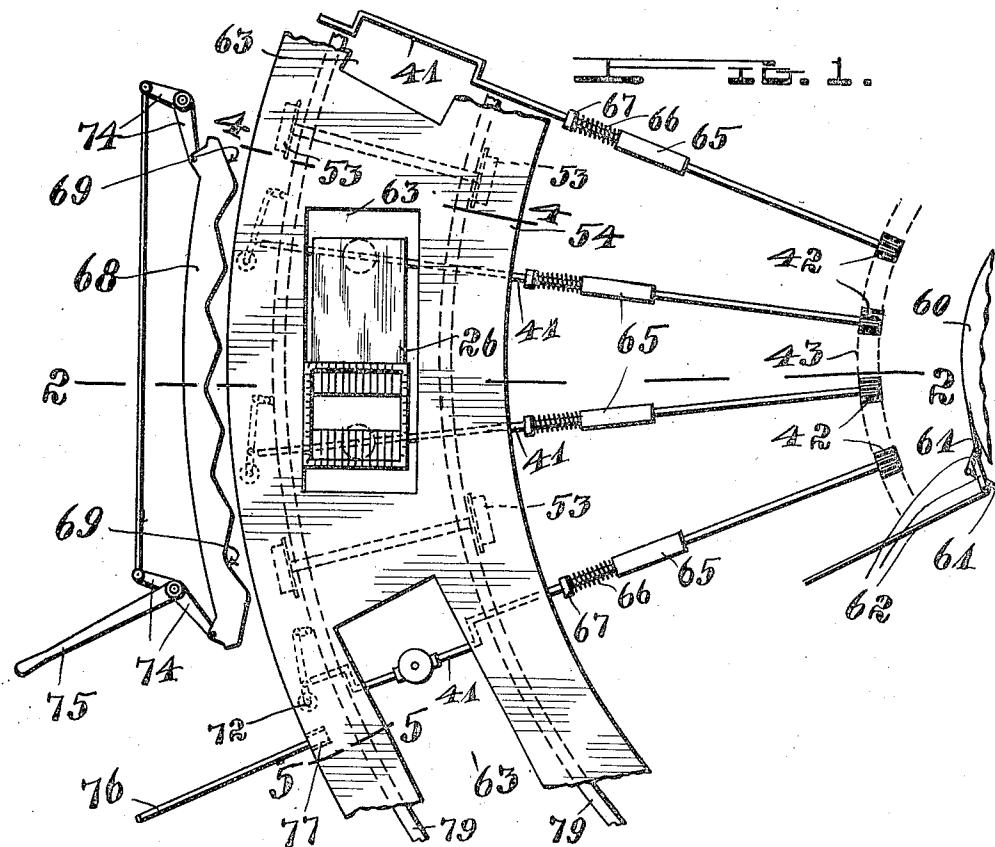


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A. KUDLER.  
MERRY-GO-ROUND.  
FILED MAY 21, 1921.

