Aug. 27, 1935. W. W. DITTMAR ET AL 2,012,378

MERRY-GO-ROUND

Filed Jan. 26, 1933 3 Sheets-Sheet 1

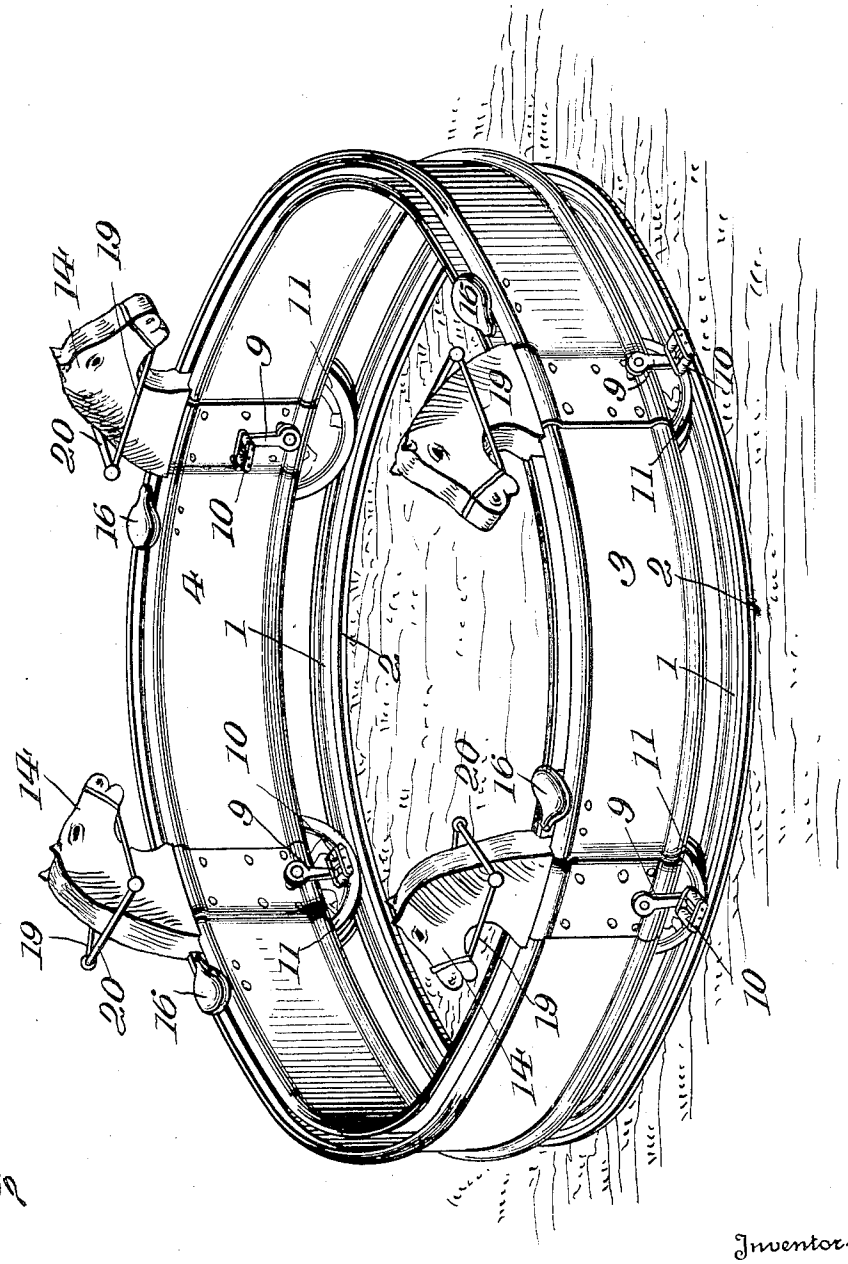


Fig. 1.

Inventors
William W. Dittmar and
Isaac S. Barto.

