Dec. 11, 1923. 1,477,498

H. P. JACKSON ET AL

AMUSEMENT APPARATUS OR MACHINE

Filed March 20, 1922 2 Sheets-Sheet 1

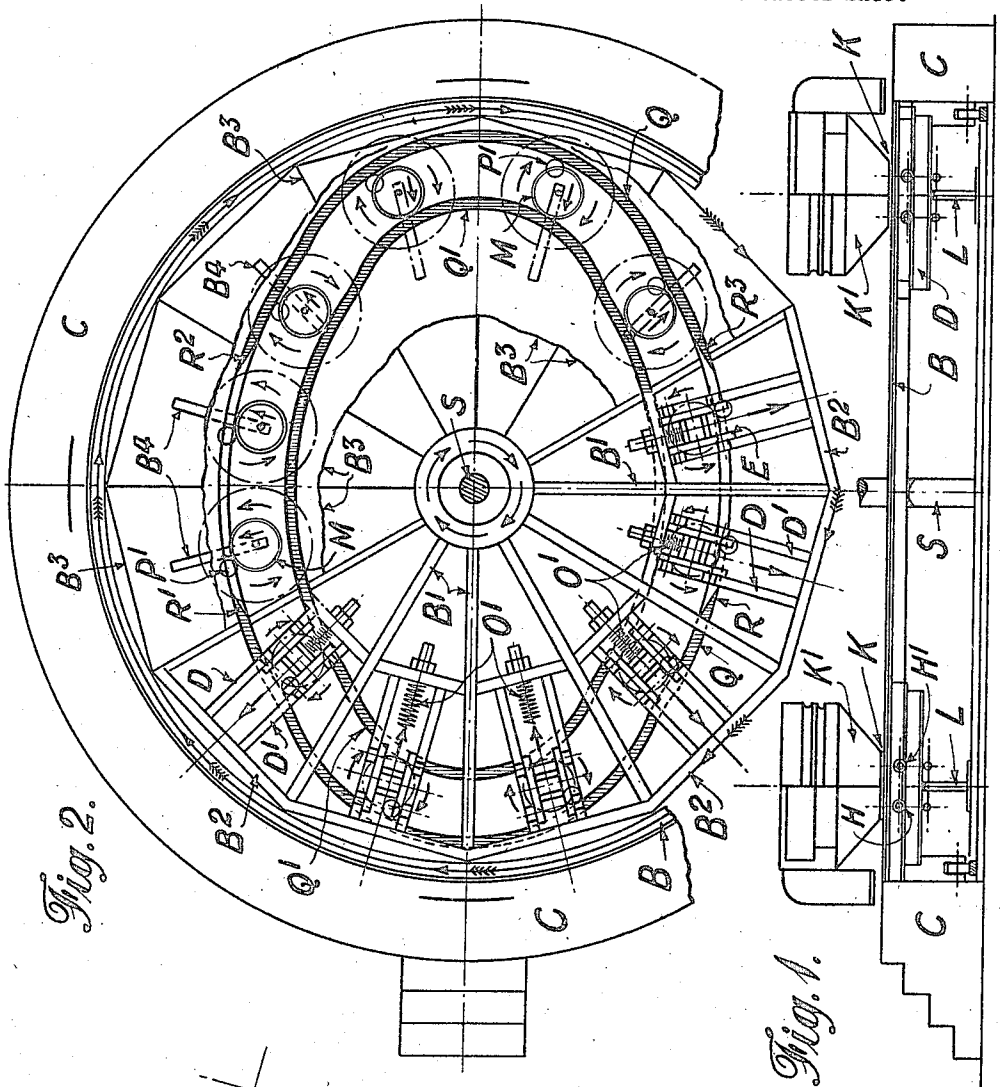

Fig. 2.

Fig. 1.

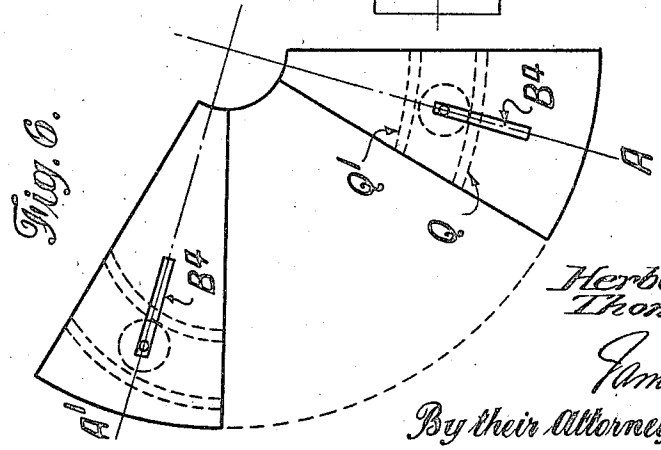

Fig. 6.

