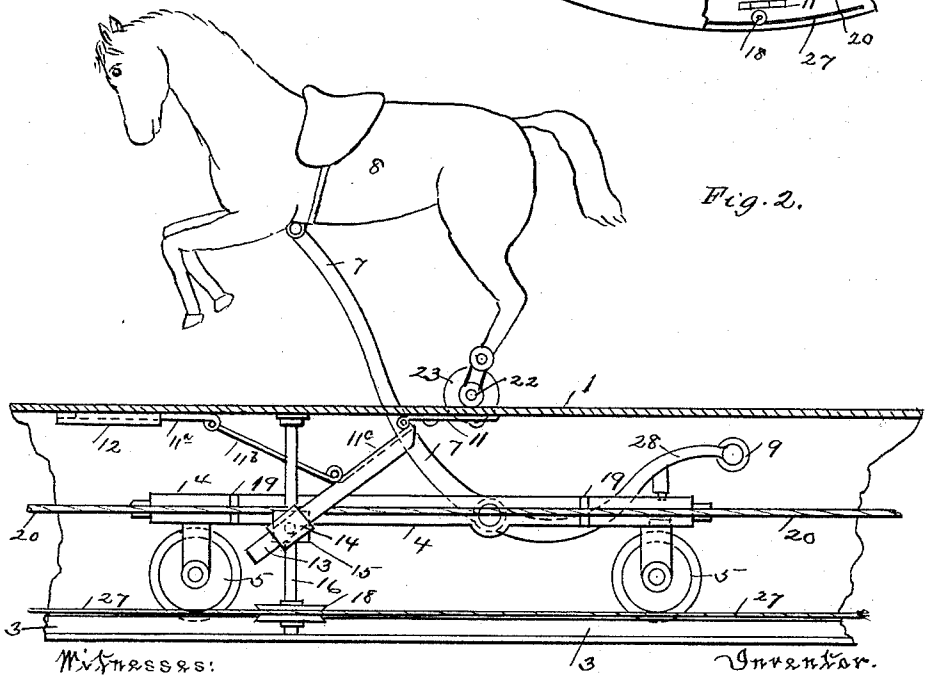

Fig. 2.

Witnesses:

H. E. Hanson.

J. A. Herron.

Inventor.

Arthur Palmer

Per

C. D. Lewis

Atty.

(No Model.)

2 Sheets—Sheet 2.

A. PALMER.

MERRY-GO-ROUND.

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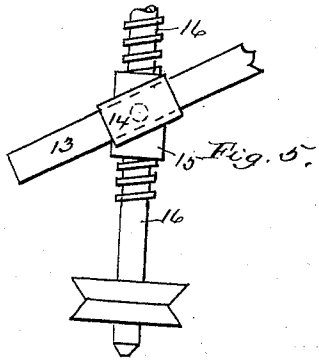

Fig. 5.