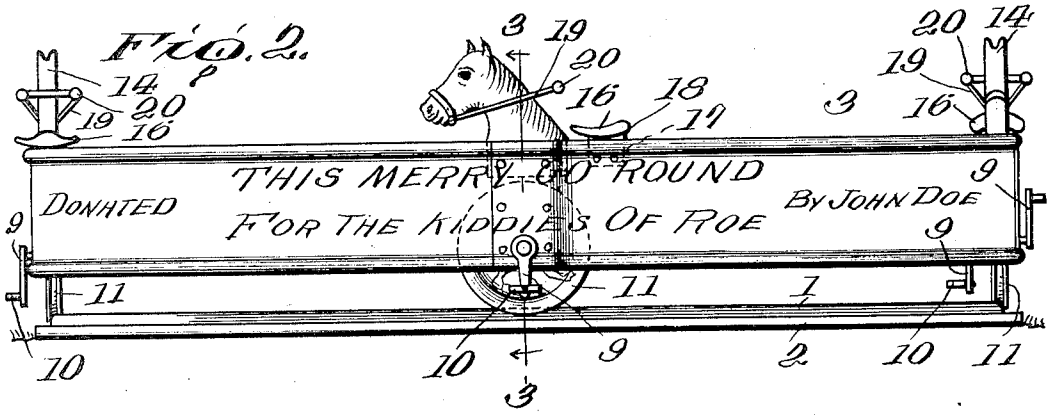
By Allison Wright & Allison
Attorneys

Aug. 27, 1935. W. W. DITTMAR ET AL 2,012,378

MERRY-GO-ROUND

Filed Jan. 26, 1933 3 Sheets-Sheet 2

FIG. 2.



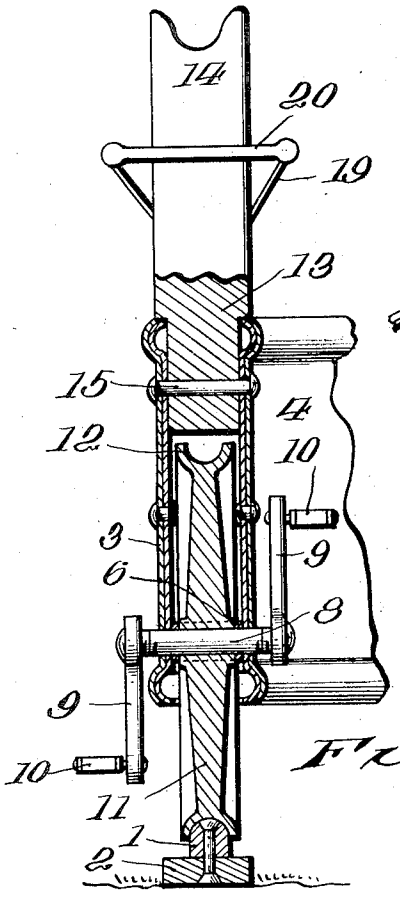


FIG. 3.

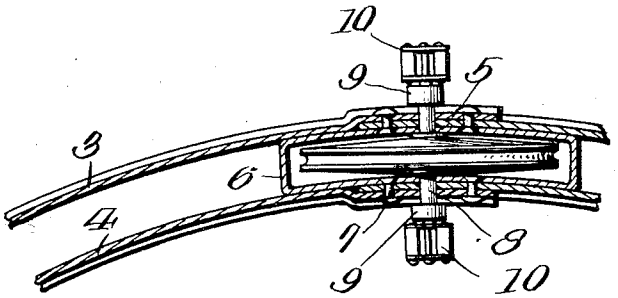


FIG. 4.

