

1,013,792.

R. & J. LUSSE.
 ROUNDABOUT.
 APPLICATION FILED JULY 20, 1911.

Patented Jan. 2, 1912.

3 SHEETS-SHEET 1.

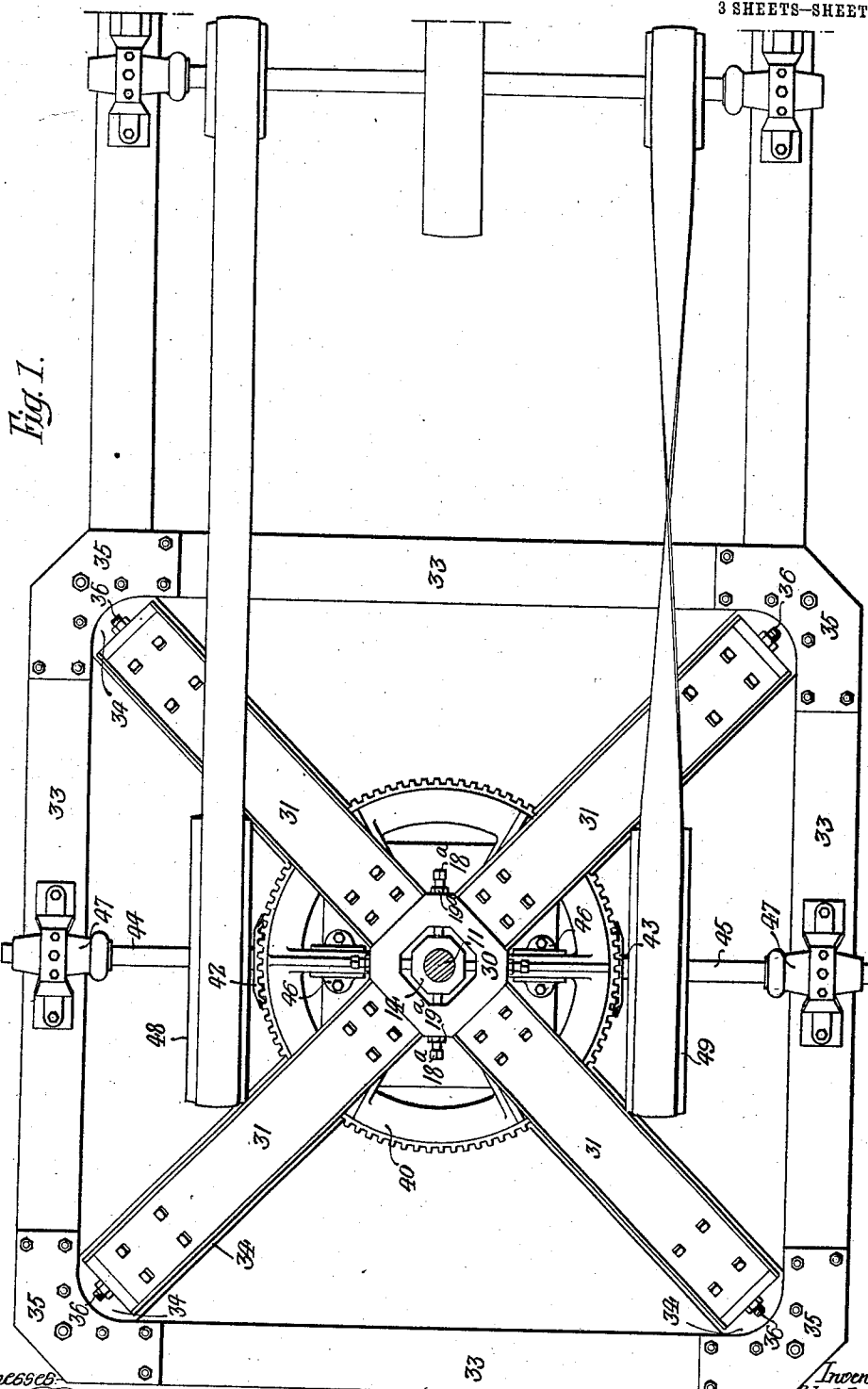


Fig. 1.

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3 SHEETS—SHEET 2.