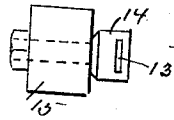

Fig. 6

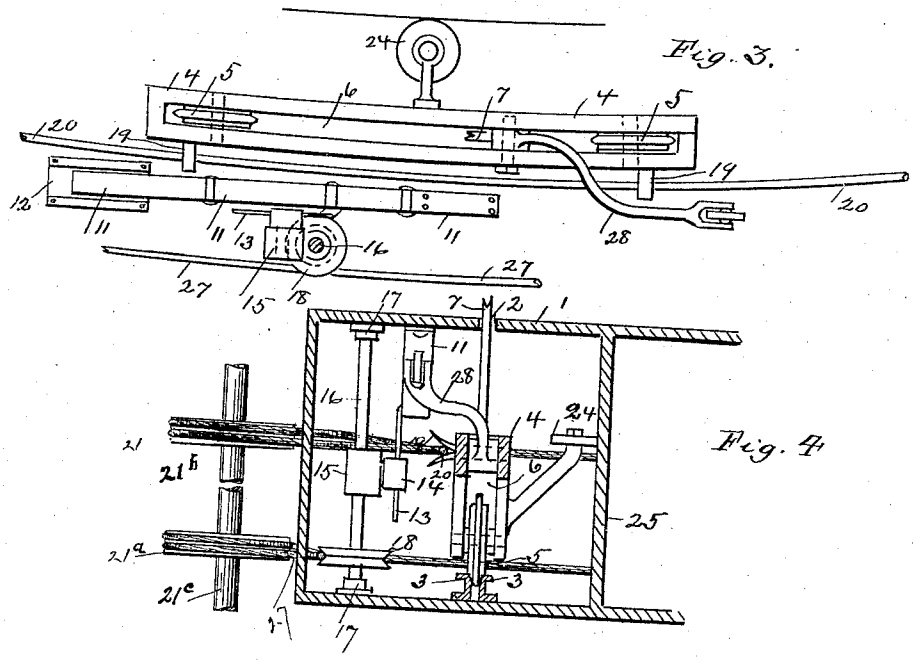

Fig. 3.

Fig. 4

Witnesses:

H. E. Harrison.

J. A. Herron

Inventor.

Arthur Palmer

Per. O. D. Lewis

Atty.

UNITED STATES PATENT OFFICE.

ARTHUR PALMER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO ALWIN HAUSOLD, OF SAME PLACE.

MERRY-GO-ROUND.

SPECIFICATION forming part of Letters Patent No. 475,742, dated May 24, 1892.

Application filed May 19, 1891. Serial No. 393,324. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR PALMER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Merry-Go-Rounds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved merry-go-round; and it consists in certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a plan view of a portion of my improved merry-go-round, partly in section. Fig. 2 is an enlarged sectional elevation of one of the horses, showing the same mounted on its truck and a means for giving the said horse a rocking or galloping motion. Fig. 3 is a plan view of the same having the horse and cover removed therefrom. Fig. 4 is an end elevation of the truck and apparatus for rocking the horse. Fig. 5 is an enlarged side elevation of the means for increasing or diminishing the rocking motion of the horse. Fig. 6 is an end elevation of the swivel connection of the same.

To put my invention into practice I provide a suitable platform 1, constructed in the form of a circle and having formed therein two annular slots 2, parallel to each other. Formed directly beneath these slots 2 are tracks 3, each of which consists of two rails so placed as to leave an intervening space for the purpose of engaging with a wheel having a flange formed at the center of the same. Operating on this track 3 is a truck 4, carried by two wheels 5 and having an opening 6 in the center of the same for the purpose of pivoting a bent lever 7 therein. This lever 7 projects upward through the slot 2 and is rigidly attached to a wooden horse 8, and is also provided with a rear extension 28, having a roller 9, which bears or rides along the under side of the platform. This rear extension 28 of the lever is bent outward and provided at its end with a roller 9 for the purpose of engaging with a series of adjustable inclined devices arranged in the track of the same. These inclined devices consist of four plates hinged together, one plate 11 rigidly attached to the under side of the platform and another plate 11^a arranged in a slide 12, which will allow the middle plates 11^b and 11^c to be elevated or lowered to change the inclination of the same. To change the inclinaton of these devices to give the horses a greater or less rocking movement, I bend one of the plates to one side and form an extension 13 on the same. This extension 13 is passed through a swivel-plate 14, which is pivoted to a block 15. Operating on a screw-thread formed within this block 15 is a threaded shaft 16, arranged in a vertical position in bearings 17. This shaft 16 is provided with a grooved wheel 18, over which an endless cord or rope is passed for the purpose of operating the same. Formed on the truck 4 are two horizontal clutches 19, which engage with an endless rope 20, which encircles the apparatus and is passed several times about a drum 21, which drum is mounted on shaft 21^b and is connected to a suitable driving apparatus. Each of these clutches 19 consists of two divergent rigid jaws. Its narrowest portion is at the rear and of such width as to closely grasp the top and bottom of the rope 20, and its widest portion is at the front and of such width as to permit the rope to pass freely through it. It will thus be seen that the clutches will automatically disengage themselves from said rope when they reach a point slightly in advance of where the latter makes its outward bend to engage the drum 21 and will automatically re-engage said rope at the point on the opposite side of said drum when its inward bend ceases, as clearly shown in Fig. 1, in which a portion of the platform is broken away to show one of said clutches, said clutch being shown at the point where the rope is in the widest part of it, so that its jaws are out of engagement with the rope, and the upper jaw being broken away. Secured to the hind legs of the horse is a roller 22, provided with a flange 23, which enters the slot 2 and will prevent any side motion of the horse. Arranged on the opposite side of the truck 4, opposite to the driving-rope 20, is