Inventors
William W. Dittmar
Isaac S. Barto

By Pollson Knight & Pollson

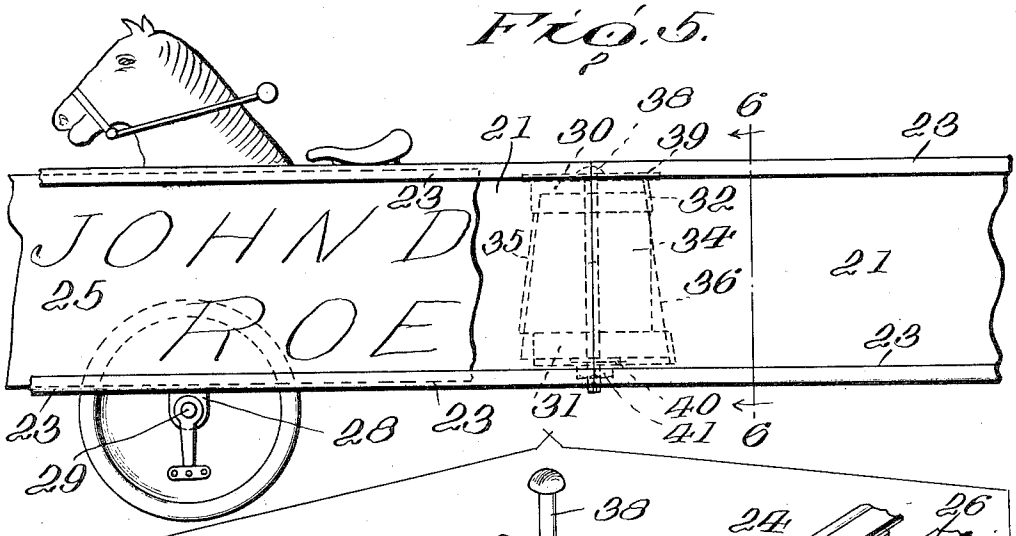
Attorneys

Aug. 27, 1935. W. W. DITTMAR ET AL 2,012,378

MERRY-GO-ROUND

Filed Jan. 26, 1933 3 Sheets-Sheet 3

FIG. 5.



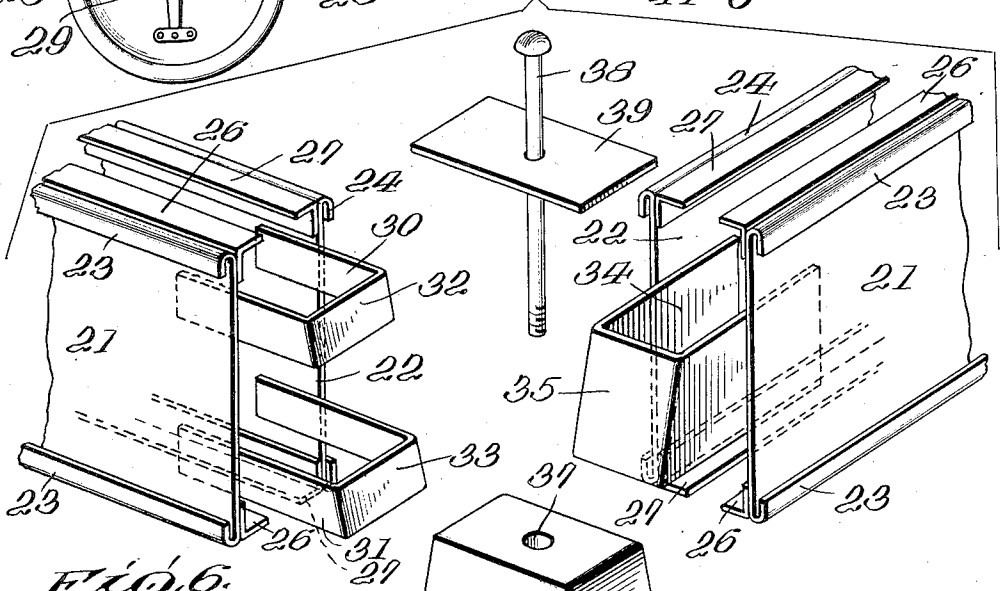


FIG. 6.