Fig. 2.

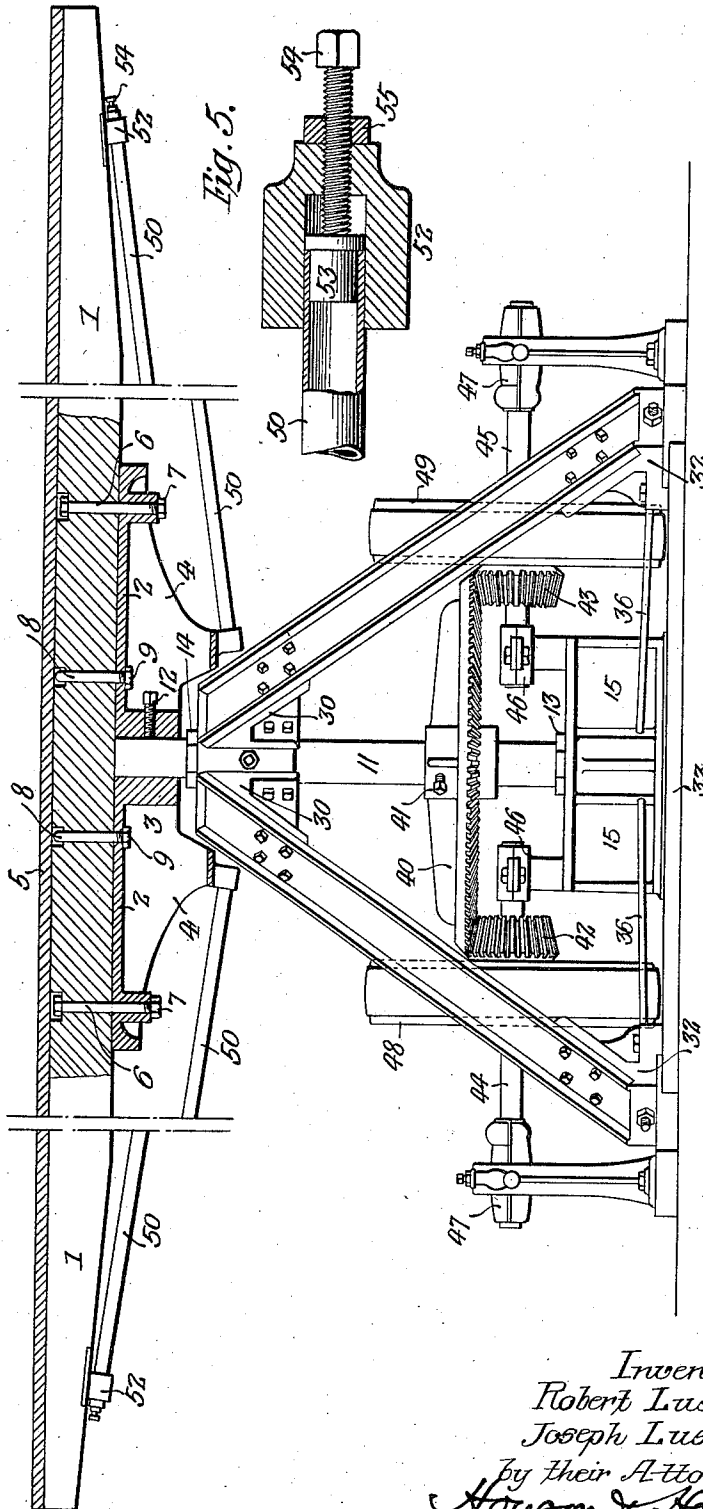
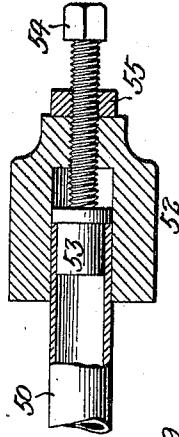


Fig. 5.



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3 SHEETS—SHEET 3.