a roller 24, which bears against an inner partition-wall 25 and serves to keep the said truck in an upright position.

In operation a number of the horses and trucks, as above described, are provided and arranged at regular intervals about the circle and the trucks in each circle joined together by a suitable coupling 30. The endless rope 20 is engaged with the clutches 19 and the same passed about the drum 21, and the said drum connected to suitable driving power. A number of the inclined devices are secured in position, and an endless rope 27 leads from another drum 21^a, which is mounted on a shaft 21^c and is located beneath and at one side of the drum 21 and engaged with the sheaves. By means of this last-described drum the inclined devices are adjusted to suit the operator. The driving-drums 21 are put in motion, which draws the trucks and horses about their circles, and as the roller 10 comes in contact with the inclined devices the fore quarters of the horse will be elevated and then suddenly lowered, thereby giving the horse a rocking or galloping movement. By revolving the one drum at a greater speed than the other the one set of horses may be made to pass the other.

Having thus described my invention, I claim—

1. In a merry-go-round such as described, the combination consisting of the truck 4 and a means for carrying the same about a circle, an upwardly-projecting lever 7, pivoted therein, a model of a horse connected thereto, the rear extension of the said lever and a roller mounted therein, and a series of adjustable inclined surfaces arranged in the path of the same, whereby the said horse in moving about the circle will be given a rocking or galloping motion, as described.

2. In a merry-go-round, the combination consisting of a series of trucks coupled together, an endless rope for operating the same, a model of a horse mounted on the said trucks, a series of inclined surfaces arranged about the apparatus to give the horses a rocking or galloping motion, and a device whereby the inclination of the same may be changed, and a roller attached to the hind legs of the horse, adapted to follow a slot formed in the apparatus and to prevent any side motion of the same, substantially as and for the purpose set forth.

3. In a merry-go-round, the combination, with the truck and a means for carrying the same about a circle, of a model of an animal, a bent lever pivotally attached between its ends to the truck at one end to said model and at its opposite end supporting a roller, and a series of inclined surfaces arranged in the path of said roller and adapted to be engaged thereby to give the horse a rocking or galloping motion.

4. In a merry-go-round, the combination, with the moving pivotally-supported model, of the sliding plate 11^a, inclined plate 11^b, pivotally secured at its upper end to said plate 11^a, an oppositely-inclined plate 11^c, to the lower end of which the lower end of said plate 11^b is pivoted, a rigid plate 11, to which the upper end of said plate 11^c is pivoted, an extension 13 from one of said inclined plates, a swivel-plate 14, through which said extension passes, a block 15, formed with a screw-thread, a threaded shaft 16, engaging the same, means for operating said shaft, and a device connected with said model and adapted to engage said inclined plates, substantially as described, and for the purpose specified.

In testimony that I claim the foregoing I hereunto affix my signature this 13th day of March, A. D. 1891.

ARTHUR PALMER. [L. S.]

In presence of—
CHARLES LARGE,
M. E. HARRISON.