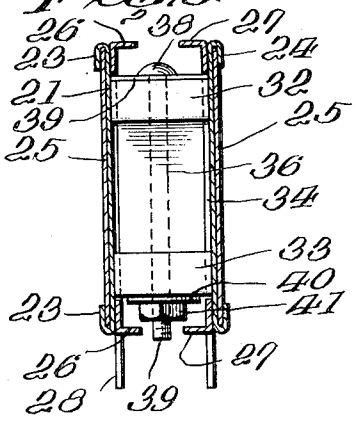
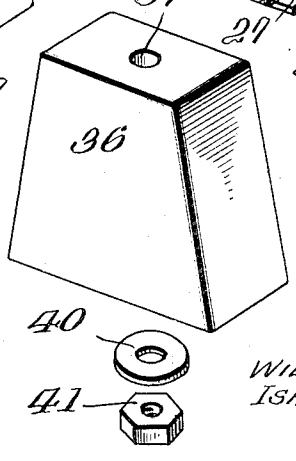


FIG. 7.



Inventors
WILLIAM W. DITTMAR and
ISAAC S. BARTO.

By Gallison Wright & Gallison

Attorneys

Patented Aug. 27, 1935 2,012,378

UNITED STATES PATENT OFFICE

2,012,378

MERRY-GO-ROUND

William W. Dittmar and Isaac S. Barto,
Williamsport, Pa.

Application January 26, 1933, Serial No. 653,690

15 Claims. (Cl. 272—33)

This invention relates to certain new and useful improvements in merry-go-rounds and more particularly to self-propelled merry-go-rounds, the object being to provide a merry-go-round which is exceedingly strong and durable and one which has a neat appearance.

Another object of our invention is to provide a merry-go-round in which the frame is formed of a pair of concentrically arranged spaced apart sectional bands forming a large area for advertising purposes and providing a support for the horses' heads and the seats which are in the form of saddles, said bands also forming a guard which encloses the wheels so as to protect the wheels from the clothing of the riders.

Another object of our invention is to provide the main frame with sub-frames forming bearings for crank shafts carrying pedals by means of which a circular frame is propelled around a circular track.

Another object of our invention is to provide the circular frame of sectional bands secured together by transverse fastening members which also secure the horses' heads in position and the sub-frames between the main frame.

A still further object of the invention is to provide a construction which is very strong and durable and which is mounted and propelled around a circular track so that it can be propelled easily, the track and main frame being formed in sections allowing the same to be assembled and disassembled for shipping purposes.

A still further object of the invention is to provide a merry-go-round which is formed of sections connected together in a novel manner whereby the sections with the horses' heads and wheels can be assembled at the factory so that when the sections arrive at their destination, they can be readily assembled and secured together to form a rigid circular frame which has on its outer and inner circumference an annular guideway or groove into which advertising plates can be readily inserted or removed.

By constructing a merry-go-round in the manner as specified above, we eliminate separate guards for individual wheels and dispense with the use of separate frames for supporting horses' heads and saddles.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined in the appended claims.

In the drawings,

Figure 1 is a perspective view of a merry-go-round constructed in accordance with our invention;

Figure 2 is a side elevation of the same;

Figure 3 is a section taken on line 3—3 of Figure 2;

Figure 4 is a detail horizontal section showing the sub-frame for supporting the wheels and crank shaft thereof;

Figure 5 is a side elevation showing a modified form of constructing the bands and connecting the sections together;

Figure 6 is a section taken on line 6—6 of Figure 5; and

Figure 7 is a perspective view of the abutting ends of the sections showing the means for securing the same together, the parts being separated.

In carrying out our invention we employ a circular track 1 preferably formed of four sections secured in a circular base 2 formed of a similar number of sections, said base being adapted to be placed on the surface and secured in any desired manner, but we have found in practice that when the base 2 is formed of sufficient width, it can be placed on a flat surface and will support the track rigidly.