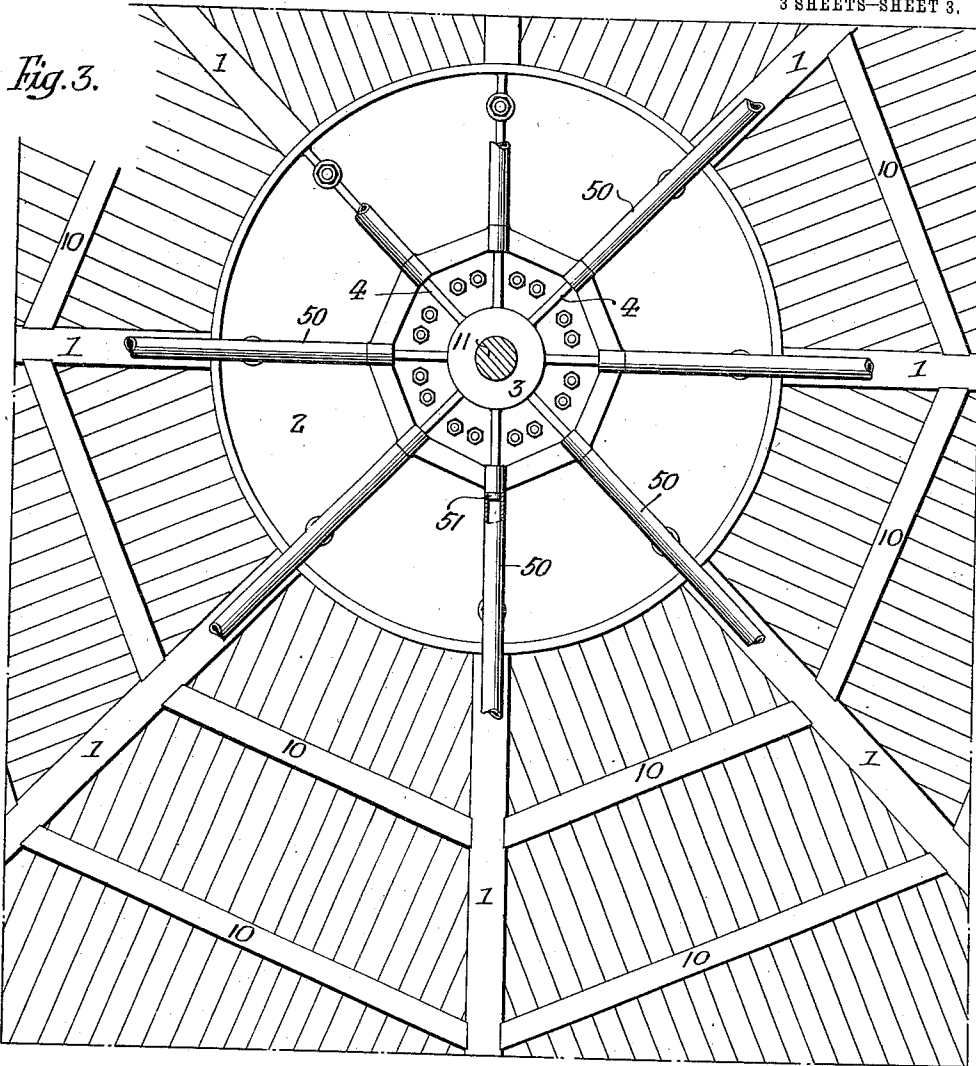
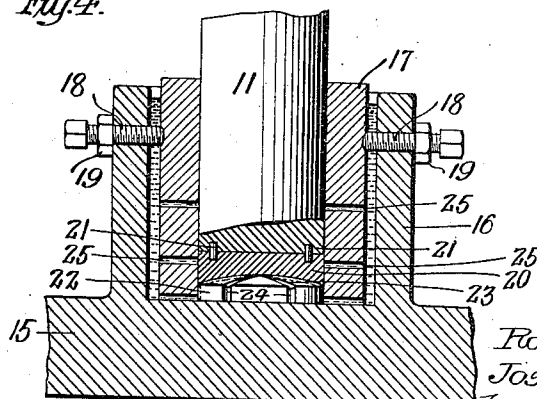


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT LUSSE AND JOSEPH LUSSE, OF PHILADELPHIA, PENNSYLVANIA.

ROUNABOUT.

1,013,792.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed July 20, 1911. Serial No. 639,605.

