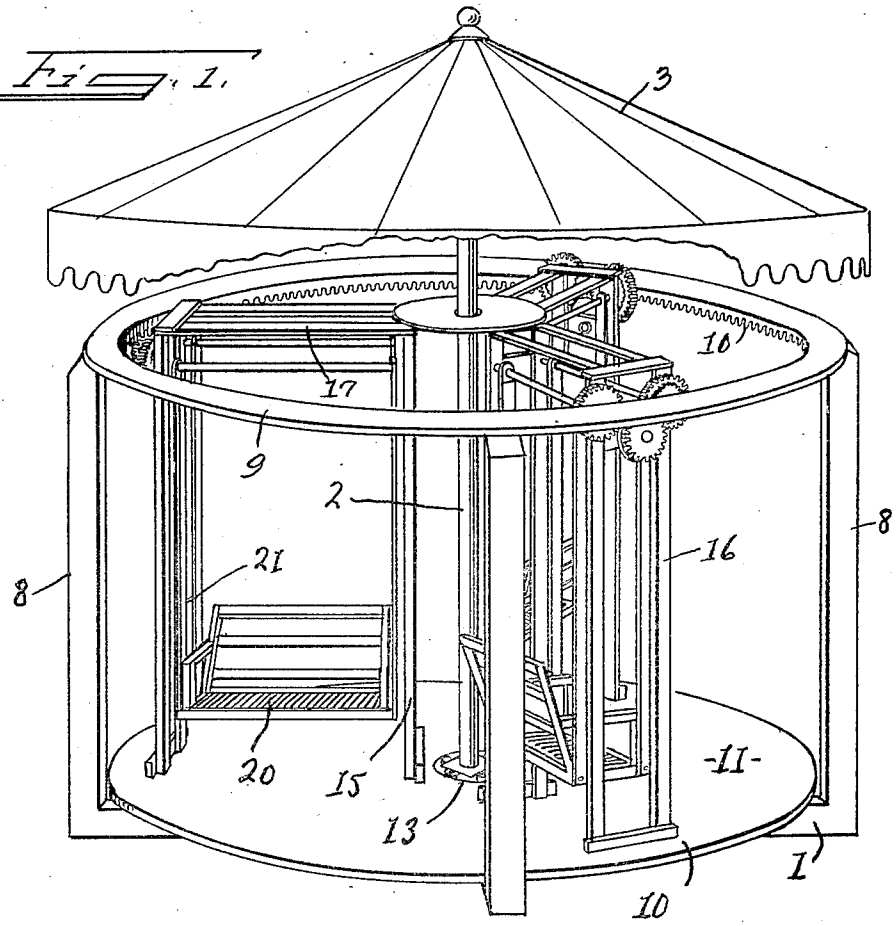
Dec. 22, 1925. 1,567,010

H. H. SPECK

SWING

Filed Jan. 2, 1923 2 Sheets-Sheet 1

Fig. 1.



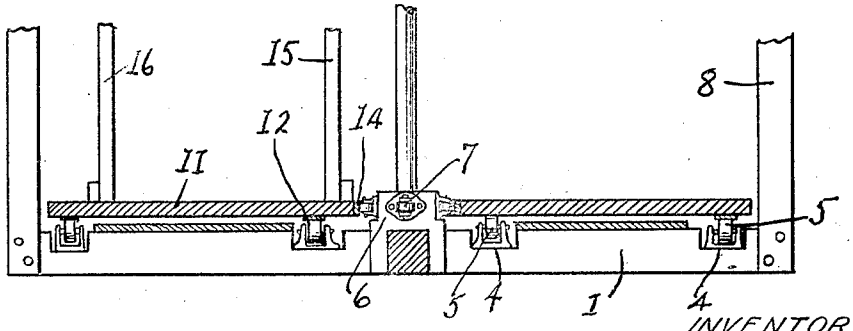


Fig. 2.

INVENTOR:

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BY Accurt Keller

ATTORNEYS.

