

W. F. MANGELS.
AMUSEMENT APPARATUS.
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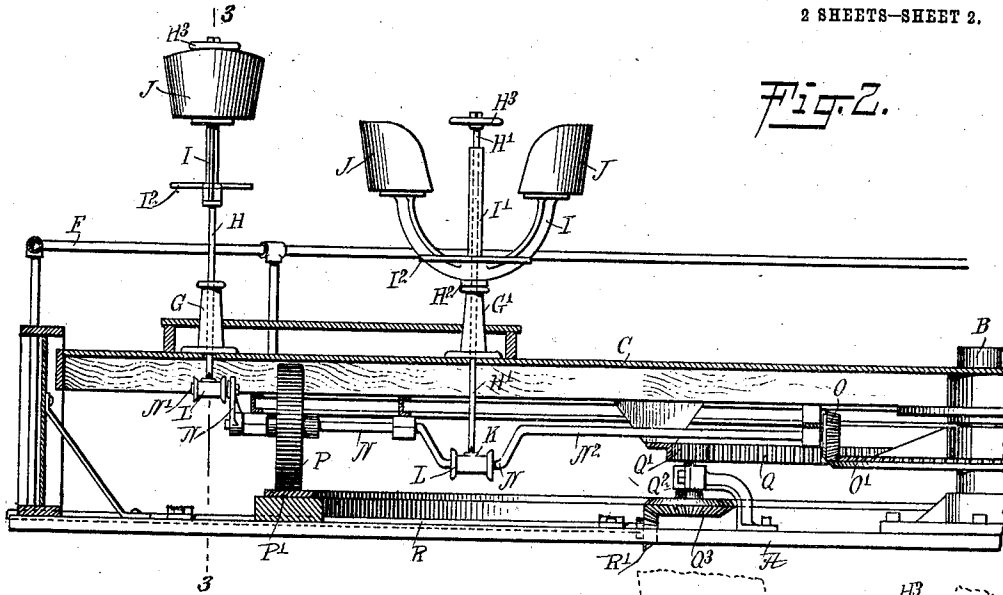


Fig. 2.

Fig. 4.

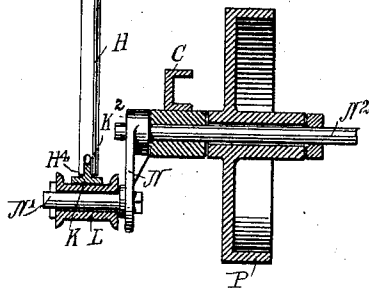
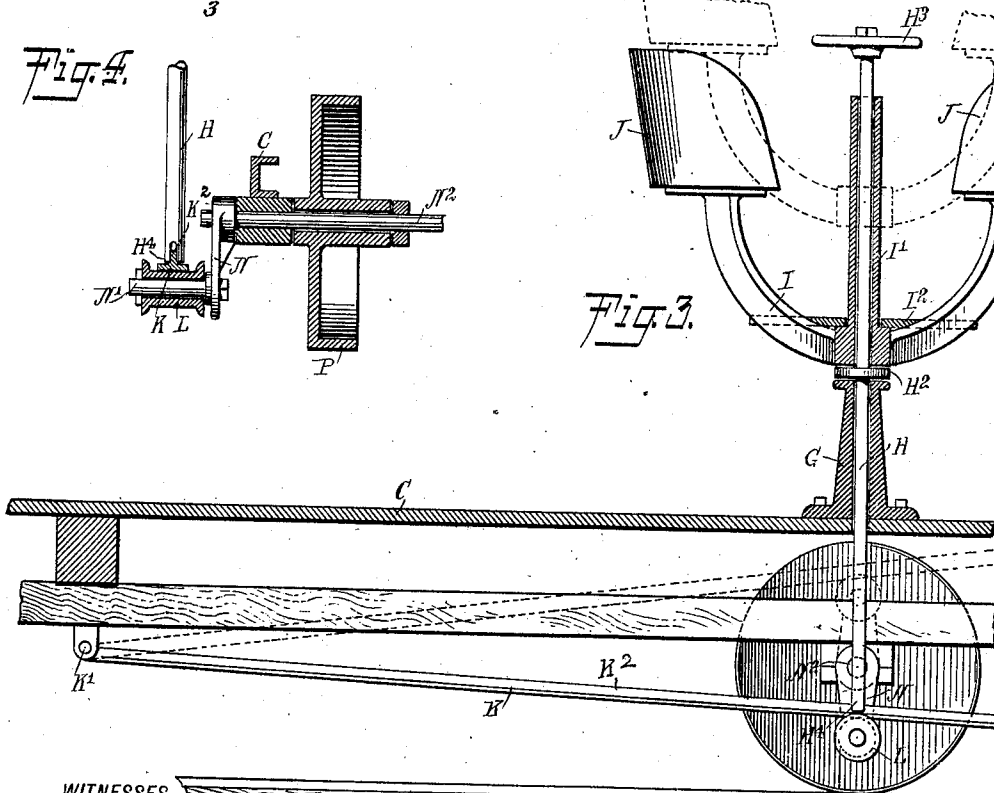


Fig. 3.