3 SHEETS—SHEET 1.

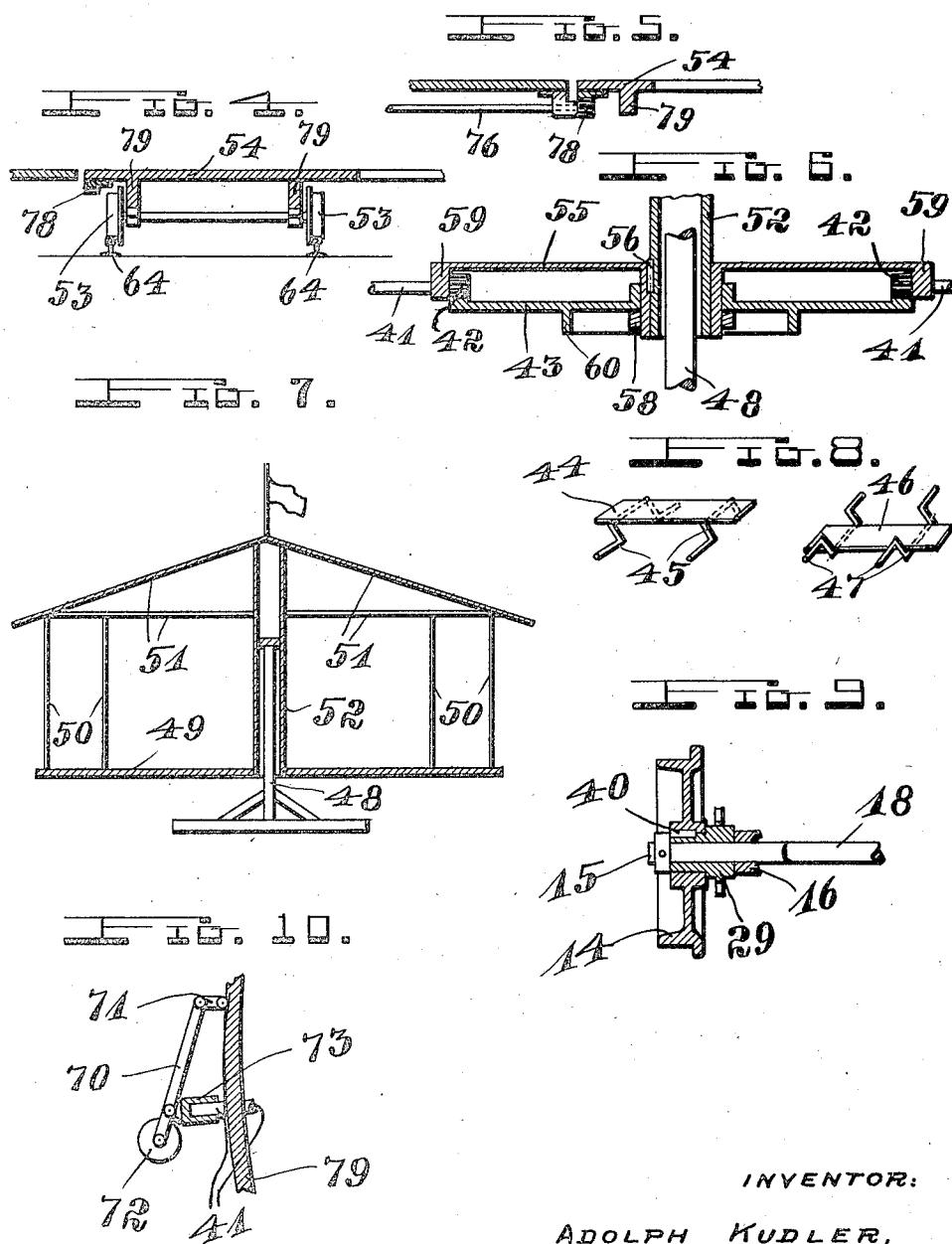


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3 SHEETS--SHEET 2.



INVENTOR:

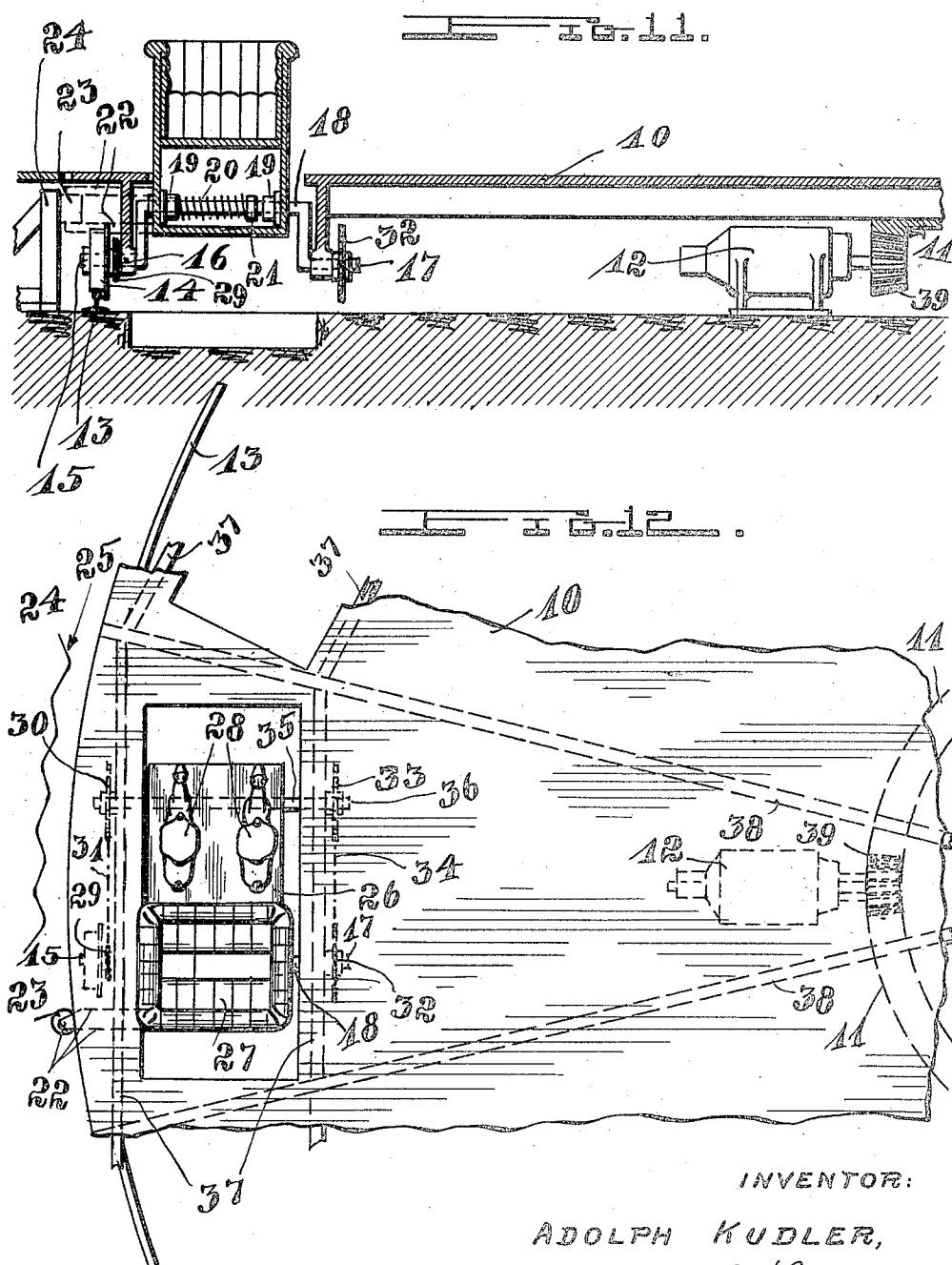
BY: Otto H. Kueger,  
his Atty.

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3 SHEETS--SHEET 3.



**INVENTOR:**

ADOLPH KYDLER.

Br: Otto H. Krueger  
his Atty.

Patented Jan. 2, 1923.

1,440,609

# UNITED STATES PATENT OFFICE.

ADOLPH KUDLER, OF LOS ANGELES, CALIFORNIA.

## MERRY-GO-ROUND.

Application filed May 21, 1921. Serial No. 471,378.

To all whom it may concern:

Be it known that I, ADOLPH KUDLER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Merry-Go-Round, of which the following is a specification.

This invention relates to so-called merry-go-rounds, used in amusement parks to carry people, normally performing trips in a circle.

One of the objects of this invention is to provide means for a rapid shaking in addition to an up and downward movement of parts by which people are carried.

Another object is to provide suitable operating means to move such parts at will, so that people may be surprised by the sudden starting of movements.

Another object is to provide operating means for the passenger-carrying parts for the upward and downward movements to be controlled at will and automatically.

Another object is to provide operating means for producing the shaking of the passenger-carrying parts at will and automatically.

Other objects will appear from the following description and appended claims as well as from the accompanying drawings, in which—

Fig. 1 is a fragmentary top plan view of the rotating platform with a movable platform in position within an opening of the rotating platform, the operating and lifting shafts for the movable platform being illustrated in their relative positions, and operating means for producing a shaking of the movable platform being indicated near the outer periphery of the rotating platform.