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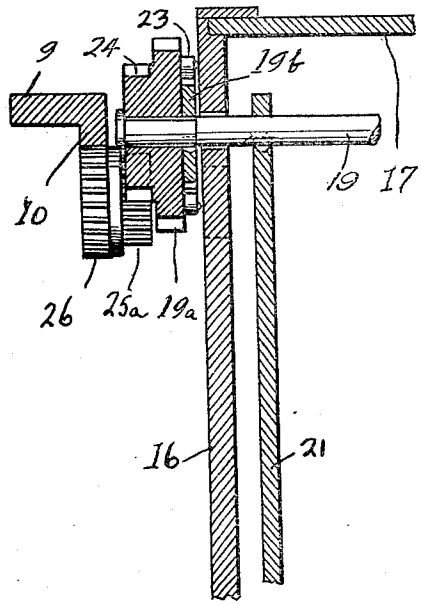

Fig. 3.

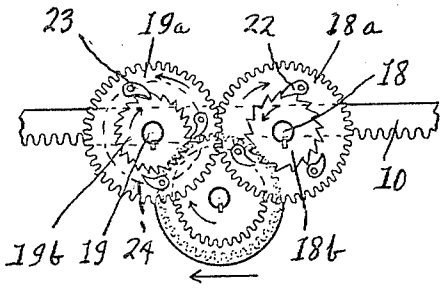

Fig. 4.

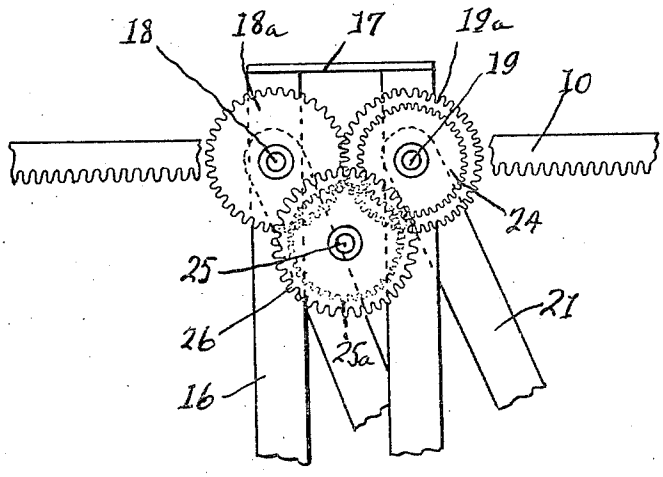

Fig. 5.

INVENTOR:

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Patented Dec. 22, 1925. 1,567,010

UNITED STATES PATENT OFFICE.

HERMAN H. SPECK, OF CINCINNATI, OHIO; JOSEPHINE SPECK EXECUTRIX OF SAID HERMAN H. SPECK, DECEASED.

SWING.

Application filed January 2, 1923. Serial No. 610,136.

To all whom it may concern:

Be it known that I, HERMAN H. SPECK, a citizen of the United States, and a resident of the city of Cincinnati, county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Swings, of which the following is a full, clear, and exact description, reference being had to the drawings accompanying this specification.

My invention relates to swings, such as are used at amusement places, public parks, and the like, and consists essentially in a merry-go-round device, which supports a set of swings, in which the operation of the swings is the driving power for the merry-go-round.

Among the objects of my invention are the provision of a simply constructed device of the character noted, and one in which any one or all of the swings act as motive power for the whole structure without interference with each other, and in which any one of the swings may stand still, with one or more others moving.

It is my object to so arrange the gearing devices that the device is revolved in but one direction by the motion of the swings in both directions and also to provide a suitable structure for easy movement so that excessive work on the swings will not be necessary.

I accomplish my objects by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings:

Figure 1 is a perspective view of the whole device. Figure 2 is a detail vertical section showing the antifriction support for the revolving platform.

Figure 3 is a detail vertical section taken through one of the driving gear units.

Figure 4 is a detail side elevation of a gearing unit.

Figure 5 is a side elevation taken from the opposite side to Figure 4 showing the circular rack device also.

My device is preferably constructed with a base formed of cross beams 1, 1, on which is mounted a central post 2. This post will serve to support a canopy 3, if desirable.