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WILLIAM F. MANGELS, OF NEW YORK, N. Y.

AMUSEMENT APPARATUS.

991,336.

Specification of Letters Patent.

Patented May 2, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM F. MANGELS, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Amusement Apparatus, of which the following is a full, clear, and exact description.

The invention relates to carousels, and its object is to provide a new and improved amusement apparatus, more especially designed for use in pleasure resorts, parks and other places, and arranged to accommodate a large number of persons at the time and to provide an exhilarating ride, part of the motion being produced by the occupants to suit their convenience.

For the purpose mentioned use is made of a support for one or more persons and mounted to turn on a post having a positive up and down motion and a bodily motion in a circular path.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the apparatus, part of the platform being broken out; Fig. 2 is an enlarged sectional side elevation of the same; Fig. 3 is an enlarged transverse section of the same on the line 3—3 of Fig. 2; and Fig. 4 is an enlarged sectional side elevation of one of the crank shafts and adjacent parts.

On a suitably constructed foundation A is arranged a standard B on which is mounted to turn the platform C, access to which is had from an entry and exit station D to which lead steps E from the foundation A, the platform being surrounded by a railing F which terminates at the station D, as plainly indicated in Fig. 1. On the platform C are arranged pairs of vertically-disposed bearings G, G' in which are mounted to slide up and down posts H and H', each provided with a collar H² on which rests a U-shaped support I, carrying seats J disposed on opposite sides of the post H, and arranged in such a manner that the occupants of said seats face each other. On the upper end of each post H, H' is arranged a fixed hand wheel H³ within convenient reach of the occupants of the seats J, so that the

occupants by taking hold of the hand wheel H³ can readily turn the support I and with it the seats J and themselves around the post H as the center. The support I is provided with a central hub I' through which passes the post H so that the legs of the occupants of the seats J are not liable to come in contact with the post H or H'. The post I is further provided with a foot board I² for the feet of the occupants to rest on. The lower end of each post H, H' terminates in a fork H⁴ seated on a vertical rib K² of a link K fulcrumed at K' on the under side of the platform C, as plainly indicated in Fig. 3. The free end of the link K rests on a roller L mounted on the wrist pin N' of a crank N attached to or formed on a crank shaft N² journaled in suitable bearings arranged on the under side of the platform C. The inner end of each crank shaft N² is provided with a pinion O in mesh with a fixed gear wheel O' attached to the standard B, so that when the platform C is rotated, the pinions O roll off on the fixed gear wheel O', and consequently a rotary motion is given to the crank shaft N² which by the cranks N, rollers L and links K impart an up and down sliding motion to the posts H and H', in such a manner that when one post of one pair of posts moves up the other moves down and vice versa, as will be readily understood by reference to Fig. 2. It is understood that for this purpose the cranks N of each crank shaft N² for a pair of links K and posts H, H' are arranged diametrically opposite each other.

By mounting the posts H, H' on the links K in the manner described the posts are held against turning and consequently the hand wheels H³ are held stationary to permit the occupants to turn the said supports I and with them the seats J and themselves, as before mentioned.

On each crank shaft N² is loosely mounted a supporting wheel P traveling on a circular track P' mounted on the foundation A and arranged concentric with the platform C and the standard B. In order to impart a rotary motion to the platform C the under side thereof is provided with a gear wheel Q concentric to the standard B and fixed to the platform C, and a pinion Q' is in mesh with the gear wheel Q and its shaft Q² is journaled in fixed bearings supported from the foundation A. On the

shaft Q^2 is secured a bevel gear wheel Q^3 in mesh with a pinion R' attached to a driving shaft R journaled in suitable bearings arranged on the foundation A , and the said shaft R is connected by pulleys and belt or other means with suitable machinery for imparting a rotary motion to the shaft R , which latter by the gear wheels R' , Q^3 , Q' , Q imparts a rotary motion to the platform C .

The operation is as follows: The passengers for a ride on the amusement apparatus pass from the station D onto the platform C and from the latter pass to the seats J and seat themselves therein. A rotary motion is now given to the platform C by driving the shaft R as before explained, so that a rotary motion is also given to the crank shafts N^2 , to cause the posts H , H' to slide up and down and with the same the supports I , the seats J and the occupants thereof. The occupants in the seats by taking hold of the stationary hand wheels H^3 and trying to turn the said hand wheels cause a rotation of the supports I , the speed of rotation being governed by the force exerted by the occupants on the fixed hand wheels H^3 .

