E. M. MAXWELL.

MERRY-GO-ROUND.

APPLICATION FILED FEB. 16, 1921.

1,435,648.

Patented Nov. 14, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

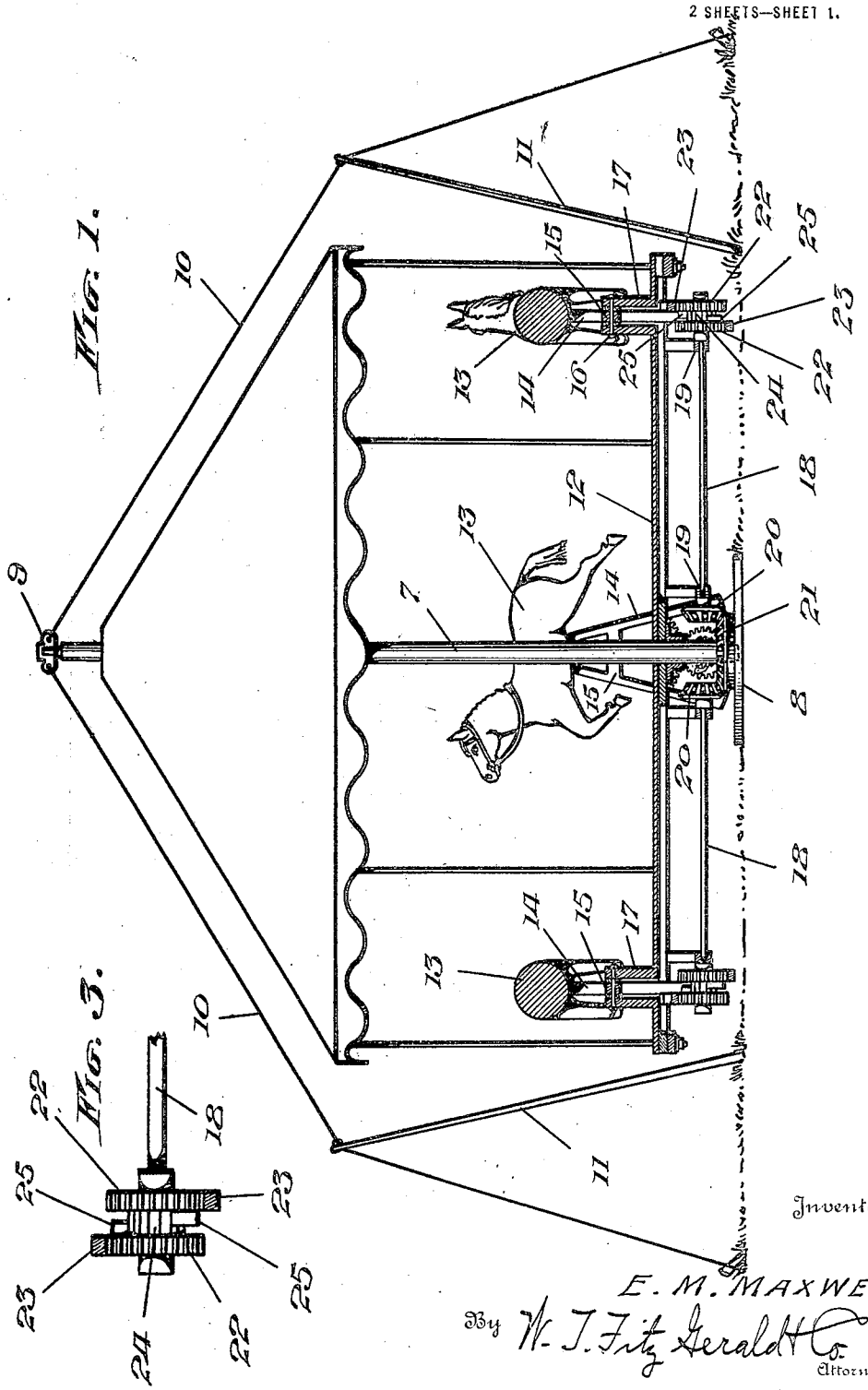

Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 2.