Mounted in suitable blocks 4, 4, in the base beams are rollers 5, 5, preferably two or more interspaced rollers in each cross beam. There is a central block 6 of wood or metal at the junction of the cross beams, about which are mounted in suitable bearings the horizontally disposed rollers 7, 7. There are the desired number of upright posts 8, connected together by an annular member 9, which may be of wood or metal, or wood faced with metal. At the inside of this annular member is a depending rack 10, which extends clear around the device.

The swings are mounted by means of a platform 11, which rests on the rollers 5, and has circular tracks 12, to serve as a bearing thereon. It is arranged to come inside of the vertical posts of the frame, and also is cut out at the center leaving a circular hole 13. The rollers 7 bear against the circular wall about this hole, which will also be faced with a metal band 14.

Thus the platform is supported and held in place in an anti-friction manner on the frame. The swings themselves are suspended from frame-work, consisting in inner and outer uprights 15 and 16 respectively, connected together at the top by means of braces 17, and serving to mount the rock shafts 18 and 19.

The swings have bodies 20, with four pivoted arms 21, one at each corner, the front pair for each body being connected fast to a shaft 18, and the rear pair of each body connected fast to a shaft 19.

The shafts 18 have large gears 18^a mounted loosely thereon, and the shaft 19 has like gears 19^a mounted loosely thereon, the gearing being only at the outside for each swing. The shafts 18 and 19 have fast thereon, and located between the swings and the gears 18^a and 19^a, the ratchet wheels 18^b and 19^b. These ratchet wheels revolve with the rock shafts, so that every time the swings are moved, the rock shafts will rock first in one direction and then in the other, both shafts swinging in the same direction, and the ratchets will have a like movement.

On the gears 18^a are located spring pawls 22, which engage their ratchets 18^b when they are moving in a clockwise direction. On the gears 19^a are pawls 23 which engage their ratchets 19^b when same are moving in a counter-clockwise direction. By this arrangement, when the swings are moved in one direction the gears 18^a are revolved in a clockwise direction, and when they are moved in the other direction the gears 19^a are revolved in a counter-clockwise direction.

The two gears 18^a and 19^a mesh with each other, and the gears 19^a have secured to them, but also loose on the shafts 19, the smaller gears 24. An additional shaft 25 is mounted in the frame of each swing, this shaft having a gear 25^a to mesh with the small gear 24 in each device. As a result when the gears 18^a revolve under the pawl and ratchet drive, they revolve the gears 19^a in their normal driving direction, with the pawls slipping over the ratchet. When the gears 19^a are driven directly by their pawl and ratchet drives, they still revolve in the same direction, so that no matter which way the swings are moving the shafts 25 always revolve in the same direction.

These shafts 25 have gears 26 on their outer ends which mesh with the large circular rack on the fixed portion of the frame, so that the swing frames are caused to revolve around the center pole, carrying the platform with them.

Any one of the swings or all of them operating together can help this revolving action, and any one of the swings may hang still in a vertical position while the platform and swings are revolved, since the pawls will merely slip over their ratchets, as the platform is only energized in but one direction.

It will be evident that my device is one of simple character, without any small parts which might get out of order or break, and that it is well adapted for use of children in public playgrounds, for which purpose I have especially designed it. The merry-go-round effect will add greatly to the pleasure of the persons swinging, and where a number of the swings are occupied some can stand still without blocking the movement of the platform about its axis.

There may be as many swings as desired, and the various structural features may be modified without departing from the spirit of my invention which I will state in my claims.

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

1. In combination with a frame having a circular rack mounted thereon, a carrier revolving on said frame, a swing device mounted on the carrier and adapted to swing to and fro when energized by an occupant, and a pair of shafts secured to the swing device and rocking with the swing, each shaft having a ratchet thereon, a gear, driven by said ratchets and meshing with the circular rack, one of said ratchets engaging in the opposite direction from the other to drive the last mentioned gear in one direction only.

2. In combination with a frame having a circular rack mounted thereon, a carrier revolving on said frame, a plurality of swing devices mounted on the carrier and adapted to swing to and fro when energized by an occupant, a pair of shafts secured to each swing device and rocking with said swings, said shafts having gear and ratchet trains including gears to mesh with the circular rack, and each gear and ratchet train being arranged to drive all rack meshing gears in the same direction.

HERMAN H. SPECK.