

C. P. BEISEL.
ROUNDAABOUT.

APPLICATION FILED MAY 21, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

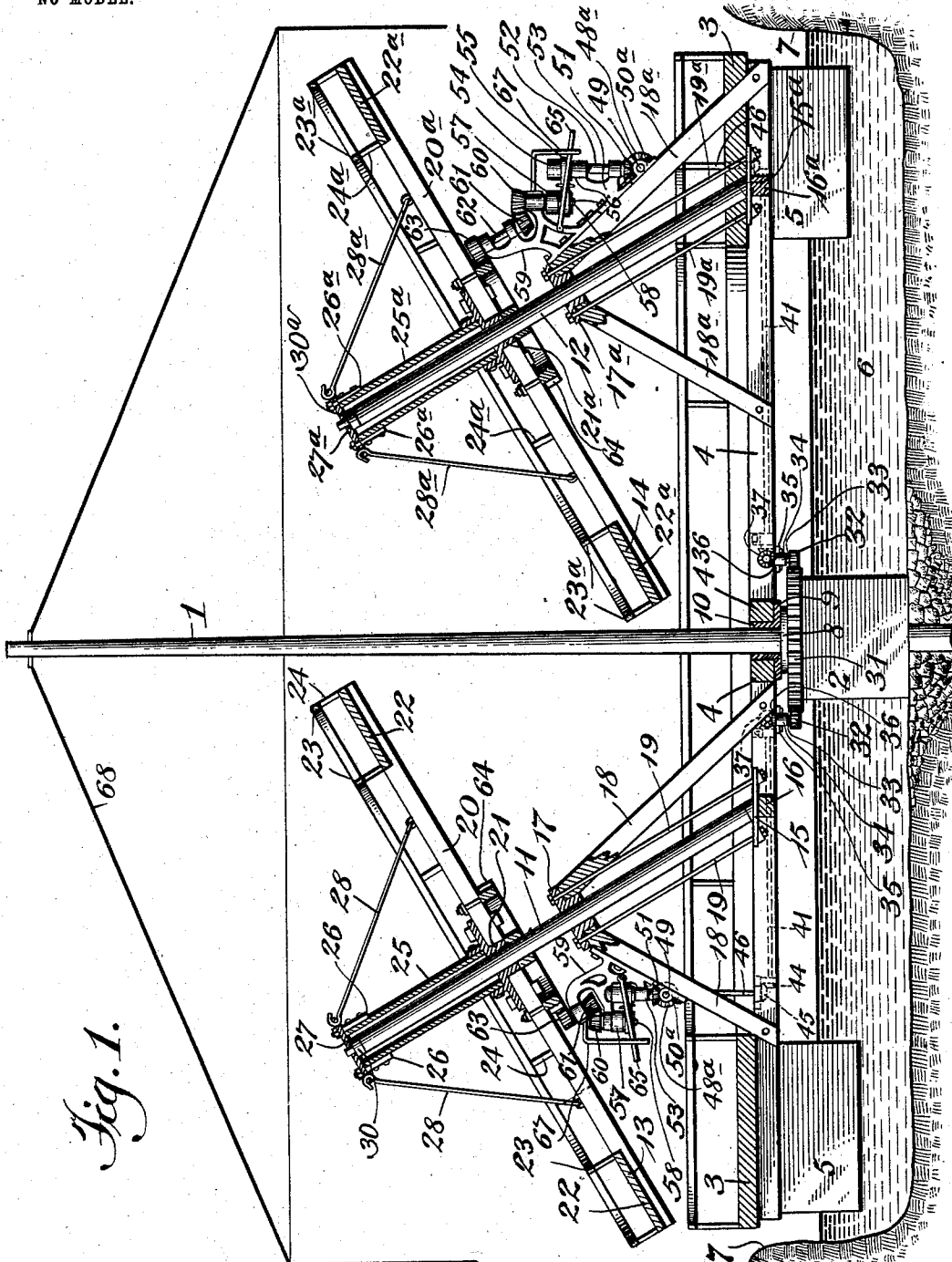


Fig. 1.