To all whom it may concern:

Be it known that we, ROBERT LUSSE and JOSEPH LUSSE, citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Roundabouts, of which the following is a specification.

Our invention relates to that form of rotatable amusement structures known as roundabouts or human roulettes, which comprise in general a circular platform, preferably horizontally disposed, which is rotated at a suitable speed and is designed to afford amusement to children and others in their endeavor to stand or sit upon such rotating platform to maintain their position thereon, standing or sitting, during the rotation of such platform.

The object of our invention is to increase the stiffness of the floor, to provide for taking up any sag of the same at the margin of the wheel and to provide an improved supporting structure for such floor. These and other features of our invention are more fully described hereinafter, reference being had to the accompanying drawings, in which:

Figure 1, is a plan view of supporting and driving means for human roulettes embodying our invention; Fig. 2, is a side elevation of the same, partly in section; Fig. 3, is an inverted plan view of the head or bracket supporting the rotatable platform, and Figs. 4 and 5, are views illustrating details of the structure forming the subject of our invention.

In the drawings herewith, 1, 1, represent supporting arms or beams, which may be disposed radially, and are carried by a head in the form of a circular casting, having a top plate 2, hub 3 and ribs 4; the arms being preferably located over said ribs and forming supports for a flooring 5. To secure said arms in place, bolts 6 and nuts 7 are employed adjacent the marginal edge of the plate; the latter being apertured for the passage of said bolts, while at points near the axis of the head, U-bolts 8, with nuts 9 are employed. Between the arms or beams 1, braces 10 may be placed, affording lateral stiffness and additional supporting means for the flooring 5.

The head is carried by a vertical shaft 11, and may be keyed to the hub 3 and further secured thereto by a set screw 12; such shaft being rotatably mounted in a step bearing 13

at the bottom and passing through an upper bearing 14, suitably supported.

The step bearing, which may be carried by the base plate 15 of the structure, comprises a suitable cup 16, which may be integral with the base plate and may receive a bearing sleeve 17 surrounding the end of the shaft. This sleeve is supported in place and adjusted by means of set screws 18 passing through the wall of the cup 16 and having lock nuts 19. The end of the shaft is provided with a bearing element which may consist of a hardened steel plate 20, fitted to the end of the shaft and held against movement by dowels 21. The under surface of this plate, which may be concaved, rests upon a bronze disk 22 in the bottom of the cup 16. This bronze disk is preferably grooved on its upper surface, as indicated at 23, in order that lubricant may enter between it and the steel disk; such grooves meeting vertical grooves 24 at the edge of such disk in order that any dirt or material worn off may be carried away. To insure the passage of lubricant to the shaft and the bearing disks, the bearing sleeve 17 may be apertured or perforated at 25 so that lubricant placed in the cup 16 may find its way to the desired parts, and the lower edge of this sleeve may be notched to carry off the dirt or the worn material.

The upper bearing 14 is mounted in a holder 30 to which it may be adjustably secured by set screws 18^a and lock nuts 19^a, and said holder may be supported by diagonal struts 31 in the form of channel bars suitably bolted to said bearing holder 30, and having their lower ends seated in and secured to shoes 32 carried by a base member 33 in the form of a square frame, with sleepers 34 extending diagonally between the corners of the same; said sleepers meeting beneath the base plate 15.

At the corners of the base frame, members 35 are provided to which the side portions of the frame and the sleepers are anchored. The shoes 32 are movable on the sleepers 34, and rods or bolts 36 anchored in the base 15 pass through said shoes whereby the latter and the diagonal struts 31 may be moved to insure the proper vertical centering of the shaft 11. Extreme accuracy in this matter may be obtained by adjusting the bearings 13 and 14.

The shaft 11 carries a bevel gear wheel 40, keyed or otherwise secured thereto and

which may be supported in proper position by a set screw 41, whereby motion may be imparted to said shaft, and for this purpose bevel pinions 42 and 43 are employed, carried by shafts 44 and 45 journaled in suitable bearings 46 disposed adjacent the base 15, and bearings 47 carried by the side members of the base frame 33 of the structure; said shafts having pulleys 48 and 49, respectively. These pulleys may be driven in opposite directions; one of the belts driving the same being crossed to effect such movement so that together they impart the proper rotative movement to the bevel gear wheel carried by the vertical shaft. The pulleys may be driven by any suitable form of prime or secondary mover, since such mechanism forms no part of our invention.

