SAFETY ROTATING PLAYGROUND APPARATUS
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4 Claims

ABSTRACT OF THE DISCLOSURE
A playground apparatus of the roundabout type consisting of a platform adapted to rotate about a substantially vertical axis wherein the platform is formed of a plurality of segments interconnected along radially extending edges and seams. The segments are of such a configuration that the maximum generated radius of rotation of the platform is defined by segment portions constituting the platform periphery intermediate the segment edges wherein burrs, sharp edges and corners occurring at the segment edges are "recessed" with respect to the generated radius of platform movement thereby protecting a child standing upon the ground adjacent the platform by from injury by the platform seams.

BACKGROUND OF THE INVENTION
The invention pertains to roundabout type platforms upon which occupants may ride as the platform rotates about a substantially vertical axis.

Roundabout platforms have long been enjoyed as a favorite playground apparatus, and such platforms have taken the form of the complicated "merry-go-round," or the very simplified rotating disk mounted upon a vertical axis. It is also common practice to tilt the axis of the roundabout platform slightly to permit a variable rate of rotation.

While roundabout playground devices are of relatively safe nature the danger exists of a child standing near the rotating platform being injured by edges, cracks or burring occurring on the platform which might strike a child's leg disposed adjacent the platform periphery. It is a common practice to form roundabout platforms from a plurality of identical triangular, pie-shaped or polygonal segments wherein the segments are interconnected at their radially extending sides. In that manufacturing tolerances, and fabrication techniques do not always permit an exact flush and identical interconnection to occur at each segment side at the periphery it is not uncommon for a shoulder, projection, corner, burr or separation to exist at the interconnection of adjacent segments at the platform periphery. This location of the platform thereupon becomes a potential hazard, capable of gashing, bruising or otherwise injuring a child whose leg may lightly rub against the platform periphery as the platform rotates.

To the applicant's knowledge nothing has been done in the prior art to prevent this type of injury, other than using a continuous guide or bumper strip about the platform periphery, which is installed after the platform has been completely assembled. This type of strip is objectionable in that it is difficult to assemble and maintain in place and often becomes a hazard in itself.

SUMMARY OF THE INVENTION
The invention pertains to a roundabout platform playground apparatus wherein the segments are so constructed that the locations at the intersection of the radially extending segment sides or edges at the periphery do not constitute the maximum generated radius of the rotating platform, wherein these portions of the segments are actually "recessed" with respect to the generated platform radius and any child whose leg or other body part engages the periphery of the platform is likely to be engaged by a portion of the segment periphery intermediate the radially extending sides thereof and be gently pushed aside and away from the segment edges. In this manner the platform configuration protects children from the usual type of injury experienced with roundabout playground platforms, and yet the manufacturers' manufacturing techniques and assembling procedures need not be varied or changed in any manner as compared with conventional procedures.

In the practice of the invention the sides of the segments of the playground platform which extend in a radial direction are identical in length, and terminate at the periphery of the segment, which preferably constitutes a segment of the complete platform periphery. The segment periphery is of a convex configuration, preferably circular, which is of a radius less that of that of the generated radius of the platform. In this manner the peripheral portion of the playground platform segment is "bowed," and upon assembling a playground platform from this type of segment a somewhat scalloped platform periphery configuration results.

It is an important object of the invention to provide a safe, dependable roundabout playground platform device which minimizes the possibility of injury to those standing on the ground adjacent the platform, yet does not require unusual manufacturing techniques or modification, and permits assembly of the apparatus in a normal manner.

BRIEF DESCRIPTION OF THE DRAWING
The aforementioned objects of the invention will be appreciated from the following description and accompanying drawing wherein:

FIG. 1 is a plan view of a playground apparatus constructed in accord with the invention,
FIG. 2 is an elevational, diametrical, sectional view taken along Section II—II of FIG. 1,
FIG. 3 is an enlarged, detail, perspective view of the platform base assembly,
FIG. 4 is a plan view of a platform segment in accord with the invention,
FIG. 5 is an inner, elevational view of a playground platform segment, per se,
FIG. 6 is a side, elevational view of a platform segment,
FIG. 7 is an enlarged detail, elevational, sectional view taken along Section VII—VII of FIG. 1,
FIG. 8 is an enlarged detail, elevational, sectional view taken along Section VIII—VIII of FIG. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT
The assembled roundabout type playground apparatus in accord with the invention is illustrated in FIGS. 1 and 2. The roundabout includes a base assembly 10 adapted to be mounted upon a suitable supporting surface, such as a concrete footing 12. The base assembly includes a vertically extending axle shaft 14 mounted on a base 16, which rotatably supports the journal sleeve 18 from which depend a plurality of radially extending support arms 20, FIG. 3.

The roundabout platform 22 is formed by a plurality of interconnected laterals or segments 24, attached to the arms 20 in a manner which will be later described. A plurality of handrails 26 are mounted upon the assembled platform whereby the occupants may stand upon the platform, grasp the handrails and enjoy the rotating movement of the platform as it rotates about the axle shaft 14.