Witnesses
E. F. Stewart
Ralph M. Norton

C. P. Beisel, Inventor,
by C. A. Snow & Co.
Attorneys

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3 SHEETS—SHEET 2.

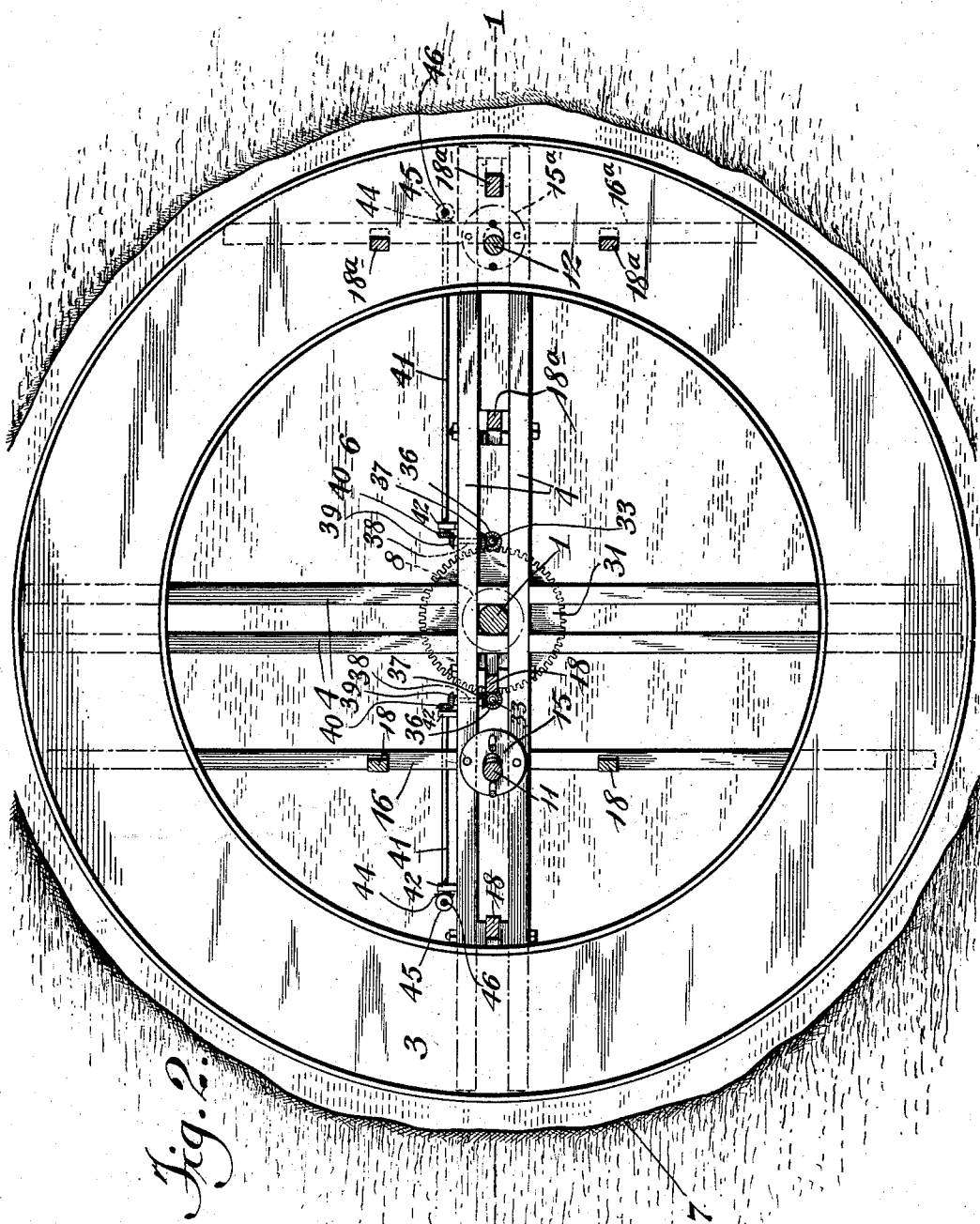


Fig. 2.