To support the arms 1 sustaining the floor 20 or upper surface of the rotating portion of the roulette structure, we provide bracing elements in the form of hollow or hollow-ended rods 50 interposed between the ribs 4 of the head carried by the vertical shaft, and the outer ends of said arms. These ribs are provided with pins or knobs 51 over which the tubular elements fit in the manner indicated, and the outer ends of said tubular members or rods are adapted to enter hollow sleeve-like elements 52 carried on the underside of the arms. Abutting this end of the rods are filler members 53, adjustable by means of set screws 54 which may be held in place by the lock nuts 55. By this means, tension may be applied to the tubular elements or rods to afford proper bracing support for the arms.

Although we have shown the bracing members as hollow elements in engagement at one end with projections carried by the central supporting element and entering sockets adjacent the ends of the arms, it will be understood that said bracing members may have hollow ends instead of being hollow throughout, and that the adjusting means may be adjacent the central supporting element instead of being combined with the sockets. Such construction we deem to be within the scope of our invention and to be covered by the claims.

We claim:

1. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, and adjustable bracing members disposed between said plate and the ends of the arms.

2. The combination of a base, a vertical shaft, bearings for the shaft carried by said base, means for rotating said shaft, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, and adjustable bracing members dis-

posed between said ribs and the ends of the arms.

3. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members disposed between said plate and the ends of the arms, and receiving means for coöperation with the ends of the bracing members.

4. The combination of a base, a vertical shaft, bearings for the shaft carried by said base, means for rotating said shaft, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members disposed between said ribs and the ends of the arms, and receiving means carried by the ribs and arms for coöperation with the ends of the bracing members.

5. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members for said arms, means carried by the ribs for engagement with the inner ends of the bracing members, means carried by the arms for engagement with the outer ends of the bracing members, and means for applying tension to said bracing members.

6. The combination of a base, a vertical shaft, bearings for the shaft carried by said base, means for rotating said shaft, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms forming a floor support secured to said plate, bracing members for said arms, pins carried by the ribs and receiving the inner ends of the bracing members, sockets carried by the arms and receiving the outer ends of the bracing members, and means carried by said sockets for applying tension to said bracing members.

7. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft having a hub and radial ribs extending from said hub, arms secured to said plate, bracing members disposed between said plate and the arms, means carried by said plate for engagement with the inner ends of the bracing members, sockets carried by the arms receiving the outer ends of the bracing members, filler blocks disposed between the ends of said bracing members and said sockets, and set screws in engagement with said filler blocks for applying tension to said bracing members.

8. The combination of a base, a vertical shaft, bearings for the shaft carried by said base, means for rotating said shaft, a plate carried by said shaft having a hub and

radial ribs extending from said hub, arms secured to said plate, bracing members disposed between said ribs and the ends of the arms, pins carried by the ribs and receiving the inner ends of the bracing members, sockets carried by the arms and receiving the outer ends of the bracing members, filler blocks disposed between the ends of said bracing members and said sockets, set screws in engagement with said filler blocks for applying tension to said bracing members, and locking means for said set screws.

9. The combination of a base, a vertical shaft journaled therein, a plate carried by said shaft, arms forming floor supports carried by said plate, and hollow adjustable bracing rods interposed between said plate and arms, said parts having abutments for engagement with the ends of said bracing rods.

10. A base, a vertical shaft journaled therein, a plate carried by said shaft, arms

forming floor supports carried by said plate, pins carried by said plate, sockets carried by said arms, and hollow adjustable bracing rods fitting said pins and interposed between the same and the sockets.

11. The combination with a platform support comprising a centrally disposed member and arms extending therefrom, of hollow rods forming bracing means interposed between said central member and the arms, means carried by said central member and the arms for engaging the ends of said hollow rods, and means for adjusting said bracing members longitudinally.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

ROBERT LUSSE.
JOSEPH LUSSE.

Witnesses:

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WM. A. BARR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."