The segments 24 are somewhat of a "pie" shape having a plan configuration as is apparent in FIG. 4. The segments 24 include radially extending sides 28 and 30 from
which downwardly depend uniformly tapered flanges 32 and 34, respectively, substantially perpendicularly disposed to the flat segment portion 36 which forms the surface of the platform. At its innermost portion the segments 24 are formed with a linear edge 38, and the outer peripheral portion of the segments is indicated by the arcuate edge 40. The arcuate convex edge 40 preferably includes a plate 42, welded thereto which is of a vertical dimension corresponding to the flanges 32 and 34 at the edge 40, as is apparent from FIGS. 5 and 6.

The flanges 32 and 34 are formed with a plurality of holes for receiving bolts. The holes 44 disposed adjacent the end edge 38 are adapted to align with holes 46 defined in the ends of the base arms 20, and in this manner the segments 24 may be attached to the arms. The bolt holes 48 are used to receive bolts 49 which interconnect the flanges of adjacent segments, as illustrated in FIG. 7, and it will be appreciated that the assembling of the segments 24 to the arms 20, and to each other can be readily accomplished in the field at the point of erection without unduly skilled labor.

The presence of the segment edges 38 results in an opening at the central region of the platform, and, of course, the purpose of this opening is to permit the assembly of the segments to the arms 20. This opening is covered by a cover plate 50 mounted upon the segments by bolts or screws, not shown, and upon the handrailing 26 being attached to the segments 24 through holes 52, FIG. 4, the apparatus is ready for use.

In that the usual method of manufacture of the segments 24 is by heavy duty sheet metal blanks, and welding techniques, it is difficult during manufacture to closely maintain the tolerances of the segments, and slight misalignment, shoulders, burrs, or openings may occur at the periphery of the platform 22 at the junction of adjacent intersected sides 28 and 30 of adjacent segments, such as at 54. For instance, one of the segments 24 may have a slightly greater radial dimension than the next which would result in a slight radial shoulder at this junction. A child standing on the ground adjacent the platform, whose leg was lightly engaging the periphery of the rotating platform, could be injured by such a shoulder, burr, or misalignment occurring at the seam junction. In order to eliminate this type of possibility for injury, the curvature of the segment side 40 is of a unique configuration. The configuration of the segment side 40 is such that the maximum radial dimension occurs at the central regions of the peripheral edge 40 of the segment section side, and the minimum radial dimension occurs at the points 54 representing the intersection of the edge 40 with the sides 28 and 30. Thus, when the segments are assembled the periphery of the platform has an escalloped configuration as is apparent from FIG. 1.

Due to the unique peripheral configuration of the platform apparatus any child who may engage the edge of the rotating platform will only likely be engaging that portion of the segments 24 between the junctions 54. As the sides 40 and plate 42 of the segments are of a smooth arcuate configuration no more than a "rubbing" of the child by the segment plate 42 will occur, and no serious injury can be inflicted. The unique construction of the segment sides 40 results in the junctions 54 of the segment being "recessed" with respect to the generated radius of rotation of the platform 22, and in this manner superior safety is achieved.

While the configuration of the edges 40 may take several convex forms in the practice of the invention, the segments may be of a circular configuration having a radius less than the radius of generation of the platform when rotating. For instance, the edge 40 illustrated in FIG. 1 has a center generally indicated at 58 and a radius A, which is obviously of a lesser dimension than the radius of rotation of the playground platform about the axis of shaft 34.

It is appreciated that various modifications to the invention may be apparent to those skilled in the art without departing from the spirit and scope thereof, and it is intended that the invention be limited only by the scope of the following claims:

I claim:
1. A safety rotating playground apparatus comprising, in combination, a platform having a central region and a periphery, bearings means mounted on said platform central region, axle means cooperating with said bearing means rotatably supporting said platform for planar rotation about a generally vertical axis, said platform comprising a plurality of similar polygonal shaped segments each having two radially extending sides of substantially equal length and a third side comprising a portion of the periphery of said platform, means interconnecting a radially extending side of one segment to a radially extending side of the adjacent segment whereby said platform comprises a plurality of segments connected on each side to its adjacent segments, said segments' third side being of a convex configuration of such shape that the maximum radial distance of said radially extending sides from the axis of rotation of the platform is less than the radial distance of a point on said third side intermediate the associated radially extending sides whereby segment third side portions intermediate said radially extending sides comprise the maximum diametrical dimension of said platform.
2. A safety playground apparatus as in claim 1 wherein said segment's third side is of a circular segment configuration having a radius less than the radius of generation of the rotary platform.
3. A safety playground apparatus as in claim 1 wherein said segment's radially extending sides include downwardly disposed flanges and said flanges of adjacent segments are interconnected by fasteners.
4. A playground apparatus as in claim 3 wherein said segments' third side includes a downwardly extending flange, said third side flange connecting with the radially extending side flanges of the associated segment.

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