Witnesses
E. J. Stewart
Baxter Morton

C. P. Beisel, Inventor,
by *C. A. Snow & Co.*
Attorneys

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3 SHEETS—SHEET 3.

Fig. 3.

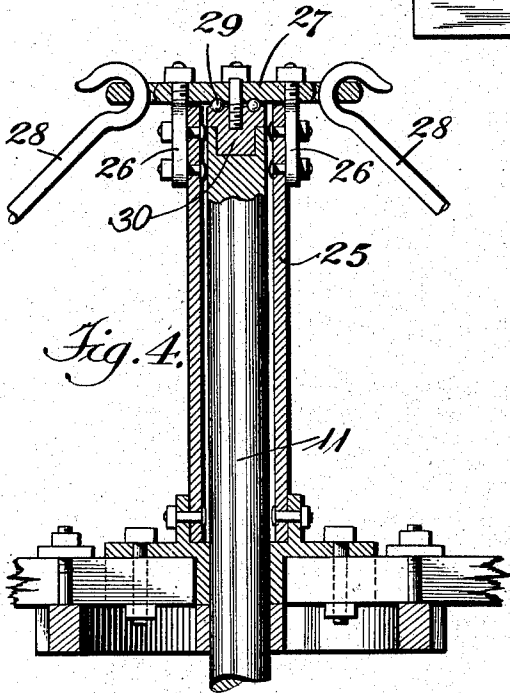
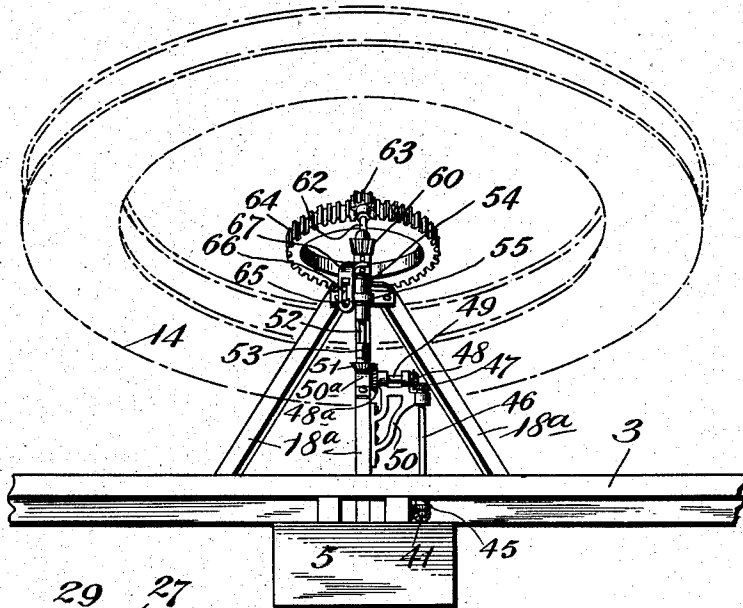


Fig. 4.

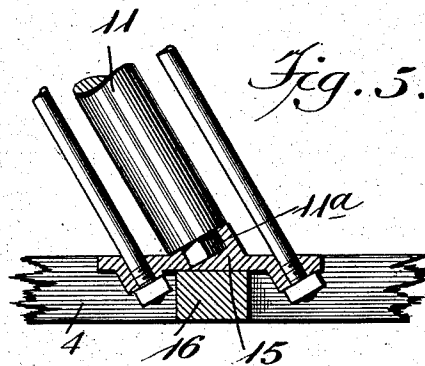


Fig. 5.

Witnesses
E. P. Stewart
Dexter Morton

C. P. Beisel, Inventor,
by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES P. BEISEL, OF WILKESBARRE, PENNSYLVANIA.

ROUNABOUT.

SPECIFICATION forming part of Letters Patent No. 741,758, dated October 20, 1903.

Application filed May 21, 1903. Serial No. 158,197. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. BEISEL, a citizen of the United States, residing at Wilkesbarre, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Roundabout, of which the following is a specification.