From the foregoing it will be seen that by the arrangement described the occupants of the seats J are raised and lowered, turned around with their seats and given a bodily movement owing to the rotation of the platform C . It will be noticed that each pair of occupants of a pair of seats J can turn themselves around with more or less speed and consequently a large number of pairs of seats and their occupants rotate at different speeds, while the up and down movement and the rotary motion of the platform C are alike for the different pairs of seats and their occupants, and hence to the onlooker the apparatus and its occupants present a varied and interesting spectacle, and the occupants of the seats enjoy an exhilarating ride.

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

1. An amusement apparatus, comprising a rotatable support for one or more persons, a post on which the said support is supported and mounted to turn freely, means for imparting an up and down motion to the said post and the support carried thereby, and means for imparting a bodily motion in a circular path to the said post and the support.

2. An amusement apparatus, comprising a seat support for one or more persons, a post for the said support to turn on freely, the post being mounted to slide up and down and having a hand wheel within reach of the persons seated on the said support to permit the persons carried on the support to rotate the latter on the post, the said seat

support moving up and down with the post, and actuating means for imparting an up and down sliding motion to the post.

3. An amusement apparatus, comprising a seat support for one or more persons, a post for the said support to turn on freely, the post being mounted to slide up and down and having a hand wheel within reach of the persons seated on the said support to permit the persons carried on the support to rotate the latter on the post, the said seat support moving up and down with the post, actuating means for imparting an up and down sliding motion to the post, and means for carrying the post bodily around in a circular path.

4. An amusement apparatus, comprising a seat support for one or more persons, a post for the said support to turn on freely, the post being mounted to slide up and down and having a hand wheel within reach of the persons seated on the said support to permit the persons carried on the support to rotate the latter on the post, the said seat support moving up and down with the post, a platform mounted to turn and provided with bearings for the posts to slide in, links pivoted on the said platform and on which rest the said posts, crank shafts mounted on the platform having cranks engaging the said links to swing the same up and down, means for rotating the said platform and means for rotating the said crank shafts.

5. An amusement apparatus, comprising a seat support for one or more persons, a post for the said support to turn on freely, the post being mounted to slide up and down and having a hand wheel within reach of the persons seated on the said support to rotate the latter on the post, the said seat support moving up and down with the post, a platform mounted to turn and provided with bearings for the posts to slide in, links pivoted on the said platform and on which rest the said posts, crank shafts mounted on the platform and having cranks engaging the said links to swing the same up and down, a fixed gear wheel concentric with the said platform, and pinions on the said crank shafts engaging the said fixed gear wheel.

6. An amusement apparatus, comprising a seat support for one or more persons, a post for the said support to turn on freely, the post being mounted to slide up and down and having a hand wheel within reach of the persons seated on the said support, to permit the persons carried on the support to rotate the latter on the post, the said seat support moving up and down with the post, the latter having its lower end forked, a platform mounted to turn and provided with bearings for the said posts to slide in, links pivoted on the said platform and having vertical ribs for engagement by the forked lower ends of the said posts, crank shafts

mounted on the platform and having cranks on which seat the said links to swing the latter up and down, means for rotating the platform, and means for rotating the said

5 crank shafts.

7. An amusement apparatus, comprising a seat support for one or more persons, a post for the said support to turn on freely, the post being mounted to slide up and
10 down and having a hand wheel within reach of the persons seated on the said support to permit the persons carried on the support to rotate the latter on the post, the said seat support moving up and down with the post,
15 the latter having its lower end forked, a platform mounted to turn and provided with bearings for the said posts to slide in, links pivoted on the said platform and having vertical ribs for engagement by the
20 forked lower ends of the said posts, crank shafts mounted on the platform and having cranks on which rest the said links to swing the latter up and down, a central standard for the platform to turn on, wheels loose on
25 the said crank shafts, a circular track for the said wheels to travel on, a gear wheel fixed on the said standard, and pinions on the said crank shafts and in mesh with the said fixed gear wheel.

30 8. An amusement apparatus provided with a non-rotatable post having an up and

down motion and a bodily motion in a circular path, seats arranged on opposite sides of the said post and a support carrying the seats and mounted to turn on the said post. 35

9. An amusement apparatus provided with a non-rotatable post having an up and down motion and a bodily motion in a circular path, seats arranged on opposite sides of the said post, a support carrying the
40 seats and mounted to turn on the said post, and a hand wheel fixed on the said post and within reach of the occupants of the chairs to permit the occupants to turn the support on the post. 45

10. An amusement apparatus provided with oppositely arranged seats, a support for the said seats and mounted to turn, means for raising and lowering the support and its seats, means for carrying the
50 support and its seats bodily around in a circular path, and means for enabling the occupants of the seats to turn the support around an axis extending intermediate the seats. 55

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

WILLIAM F. MANGELS.

Witnesses:

THEO. G. HOSTER,
JOHN P. DAVIS.