Fig. 2 is a practically vertical section on line 2—2 of Fig. 1.

Fig. 3 is a detail longitudinal midsectional view of a connecting coupling of the operating shafts.

Fig. 4 is a cross section in a practically vertical plane on line 4—4 of Fig. 1.

Fig. 5 is a vertical cross section on line 5—5 of Fig. 1.

Fig. 6 is a practically vertical midsectional view of the connecting and controlling means for the operating shafts for the movable platforms within the main rotating platform.

Fig. 7 is a vertical midsectional view of a merry-go-round, illustrating in outline the interconnection between the main framework and the center post.

Fig. 8 is a perspective fragmentary illustration of two pairs of operating shafts for the movable platforms, to show that it is preferable to arrange one pair to balance against the movements of another pair.

Fig. 9 is a fragmentary midsectional view of a supporting wheel of a slightly modified form to be used as driving wheel for the operating shafts.

Fig. 10 is a detail fragmentary top plan view of the operating means for producing the shaking of the movable platforms.

Fig. 11 is a practically vertical midsection view of the modified form illustrated in Fig. 12.

Fig. 12 is a fragmentary top plan view of the rotating platform of a merry-go-round, slightly modified over the illustration in Fig. 1, the operating shafts of the movable parts being actuated by the modified form of driving wheels illustrated in Fig. 9.

The modified form, illustrated in Figs. 11 and 12, is obviously the simplest design but not the preferred device. In this modified form, the platform 10 is provided with a main gear 11, by which the platform is rotated, an electric motor is preferably used for driving the gear, as indicated at 12. A rail 13 is used to support the outer edge of this practically circular platform 10. Driving wheels 14 serve to support the platform on the rail. The outer end 15 of a crank shaft 18 is journaled at 16 and turnably supporting the driving wheel 14, as will be more fully described in connection with the illustration in Fig. 9. The other end 17 of the crank shaft forms the driving end. Journal boxes 19 are provided to support the movable parts of the merry-go-round. A spring 20 is inserted between one of the journals and a set-collar 21 for keeping the movable part of the merry-go-round in its normal inoperative position.

An actuating arm 22 is provided on the end of the movable member or platform below the general flooring of the merry-go-round, having a roller 23, to engage with the waved, corrugated, or otherwise suitably shaped front face 25 of the actuating member 24. The movable member or platform 26 is provided with seats 27, horses 28, or 110

any other facilities to serve in a desired manner for the passengers and people who patronize amusement devices of this type. The platform 26 is actuated by the crank 5 shafts 18 and 35. Both shafts are operatively connected by the sprocket wheels 32 and 33, and the chain 34, the sprocket wheel 32 being secured to the end 17 of the crank shaft 18, and the sprocket wheel 10 33 being secured to the end 36 of the crank shaft 35. A sprocket wheel 30 is secured to the opposite end of the crank shaft 35. The sprocket wheel 30 is operatively connected to the sprocket wheel 29 by the chain 31. The actuating of the sprocket wheel 29 is more clearly illustrated in Fig. 9. The driving wheel 14 is secured to the sprocket wheel 29 by the key 40. The sprocket wheel 29 and thereby the driving wheel are turnably mounted on the end 15 of the crank shaft 18.

The platform 26 is moved up and down in this manner by transmitting the motion of the driving wheel 14 to the sprocket 25 wheel 29. Such turning motion of the sprocket wheel is transmitted to the crank shaft 35 through the sprocket wheel 30. Both crank shafts 18 and 35 are actuated equally by the connecting chain 34 on the 30 sprocket wheels 32 and 33.

The actuating member 24 is made of suitable height so that the engaging arm 22 with the roller 23 will engage with the front face 25 of the actuating member 24 in any 35 position of the up and down moving platform.

The main rotating platform 10 is reinforced by radial beams 38 and other beams 37. The motor 12 is provided with a driving gear 39 to engage with the gear 11 of the rotating platform 10.

The construction illustrated in Figs. 1 and 2 is, however, the preferred form, since the driving wheel 14 in the slightly modified form is liable to slip on the rail 13 in case the platform 26 is overloaded, which may occur with devices of this type.