This invention relates to roundabouts; and the object thereof is to provide in a roundabout means for imparting to the passenger-supporting portions of the apparatus a peculiar movement not hitherto produced by apparatus of the class specified and adapted to produce novel sensations in the passengers.

With the object above stated and others in view, which will appear as the invention is more fully disclosed, the same consists, generally speaking, in the combination, with a primary horizontally-disposed annular platform adapted for rotation in a horizontal plane about its own center as an axis, of a plurality of obliquely-disposed auxiliary platforms supported above the plane of the primary platform and each provided with mechanism for imparting thereunto rotary motion about an axis perpendicular to its own plane.

In describing the invention reference will be had to the accompanying drawings, in which is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that changes in the form, proportions, and exact mode of assemblage of the elements exhibited may be made without departing from the spirit of the invention or sacrificing any of the advantages thereof.

In the drawings, Figure 1 is a view in vertical section through the roundabout in the plane of the line 1-1 in Fig. 2. Fig. 2 is a view in plan of the primary platform and the mechanism below the plane thereof, the superstructure having been removed. Fig. 3 is a detail view showing the means for imparting rotation to one of the auxiliary platforms. Fig. 4 is a detail view in section, showing the mode of supporting one of the auxiliary platforms upon its shaft. Fig. 5 is a detail view, partly in section, showing the manner of stepping the lower ends of the shafts that support the auxiliary platforms.

Corresponding parts are designated by the

same characters of reference throughout the various views in which they appear.

Referring to the drawings by reference characters, 1 designates a central standard, 55 having the lower end firmly fixed in the ground, as shown.

2 designates a pedestal surrounding the lower portion of the central standard 1 and assisting in holding said central standard in stationary and upright position. The pedestal 2 may be constructed of any suitable material and will be stationary upon the ground.

3 designates an annular platform adapted to rotate about the central standard 1 and held in proper relation to said standard by cross bars or beams 4, arranged in two pairs, as shown, said pairs being disposed at right angles to each other. The platform 3 may be supported in any preferred manner. In the embodiment of the invention illustrated the platform is supported by means of floats 5, of which there may be any desired number and which are secured to the under side of the platform 3. The floats 5 rest upon and are partly submerged in water 6, contained in a basin 7, formed by excavating the ground surrounding the pedestal 2. The floats 5 steady the platform, and when the apparatus has no passengers thereon the floats support the entire weight of the primary platform and the superstructures mounted above it. When the apparatus is loaded with passengers, a portion of the weight is received by a bearing-plate 8 upon the upper surface of the pedestal 2, upon which rests the flange 9 of a journal 10 encircling the central standard 1, as best seen in Fig. 1.

Between two of the cross-bars 4 are rigidly supported the inclined shafts 11 and 12, upon which are mounted for rotation the auxiliary obliquely-disposed platforms 13 and 14, respectively. The shaft 11 has the lower end thereof provided with a square tenon 11^a, which is stepped in an inclined socket member 15, bolted to the cross-bars 4 and to a bar 16, arranged at right angles to said cross-bars, as best seen in Fig. 2. The shaft 11 passes through a flanged collar 17, which is securely bolted to the upper ends of inclined brace members 18, the lower ends of which are attached to bars 4 and 16, as best seen in

Fig. 2. The bolts 19, by means of which the flanged collar is secured in position upon the upper ends of the brace members 18, serve also to secure in position the socket-plate 15 above mentioned. As the shaft 11 is not to rotate, the flange-collar 17 may be rigidly secured thereto in any desired manner, as by clamping-screws. (Not shown.)

The shaft 12, supporting the oblique auxiliary platform 14, is secured in position in a similar manner to the shaft 11, the shaft 12 being provided at its lower end with a square tenon similar to the tenon 11^a, which is stepped into a socket 15^a, bolted to cross-bars 4 and to a bar 16^a, secured at right angles thereto. The shaft 12 passes through a flanged collar 17^a, secured in proper relation to the oblique brace members 18^a by bolts 19^a, passing through said collar 17^a, the upper ends of said braces, and through the socket-plate 15^a.