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Thomas Jackson
James L. Norris.

By their Attorney:

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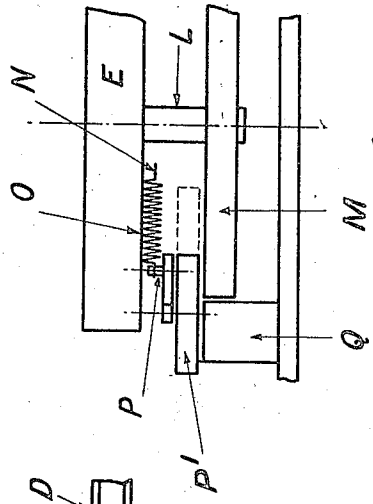

Fig. 4.

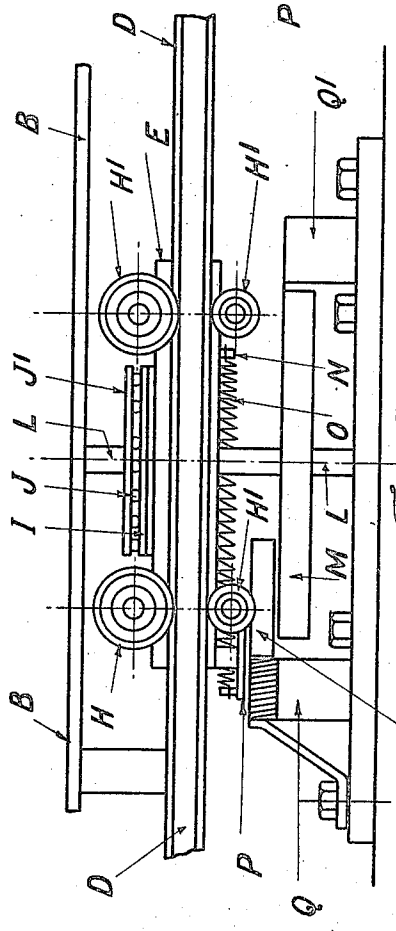

Fig. 3.

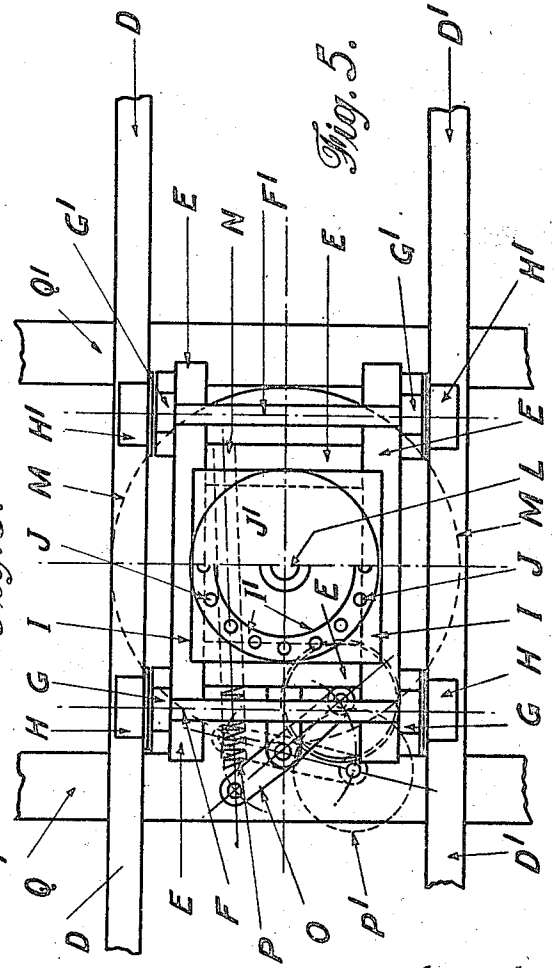

Fig. 5.

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Patented Dec. 11, 1923.

1,477,498

UNITED STATES PATENT OFFICE.

HERBERT PERCY JACKSON, OF CONGLETON, AND THOMAS JACKSON, OF PATRICROFT, NEAR MANCHESTER, ENGLAND.

AMUSEMENT APPARATUS OR MACHINE.

Application filed March 20, 1922. Serial No. 545,233.