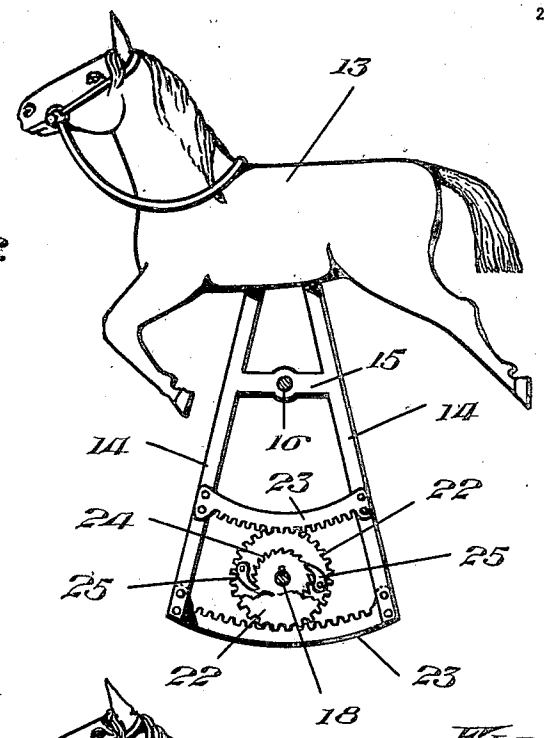
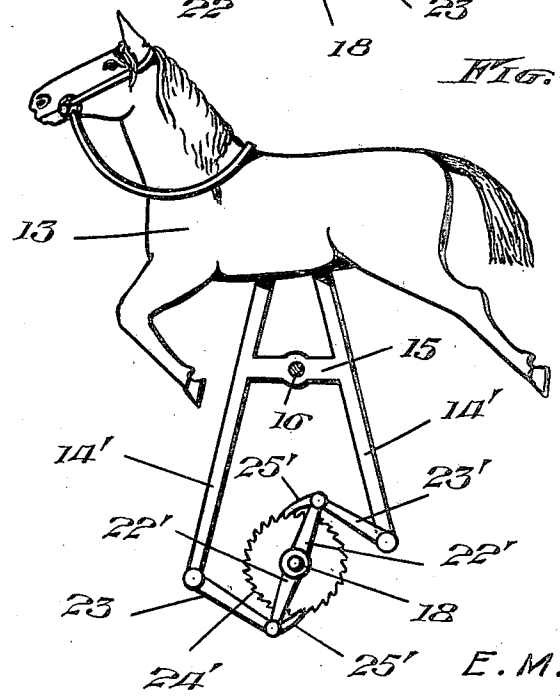


Fig. 4.



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UNITED STATES PATENT OFFICE.

ERASTUS M. MAXWELL, OF CARDINAL, VIRGINIA.

MERRY-GO-ROUND.

Application filed February 16, 1921. Serial No. 445,508.

To all whom it may concern:

Be it known that I, ERASTUS M. MAXWELL, a citizen of the United States, residing at Cardinal, in the county of Mathews and State of Virginia, 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 appertains to make and use the same.

The present invention relates to merry-go-rounds or roundabouts, and aims to provide a novel and improved amusement device of that kind, which is intended particularly for the amusement of and enjoyment by children who can operate the device while riding thereon.

Another object is the provision of a carousel having rocking seats or objects to be ridden by the occupants and a novel operating mechanism actuated by said seats or objects for propelling the device.

A still further object is the provision of novel means for mounting or supporting the seats or objects, which may be in the form of horses or other animals which the riders can straddle, and for operatively connecting said seats or objects with the mechanism for propelling or actuating the device, whereby the oscillatory or rocking motion of said seats is converted into continuous rotary motion.

With the foregoing and other objects in view, which will be apparent as the description proceeds, the invention resides in the construction and arrangement of parts hereinafter described and claimed, it being understood that changes can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the merry-go-round, portions being shown in section.

Fig. 2 is an enlarged elevation of one of the seats or objects and its ratchet mechanism.

Fig. 3 is enlarged detail view of said ratchet mechanism.

Fig. 4 is a view similar to Fig. 2 showing a modification in the ratchet mechanism.