The platform 13, mounted for rotation upon the shaft 11, consists of a plurality of radially-disposed beams or bars 20, the inner ends of which are secured to a hub 21 and the outer ends of which support an annular floor 22, at the margins of which are provided two rails 23, mounted at the upper ends of suitable standards 24. The hub 21 comprises a collar encircling the shaft 11, a horizontal flange to which the ends of the radial beams 20 are bolted, and a collar within which is inserted and secured by bolts, as seen in Fig. 4, a sleeve 25. The upper end of the sleeve 25 has bolted thereto a plurality of straps 26, each of which terminates in an upwardly-disposed threaded end which passes through a cap-plate 27, in association with which said straps are held by means of nuts upon the said threaded extensions. The cap-plate 27 is provided with a plurality of openings for the engagement of hooks at the upper ends of inclined stay-rods 28, the lower ends of which are secured, by means of eyebolts, to the radial bars 20.

The platform 14 is constructed in substantially the same way as platform 12, comprising the radially-disposed bars 20^a, the hub 21^a, comprising a lower collar, a flange, and an upper collar. At the outer ends of the radial bars 20^a is supported an annular platform 22^a, with guard-rails 23^a on supporting-standards 24^a. The hub 21^a is bolted to the sleeve 25^a, which is secured, by means of straps 26^a, to cap-plate 27^a, through which passes the hooked extremities of stay-rods 28^a, the lower ends of which are attached by eyebolts to the radial bars 20^a.

To diminish the friction incident to the rotation of the platforms 13 and 14, cap-plates 27 and 27^a are each provided on the under surface thereof with a groove forming a race for antifriction-balls, (shown at 29 in Fig. 4.) Said antifriction-balls rest in corresponding grooves formed in bearing-blocks 30 and 30^a,

fixed in sockets provided therefor in the upper ends of shafts 11 and 12, respectively.

The means for imparting motion to the oblique platforms 13 and 14 comprises the parts now to be described. The stationary master-gear 31 is rigidly supported at the top of the pedestal 2, and meshing with said master-gear 31 are a pair of small spur-gears 32, each of which is supported at the lower end of a short vertical shaft 33, journaled in a sleeve 34, provided in a supporting-plate 35, which is bolted to the lower surface of cross-bars 4, as seen in Fig. 1. At the upper end of each of said shafts 33 is a bevel-gear 36, which meshes with a bevel-gear 37 at the end of a short shaft 38, journaled in one of the cross-bars 4, as best seen in Fig. 2. Each of the short shafts 38 has at the front end thereof bevel-gear 39, which meshes with a similar gear 40, provided at one end of shaft 41, journaled in brackets 42, projecting from the side of one of the cross-bars 4, as best seen in Fig. 2. Each of shafts 42 has at the front end thereof a bevel-gear 44, which meshes with a similar gear 45 at the lower end of a vertical shaft 46, journaled in brackets provided on one of the oblique braces 18 and 18^a. The shafts 46 are provided at their upper ends with bevel-gears 47, which mesh with bevel-gears 48 on shafts 49, journaled in brackets 50 and 50^a on the oblique braces 18 and 18^a. Shafts 49 also carry bevel-gears 48^a, which mesh with bevel-gears 51, provided at the lower ends of shafts 52, journaled in brackets 53, mounted on the outer braces 18 and 18^a, as shown in Fig. 1. At the upper ends of said shafts 52 are rigidly secured pulleys 54, over which run belts 55. The belts 55 are adapted to travel over pulleys 56 and 57, provided on vertical shafts 58, journaled in brackets 59. The pulleys 56 at the lower ends of said shafts 58 are loose upon their shafts, and when the belts 55 travel over pulleys 56 no motion is imparted to shafts 58 in consequence; but when the belts 55 travel over pulleys 57 motion is imparted to the shafts 58 thereby. At the upper end of each of the shafts 58 is mounted a bevel-gear 60, which meshes with a similar bevel-gear 61 at the lower end of a shaft 62, also journaled in the bracket 59. Each of the shafts 62 has at the upper end thereof a pinion 63, which meshes with a large annular gear 64, bolted to the under side of the radial bars 20 or 20^a, as seen in Fig. 1.