To all whom it may concern:

Be it known that we, HERBERT PERCY JACKSON, engineer's mechanic, and THOMAS JACKSON, motor-works inspector, subjects of the King of Great Britain, residing at 6 Booth Street, Congleton, in the county of Chester, and 1 Ivy Street, Patricroft, near Manchester, in the county of Lancaster, England, respectively, have invented certain new and useful Improvements in and Relating to Amusement Apparatus or Machines, of which the following is a specification.

This invention relates to amusement apparatus or machines of the type in which a seat, which may be of any desired form, is given rotary and other movements, and has for its object to provide improved means for imparting such movements to the said seat.

In accordance with our invention, as applied to a machine of the type in which the seats are carried upon a revolving platform, each seat is, or a number of seats are, mounted rigidly upon the upper end of a vertical or inclined shaft or a part secured thereon, the said shaft being journalled in a suitable bearing carried by the revolving platform.

Beneath the said bearing, the shaft carries a pulley or wheel which is adapted to engage a stationary track or tracks of any desired shape. The track causes the pulley or wheel and the shaft to rotate and at the same time the track may displace the lower end of the shaft so as to give a radial or cross-wise movement to the seat or seats thereon respectively towards and from the centre of the revolving platform. A spring or springs may return the shaft to its initial position and at the same time maintain the pulley or wheel in close contact with the track, and a rotary motion is imparted to the seat about its axis.

If desired, the track may be a double one, the pulley engaging one side or the other, according to the position of the seat or seats on the platform, and an opposite or reverse rotary motion may be imparted to the seats about their axis by causing pulleys associated with said seats to alternately contact with the opposite rails of the double track.

The invention will be described with reference to the accompanying drawings in which like letters of reference throughout the figures indicate like or similar parts.

Fig. 1 is an elevation in section showing the revolving platform and the position of seats mounted on the vertical shaft.

Fig. 2 is a plan view, partly in section, showing the positions of some of the seats and also showing the tracks which are below the level of the revolving platform and on the ground level.

Fig. 3 is a sectional detail elevation, drawn to a larger scale than the preceding figures, showing the under carriage or trolley upon which the seat is mounted, which trolley, during the operation of the apparatus, is moved toward and away from centre of the revolving platform, also showing the traction pulley in contact with an inner rail of the double track.

Fig. 4 is a part elevation similar to Fig. 3 showing the traction pulley in contact with the outer rail of the double track.

Fig. 5 is a plan view of the parts shown in Fig. 3.

Fig. 6 is a plan view of a part of the revolving platform showing diagrammatically the extreme positions of the traction pulley.

According to the present construction we employ a revolving platform B constructed of supporting members, strays or struts B^1, B^2, and covered by sectional floor boards B^3, enclosed by a stationary staging C. We secure to the underside of the platform B a plurality of pairs of metal rails D, D^1, upon each of which we mount a rectangular carriage or trolley frame E provided with axles F, F^1, bearings G, G^1, and flanged wheels or runners H, H^1. On each rectangular frame E we mount a rectangular plate I having a channelled cup I^1, which contains spherical balls or bearings J, on which we superimpose or mount a circular plate J^1. The lower end or bottom K of the seat or tub K^1, which may be of any form, such as a vehicle or figure, is mounted on the vertical shaft or spindle L which passes upwards through a slot B^4 in the revolving platform B and is journalled in the plate J^1. The said plate J^1 with the seat thus rides upon the ball-bearing parts before named. At the lower end of the shaft L we provide a wheel or pulley M. At N, on the underside of the rectangular carriage or trolley frame E, we securely attach one end of a spiral spring O, the other end of

said spring being attached to a crank shaped or two armed lever P journalled on a bracket attached to the rectangular trolley and carrying a friction pulley P^1. The spring is distended as shown in Fig. 3 when the friction pulley bears against or makes contact with the raised portion of the outer rail Q which is specially raised out of the track situated below the trolley frame E, which operation comes into action when the normally situated friction pulley which extends beyond the outer rail as shown in Figs. 2, 4 and 5 enters the open entrance of the track at R see plan Fig. 2, which action causes the lever P to move the shaft L lengthwise of the slot or opening B^4 in the platform B and pulley M across the path of the track into contact with the inner rail Q^1, giving a rotary motion to the seat as indicated by the arrows Fig. 2, and as shown in Fig. 5. The shaft L continues to rotate and at the same time to slide or move radially towards and from the centre of the revolving platform according to the horizontal contour, configuration, form or curves of the said rail or track until the said friction pulley P^1 passes out to the open end or exit of the track at R^1 when the friction pulley P^1 is released to assume its normal position to permit the spiral spring O under the carriage or trolley to draw the friction pulley free from any contact at its periphery in which event the trolley carriage shaft L, and pulley M by the aid of the spring O^1 are forced forward over or across the track so that the pulley M then makes contact with the outer rail Q as shewn at R^1 (Figs. 2, 4 and 6), the effect of which is that the circular movement of the seat about the axis of shaft L is reversed, and so continues until the friction pulley enters the entrance R^2 of the track Q when obviously the same movements occur or take place from R^2 to the open or exit point R^3 in the opposite section of the track from point R to point R^1 as fully shown in Fig. 2.