The merry-go-round proper is formed of a circular frame comprising circular bands 3 and 4 formed of sections, preferably four in number. These bands are preferably formed of metal and have beads preferably formed on their upper and lower edges as clearly shown in Figure 3.

The sections of the bands are overlapped as shown at 5 and arranged between the spaced bands are sub frames 6 which are secured in position by transversely arranged fastening members 7 in the form of bolts or rivets which perform the double function of securing the overlapping ends of the bands of the frame together and securing the wheel frames or sub frames 6 between the spaced bands as clearly shown in Figure 4.

These wheel frames are provided with transversely arranged openings forming bearings for shafts 8, said bands being provided with registering openings through which the shafts 8 extend, the shafts carrying crank arms 9 provided with pedals 10 by means of which the shafts can be rotated. The openings of the frame 6 form bearings for the shafts 8 and the shafts 8 are provided with wheels 11 having grooved rims 12 corresponding in shape to the tracks 1 and on which the wheels are adapted to be mounted so that the frame can be rotated or propelled thereon.

Disposed between the spaced bands 3 and 4

in vertical alignment with the shafts 8 are the neck portions 13 of horses' heads 14 which are secured in position by transversely arranged bolts or rivets 15 which not only secure the heads in position between the bands, but secure the overlapping ends of the bands together to form the circular frame.

Arranged to the rear of each horses' head is a seat 16 having a depending portion 17 extending between the spaced bands 3 and 4 and secured by transverse bolts or rivets 18, the upper ends of the bands forming a support for the seat or saddle.

It will be seen that the horses' necks are reduced so that shoulders are formed which rest on the upper or beaded edges of the bands and the same is true in respect to the seats or saddles so that the bands form a support for the horses' heads and the saddles without any additional supporting means.

The circular frame formed of the spaced bands 3 and 4 is of sufficient size to thoroughly protect the wheels 11 and also provide a large area for advertising purposes and by constructing this frame in this manner we dispense with all additional supports for the seats, horses' heads and the like and provide a rigid circular frame mounted on wheels driven by crank shafts so that the occupants of the merry-go-round can cause the frame to travel around the circular track by operating the cranks. This provides a very simple construction which is very strong and durable, the parts being so arranged and connected together that all danger of their becoming separated in use is dispensed with and a self-propelled merry-go-round is formed very cheaply.

The horses' heads are provided with bands 19 connected together by bars 20 which are adapted to be grasped by the riders so as to enable the riders to hold themselves in position on the merry-go-round as it is being propelled by the operation of the crank shaft, these bars forming handle bars and while we have shown this particular construction, of course, various changes can be made without departing from the spirit of our invention.

In the embodiment of our invention as shown in Figures 5, 6 and 7, we form the sectional circular bands 21 and 22 with turned over upper and lower edges 23 and 24 to form a guideway into which advertising sheets or plates 25 can be inserted by flexing the same whereby the advertising matter on the circular bands forming the framework of the merry-go-round can be readily changed from time to time. The upper and lower edges of the bands 21 and 22 carry angle irons 26 and 27 which are preferably welded thereto so as to form a frame of the proper strength to support the bands.

In the construction shown in Figures 1 to 4 the crank shaft 8 is mounted within the frame 6 but in the construction shown in Figures 5, 6 and 7, clips 28 are carried by the frame in which the crank shafts 29 are mounted.

The saddles and horses' heads are secured between and on the upper angle irons 26 and 27 at a point remote from the joint as clearly shown in Figure 5 and in constructing the merry-go-round, the circular frame formed by the bands and angle irons is preferably formed in four sections, one end of each section being provided with outwardly projecting spaced substantially U-shaped clips 30 and 31, the connecting bars of these clips being inclined as shown at 32 and 33 and these clips are preferably welded to the bands as clearly shown.