The device comprises a central mast 7 mounted for rotation, and having its lower end journaled within a base 8, while the upper end of the mast is journaled in a cap bearing 9 to which guy ropes or wires 10 are connected and they are anchored to the ground, whereby to hold the mast upright, as well as the frame or turn-table 12, carried thereby, and provide for free rotation thereof. Props 11 are used, for the ropes or wire 10, so that they can be anchored to the ground nearer the device.

The device can have any suitable turn table or frame 12 supported from the mast 7, and any suitable number of seats or objects 13 for carrying the riders are provided, and they are disposed around the mast. As shown, said seats or objects are in the form of horses or animals on which the riders can sit astride. In order to mount the seats or objects 13 for rocking or oscillatory motion, each one of them is provided with downwardly extending diverging bars 14 connected between their ends by a cross piece 15 which is mounted on a pivot 16 secured in a pair of posts 17 rising from the turn-table or frame 12 at opposite sides of the bars 14 and cross piece 15. The seat or object 13 is disposed over the pivot 16 to rock forwardly and rearwardly on a transverse axis, and the bars 14 are operatively connected with an actuating mechanism, for rotating the frame or turn-table by the rocking motion of the seats 13.

The actuating or operating mechanism includes radial shafts 18, one for each seat 13, which are journalled in bearings 19 below the turn-table 12, and bevel gears 20 are secured to the inner ends of said shafts and mesh with a stationary bevel gear 21 provided on the base 8, whereby the rotation of the shafts 18 will impart rotary movement to the turn-table.

A ratchet mechanism is provided between each seat and the corresponding shaft 18. Thus, as shown in Figs. 1, 2 and 3, a pair of spur gears 22 is mounted loosely on the shaft 18 below the seat, and arcuate rack bars 23 are secured to the bars 14 above and below the gears 22. One rack bar 23 meshes with the upper portion of one gear 22, and the other rack bar 23 meshes with the lower portion of the other gear 22, as seen in Figs. 1 and 3. Consequently, the gears 22 of each pair rotate relatively in opposite directions when the seat 13 is oscillated and the rack bars 23 reciprocated. A ratchet wheel 24 is secured on the shaft 16 between the gears

22, and a pawl or dog 25 is pivoted to each of said gears 22 to engage said ratchet wheel.

In operation, when a seat 13 moves in one direction, the pawl 25 of one gear 22 will engage the ratchet wheel 25 to rotate same forwardly, while the other pawl drags backwardly on the ratchet wheel and when the seat moves in the other direction, the pawl of the other gear engages the ratchet wheel to move it forwardly, while the pawl of the first named gear 22 drags idly backward on the ratchet wheel. Thus, the rocking or oscillating motion of the seats will impart practically continuous rotation to the shafts 18, and the gears 20 in traveling on the stationary sun gear 21, will rotate the turntable or frame. In this manner, the riders or occupants not only have the pleasure of the rocking motion of the seats or objects 13, but can also thereby propel the device and obtain both recreation and exercise.

A modified form of ratchet device is shown in Fig. 4, wherein arms 22′ are mounted on the shaft 18 and carry the pawls or dogs 25′ to engage the ratchet wheel 24′ which is secured on the shaft, and said arms are connected by links 23′ with the bars 14′, whereby said arms oscillate in opposite directions with respect to the ratchet wheel 24′, to obtain a forward thrust on the ratchet wheel and shaft during such oscillation of the seat or object 13.

Having thus described the invention, what is claimed as new is:—

1. A merry-go-round comprising a base, a central mast mounted for rotation on the base, a cap bearing in which the upper end of the mast is journaled, a frame carried by the mast having seats for the riders, and guy members connected to said cap bearing for holding the mast upright.

2. A merry-go-round comprising a turntable, radial shafts carried by the turntable adapted to actuate the turntable by the rotation of said shafts, a ratchet wheel secured on each shaft, a pair of members rotatable on each shaft, pawls carried by said members and engaging the ratchet wheels, objects disposed above said shafts and having downwardly extending bars disposed at opposite sides of the corresponding shafts, pivots connecting said objects with the turntable between said objects and shafts for the oscillatory movements of said objects above said pivots, and members connecting the aforesaid members and bars for oscillating the firstnamed members.

In testimony whereof I have signed my name to this specification in the presence of a subscribing witness.

ERASTUS M. MAXWELL.

Witness:
NANNIE MINTER.