In the preferred form, as illustrated in Figs. 1 and 2, each one of the crank shafts 41 is provided with a gear 42 to directly engage with the actuating gear 43, so that the whole merry-go-round can be balanced, arranging an equal number of platforms to counteract another number of platforms. 55 In Fig. 8, a platform 44 is outlined on two crank shafts 45 in a position to counteract the platform 46 on the crank shafts 47, this being only a fragmentary illustration to show what is meant by balancing the several 60 movable platforms of the whole merry-go-round.

The whole rotating frame work of a merry-go-round is normally arranged around a central post 48; the main flooring 65 or rotating platform 49, the uprights 50,

and the several braces 51 being normally interengaged and connected to a rotating tubular member 52, so that all principal parts of the merry-go-round are moving around the central stationary post 48.

The driving wheels 14, illustrated in Figs. 11 and 12, normally help to support this whole rotating structure. The preferred construction, illustrated in Figs. 1 and 2, is also provided with supporting wheels, as indicated at 53 in Figs. 1 and 4.

The rotating main platform 54, in this preferred form, is always followed by corresponding movements of the central rotating tubular member 52, indicated in Fig. 6, 80 so that all the crank shafts 41 retain their radial relation between the rotating platform 54 and the member 52. The shaft supporting member 55 is securely engaged with the tubular member 52, as indicated at 85 50. The gear 43 is turnably mounted on the hub of the supporting member 55, as indicated at 57, resting on the set collar 58. The shafts 41 are turnably mounted and journaled at 59 in the supporting member 55, so that the gears 42 are carried around with the supporting member 55 and with the gear 43 together with the rotating platform 54. The gear 43 is, however, provided with a brake drum or flange 60, by 95 which the movement of the gear can be stopped.

On stopping the movement of the gear 43, the supporting member 55 continuing with the rotating main platform 54 its movement 100 around the central axis, the smaller gears 42 are caused to turn and thereby cause a turning of the shafts 41. A brake band is indicated at 61 in Figs. 1 and 2, to be actuated by the levers and rods 62. If the 105 actuating means and thereby the brake band are not operated, the crank shafts 41 are normally not operated, and tend to hold the movable platforms in resting and stopping positions. The movable platforms can therefore be actuated at any time by operating the brake on the gear 43 for causing an 110 up and downward movement of the movable platforms. The same numeral 26 is used in Figs. 1 and 2 to designate the movable 115 platform, since in fact a similar device as those shown in the illustrations of Figs. 11 and 12. Suitable openings 63 are provided in the main rotating platform 54 to provide 120 space for the movements of the movable platforms 26. Rails 64 are provided to support the supporting wheels 53.

The shafts 41 are provided with sliding couplings 65, to allow a shaking of the 125 movable platforms 26 in a similar manner as described with reference to the illustrations in Figs. 11 and 12. The sliding coupling is illustrated in detail in Fig. 3. The shaft 41 is split within the coupling 65, the coupling being secured to the one end of 130

the shaft while slidingly engaging with the other end of the same shaft. A spring 66 is inserted between the coupling 65 and a set collar 67, so as to normally press the 5 two ends of the split shaft apart a suitable distance so as to leave enough space between the shaft ends for the sidewise movements of the movable platforms on the outer ends of the shafts 41.

10 An actuating member 68 is provided, having a waved, corrugated, or otherwise suitably shaped face 69 to produce and cause the sidewise movement of the movable platforms when placed to engage. The re-enforcing beams 79 serve to hold the journals 15 for the crank shafts 41 and for the supporting wheels 53. An arm 70 is pivotally engaged at 71 to the beam 79, as illustrated in detail in Fig. 10, the arm being provided 20 with a roller 72 to engage with the face 69 of the actuating member 68 and having a journal box 73 to engage with the ends of the crank shafts 41, so that the movable platforms are moved sidewise in a shaking manner as the rollers 72 pass over the face 69. The actuating member 68 is in engagement 25 with levers 74, operative by the lever 75, so that the face 69 can be controlled to come into engagement with the rollers 72 of the several crank shafts 41 or can be withdrawn 30 from such engaging position to leave the movable platforms unmoved when the main rotating platform passes the actuating member 68.