The opposite end of each section is provided with a substantially U shaped clip 34 of a size to snugly fit between the clips 30 and 31 when the ends of the sections are brought together and this clip 34 is provided with an inclined connecting bar 35 which forms an inclined wall inclined in the opposite direction to the inclined walls of the clips 30 and 31 and into which is adapted to be inserted a wedge-shaped block 36 which is provided with an opening 37 through which a bolt 38 is adapted to pass, said bolt being mounted in a plate 39 adapted to straddle the angle irons 26 and 27 at the joint thereof, the bolt being provided with a threaded end on which is mounted a washer 40 and a nut 41 by means of which the wedge-shaped block can be drawn upwardly into position within the clips 31 and 35 so as to draw the sections tightly together and form a rigid circular frame of the various sections.

It is, of course, understood that the substantially U-shaped clip 34 is welded to the bands and that these clips are so arranged that when the four sections are arranged in abutting relation to one another, that four wedge-shaped blocks will be employed to draw the various sections tightly together and secure the frame in a rigid manner.

It is, of course, understood that the bands and the angle irons constituting the sections of the circular frame are formed of sufficient width to thoroughly protect the wheels from the clothes of the riders and to provide sufficient area for carrying advertising matter.

While in the drawings we have only illustrated the abutting ends of two sections, it is, of course, understood that the abutting ends of each section are connected together in a similar manner and that the sections are provided with one or more wheels with cranks having pedals by means of which the rider can propel the circular frame around a circular track.

From the foregoing description it will be seen that we have provided a self-propelled merry-go-round formed of a pair of spaced, concentrically arranged bands formed of sections having wheel frames secured between the bands for supporting the wheels with crank shafts and pedals for operating the same and while we are aware that it is old prior to our invention to use circular frames for supporting wheels, these frames do not form guards for the wheels to protect the clothing nor do they form supports for the seats and horses' heads.

What we claim is:

1. A merry-go-round comprising a circular frame formed of spaced circular bands having wheel frames secured between the same adjacent their lower edges and horses' heads between the same adjacent the upper edges for spacing said bands apart, wheels mounted in said frames carrying axles provided with crank shafts having pedals, the periphery of said wheels terminating in a plane below the upper edges of said bands, and a circular track upon which said wheels are mounted.

2. A self-propelled merry-go-round comprising a circular frame formed of spaced bands, wheel frames arranged between said bands adjacent their lower edges, members arranged between said bands in vertical alignment with said wheel frames adjacent their upper edges, shafts mounted in said wheel frames, wheels mounted on said shafts, the periphery of said wheels terminating in a plane below the upper edges of said bands, cranks carried by said shafts and

pedals carried by said cranks for rotating said wheels.

3. A merry-go-round comprising a circular track, wheels adapted to travel on said track, a circular frame carrying said wheels, said circular frame comprising spaced concentric bands enclosing said wheels, the upper edges of said frame being in a plane above the periphery of said wheels, said bands forming supports for saddles and horses' heads, said horses' heads and saddles forming means for spacing said bands.

4. A merry-go-round comprising a circular frame formed of spaced bands having wheel frames arranged between the same adjacent their lower edges and horses' heads and saddles arranged between the same adjacent their upper edges, shafts mounted in said wheel frames carrying wheels provided with grooved rims, the upper edges of the wheel frames being in a plane above the periphery of said wheels, cranks carried by said shafts provided with pedals and a circular track on which said wheels are adapted to travel.

5. A self-propelled merry-go-round composed of a frame formed of a pair of concentrically arranged wide bands, said bands being spaced apart adjacent their lower edges by wheel frames and adjacent the upper edges by the neck portions of horses' heads, wheels mounted in said wheel frame provided with crank shafts, the upper edges of said bands being in a plane above the periphery of said wheels, said bands forming a guard for said wheels and saddles mounted directly upon the upper edges of said bands.