It will be observed that the radial movements of each seat K^1 with its under carriage or trolley frame E to and from the axis or centre S of the machine is governed by the engagement of its friction pulley P' with the raised portion of the track Q, and the movement of its shaft L in its slot B^4 of the platform B. It will also be noted that each under carriage or trolley frame E, as its pulley M traverses the inner or outer rails, respectively, of the track, travels with the platform B and lengthwise of the rails D, D^1, while the platform B is revolving, and that these movements occur during the travel of the seats K^1 in the arc from point A to point A^1, see Fig. 6. The circular and reverse circular or concentric movements of the seats K^1 about the axes of the shafts L are all simultaneously effected and operate through the agencies above described and during the revolving action of the platform B about its axis or center S.

From what has been hereinbefore set forth it is obvious that the function of the raised portion of the stationary outer rail Q is to form a bearing surface for the runner or friction pulley P^1 to throw over or move the shafts L with their pulley M to the opposite stationary rail Q^1 of the track and cause the shafts to rotate about their axes and such is accomplished by the gyration of the revolving platform B about its axis from which platform the shafts with the whole of their attendant supporting mechanism are suspended when each of the friction pulleys P^1 reach the gaps or open spaces between the points R^1 and R^2 and between R^3 and R, respectively, the friction pulleys P^1 are released and upon their release from the rail Q their pulleys M are forced over by spring O^1 from the rail Q^1 and engage with the lower part of the opposite rail Q causing the shafts L to rotate about their axes and in a direction opposite to the direction imparted thereto when in contact with rail Q^1.

Thus according to the arrangements described we accomplish five separate movements of each seat of the revolving platform from any given point, for example the point R, viz: First, concentrically relatively to the axis S of the machine and this movement continues and combines with each of the following and intermittent movements. Second, radial movement towards the centre S. Third, concentric movement about its own axis by engagement of the pulley M with rail Q^1. Fourth, radial movement from the centre S. Fifth, reverse concentric movement about its own axis by engagement with rail Q.

The essential features of the above movements or operations being the advance and retiring movements towards and away from the centre of the machine and the alternate or reverse circular movements of the seats, about their axes, such movements being somewhat simulative of waltzing movements as in dancing.

If desired such movements may be more or less effected by modifications of our invention without departing from the principle of this our said invention.

We claim:—

1. In a machine for amusement purposes, a rotating platform having slots extending radially therein, a track beneath said platform comprising parallel curvilinear rails, carriages upon said platform having shafts extending through said slots, pulleys on the lower ends of said shafts adapted to ride between said rails, means whereby said pulleys are held against the inner of said rails and the construction of the outer rail being such

that said pulleys are released from contact with said inner rail periodically during the rotation of said platform.

2. A machine for amusement purposes comprising a rotating platform, a substantially elliptical track lying beneath said platform, said track having two parallel rails one of which is mutilated by having spaced depressions in its upper edge, said platform being provided with radial slots, carriages carried by said platform having shafts extending through said slots, pulleys on said shafts adapted to ride between said rails, supplementary pulleys movably mounted and adapted to press the first named pulleys against the mutilated rail when the platform is rotated, said supplementary pulleys being adapted to swing through said spaced depression to permit the first named pulleys to contact with the mutilated rails whereby rotary movement of the carriages are periodically reversed.

3. A machine for amusement purposes comprising a rotary platform having radial slots therein, a substantially elliptical track beneath said platform, a portion of one of the rails of said track being raised above the other rail, radial tracks carried by said platform on either side of said slots, carriages having wheels movable on said radial tracks, shafts extending from said carriages through said slots, pulleys on said shafts guided between the rails of said first-named track and a lever pivotally attached to said carriage and having a supplemental pulley on one end thereof, said supplementary pulley being adapted to ride against the raised portion of one of the rails of said first-named track for holding the first named pulley against the other rail, one of the rails of said first-named track having spaced depressions through which the supplementary pulley may swing to permit the first named pulley to be released from contact with the other rail and to contact with the opposite rail whereby the rotary movement of the carriages is periodically reversed.

In testimony whereof we have hereunto set our hands.

HERBERT PERCY JACKSON.
THOMAS JACKSON.