35 The main driving shaft or operating shaft 76 is provided with a gear 77 to engage with a gear 78 on the main rotating platform 54. The main rotating platform 54, and, since interconnected as described with reference 40 to Fig. 7, the whole structure, including the central tubular member 52 with the supporting member 55, together with the crank shafts 41 and the gear 43 become actuated by the turning of the main driving shaft 76.

45 The movable platforms are actuated by the operation of the brake mechanism in connection with the brake flange 60 on the gear 43 as described above, the crank shafts 41 commencing to turn as soon as the gear 50 43 is stopped by the braking mechanism so as to move the movable platforms in an up and downwardly manner on the cranks.

The sidewise movements are produced by moving the actuating member 68 into the 55 path of the rollers 72, thereby causing the movable platforms to shake and vibrate in addition to the circular up and downward movement, thereby producing the effect of the so-called shimmy dance.

60 Having thus described my invention, I claim:

1. In a merry-go-round, in combination with a passenger-carrying member normally carried in a certain path around the center 65 of the merry-go-round, means removably disposed in the said path to actuate the passenger-carrying member in a shaking sidewise direction at will.
2. In a merry-go-round, in combination with a passenger-carrying member adapted to move up and down and normally carried in a certain path around the center of the merry-go-round, means removably disposed in the said path to actuate the passenger-carrying member in a shaking sidewise direction at will in addition to the other movements of the passenger-carrying member. 70
3. In a merry-go-round, in combination with a passenger-carrying member disposed to move up and down and normally carried in a certain path around the center of the merry-go-round, means removably disposed in the said path to actuate the up and downward moving member back and forth in a sidewise direction on touching the actuating means, and means to control the said actuating means at will. 75
4. In a merry-go-round, a circulating platform, movable members to carry passengers on the circulating platform, crank shafts disposed to actuate the movable members in a circular up and downward movement, means for actuating the crank shafts, and means to actuate the movable members in a shaking sidewise direction in addition to the circular up and downward movement. 80
5. In a merry-go-round, a circulating platform, movable members to carry passengers on the circulating platform, means to actuate the movable members in a circular up and downward movement, means to automatically actuate the movable members in a shaking sidewise direction, and operating means for controlling the actuating means at will. 85
6. In a merry-go-round, in combination with a passenger-carrying member normally moving in a certain path around the center of the merry-go-round, an actuating member shiftable radially in relation to the merry-go-round and adapted to be in the path of the carrying member for moving the carrying member out of its regular path. 90
7. In a merry-go-round, in combination with a passenger-carrying member normally moving in a certain path around the center of the merry-go-round, an actuating member having a roughened actuating face shiftable radially in relation to the merry-go-round and adapted to be in the path of the carrying member so that the carrying member is compelled to move sidewise according to the obstacles in the actuating face of the actuating member past the member. 95
8. In a merry-go-round, in combination with a passenger-carrying member normally moving in a certain path around the center of the merry-go-round, an actuating plate having a corrugated face shiftable radially in relation to the merry-go-round, the pas- 100
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senger-carrying member having means to engage with the corrugated face of the actuating plate for moving the passenger-carrying member in a sidewise direction 5 when passing the actuating plate in its normal path.

9. In a merry-go-round, in combination with a passenger-carrying member normally moving in a certain path around the center 10 of the merry-go-round, an actuating plate having a corrugated face shiftable radially in relation to the merry-go-round, the passenger-carrying member having means to engage with the corrugated face of the actuating member when passing the actuating 15

member in its normal path for moving the passenger-carrying member in a sidewise direction, and means for maintaining the actuating plate in the path of the engaging means on the passenger-carrying member 20 and adapted to withdraw the actuating plate out of the path of the engaging means of the passenger-carrying member.

In testimony that I claim the foregoing as my invention I have signed my name in the 25 presence of two subscribing witnesses.

ADOLPH KUDLER.

Witnesses:

O. H. KRUEGER,  
JESSIE A. MANOCK.