6. A merry-go-round comprising a circular frame formed of spaced bands, said bands being formed of sections and means disposed between said bands for drawing the abutting ends of said sections together and securing the same.

7. A merry-go-round comprising a circular frame formed of sections, each section comprising spaced bands carrying angle irons at their upper and lower edges, one end of one section being provided with spaced clips and the other end of said section being provided with a single clip, said clips being so disposed in respect to one another that when said sections are assembled, the spaced clips receive the single clip on the abutting end of the adjacent section, and a member mounted in said clips having inclined faces for drawing said sections together.

8. A merry-go-round comprising a circular frame formed of segments, each segment comprising spaced bands forming supports for seats, a wheel carried by each segment provided with a crank shaft carrying crank arms provided with pedals, the upper edge of said frame being in a plane above the periphery of said wheels and means for securing said segments together to form a circular frame.

9. A merry-go-round comprising a circular frame formed of sections, each section being provided with a supporting wheel and comprising spaced bands, U shaped clips having inclined connecting bars carried by one end of each section, a single clip provided with an inclined connecting bar carried by the opposite end of each section, said clips being so disposed that when the ends of the sections are arranged in engagement with one another an inclined socket is formed, a wedge-shaped member adapted to be disposed within said socket and a plate straddling the upper edges of said bands carrying a bolt passing through said wedge-shaped member having a nut mounted thereon for drawing said wedge-shaped member within said clips to draw the abutting ends of said sections together.

10. A self-propelled merry-go-round formed of a circular frame composed of spaced bands, wheel frames arranged between said bands for spacing said bands adjacent their lower edges, horses' heads arranged between said bands adjacent the upper edges for spacing said bands, wheels mounted in said frame enclosed by said bands, said bands extending upwardly beyond the periphery of said wheels, said wheels carrying axles provided with crank shafts having pedals and a circular track upon which said wheels are mounted.

11. A merry-go-round comprising a circular frame formed of sections, each section being provided with supporting wheels and comprising spaced bands, U-shaped clips carried by said sections, a wedge-shape member adapted to be disposed within said clips and a bolt for moving said wedge-shaped members to draw the sections of said bands together.

12. A merry-go-round comprising a circular frame formed of sections, the abutting ends of said sections being provided with U-shaped clips, a wedge shaped block arranged within said clips and a bolt engaging said block for drawing said sections together.

13. A self-propelled merry-go-round comprising a pair of circular bands formed of sections having overlapping ends, said bands forming a circular frame, a wheel frame secured between said bands at the junction of the overlapping ends, shafts mounted in said wheel frames, wheels mounted on said shafts, the periphery of said wheels terminating in a plane below the upper edges of said bands, cranks carried by said shafts, pedals carried by said cranks, and a circular track upon which said wheels are mounted.

14. A self-propelled merry-go-round formed of a circular frame composed of spaced sectional bands having overlapping ends, wheel frames arranged between the overlapping ends of said bands, transversely arranged fastening means extending through said wheel frames and overlapping ends of said bands for securing said overlapping ends of said bands together and said wheel frames between said bands, wheels mounted in said wheel frames, the periphery of said wheels terminating in a plane below the upper edges of said bands.

15. A merry-go-round having a circular frame formed of sectional bands having their ends overlapped, wheel frames arranged between said bands at the junction with the overlapping ends thereof and secured in position by securing means passing through said wheel frames and overlapping ends of said bands, said wheel frames holding said bands spaced apart at their lower edges, horses' heads provided with reduced neck portions arranged between the overlapping ends of said bands adjacent the upper ends, securing means extending through said overlapping ends and necks of said horses' heads for securing the necks of said horses' heads between said bands and said bands together adjacent the upper edges and wheels mounted in said wheel frames for supporting said main frame, the periphery of said wheels terminating in a plane below the upper edges of said bands.

WILLIAM W. DITTMAR.
ISAAC S. BARTO.