In order to provide for shifting belts 55 from pulleys 56 to pulleys 57, and vice versa, levers 65 are pivotally mounted upon the brackets 59 and have their free ends extending through slots 66 in arms 67, which project outward from the brackets 59, as seen in Fig. 1, the slots 66 being provided with offsets at the bottom and top thereof, so that the belt-shifting lever 65 may be retained in raised or lowered position, as desired.

To protect the passengers upon the roundabout, a suitable canopy-top of any preferred design (indicated at 68) is mounted upon the central standard 1.

The passengers upon the roundabout may be carried on the main horizontal platform 2 or upon the inclined platforms 13 and 14. When the roundabout is put into practical use, chairs or other suitable seats will preferably be provided upon the platforms for the accommodation of the passengers; but as said seats form no part of this invention no illustration thereof appears to be necessary.

Any approved means for imparting rotation to the main platform may be used, and the passengers may be placed upon the oblique platforms 13 and 14 in any preferred manner. As the means for imparting rotation to the main platform 2 and means whereby the passengers are placed upon the auxiliary platforms 13 and 14 are not integral parts of this invention and may be of any desired form, such means have not been shown.

The operation of the roundabout will be readily understood from the drawings and from the description comprised within the foregoing paragraphs. The passengers having taken their places on the roundabout, especially upon the oblique platforms 13 and 14, motion will be imparted to main platform 2 in any desired manner. This rotation will cause the small gears 32, which mesh with the stationary master-gear 31, to be rotated as the platform 2 travels around the standard 1. The rotation of the small gear 32 will impart rotary motion to the shaft 33, from which the motion is transmitted through the connecting bevel-gears to shafts 38 and thence through the bevel-gear connections to shafts 41. From shafts 41 the rotation is transmitted to shafts 46 and thence through the bevel-gears 48 and the bevel-gears meshing therewith to the shafts 52, upon which are carried pulleys 54. From pulleys 54 motion will be transmitted to pulleys 57 when the belts 55 are traveling over said pulleys 57, and motion will thus be imparted to the shafts 58, from which it will be transmitted, through the bevel-gears 60 and 61, to shafts 62 and thence to the gears 64, secured to the under side of the radial bars in the platforms 13 and 14.

When it is desired to rotate the platform 3 without imparting rotation to the platforms 13 and 14 upon their supporting-shafts 11 and 12 below the shaft, levers 65 will be placed in the position shown in Fig. 1, in which the belts 55 ride over idle pulleys 56, and therefore do not impart rotation to the shafts 58.

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination in a roundabout of a main horizontal platform mounted for rotation in its own plane, a pair of parallel shafts

mounted upon the main platform at an oblique angle thereto and having their lower ends squared, sockets to receive the lower ends of said shafts mounted on said platform, collars surrounding said shafts intermediate of their ends, brace members mounted upon said main platform and affording supports for said collars, bolts connecting said collars with said braces and said sockets, auxiliary platforms rotatably mounted upon said shafts for rotation in planes perpendicular to said shafts, and driving connections between said auxiliary platforms and said main platform whereby said auxiliary platforms may be rotated upon their supporting-shafts.

2. The combination in a roundabout of a main horizontal platform mounted for rotation in its own plane, an oblique shaft rigidly supported upon said platform and having a socket in its upper end, a bearing-block having a stem fitted in said socket and having an annular groove on its upper surface, a cap-plate supported above said bearing-block, antifriction-balls disposed between said plate and block, a sleeve encircling said shaft and rigidly connected with said plate, an auxiliary platform rotatably mounted on said shaft and bolted to the lower end of said sleeve, oblique stay-rods having hooked extremities engaging openings in said cap-plate pivotally mounted on said oblique platform, and driving connections between said main platform and said oblique platform.

3. The combination in a roundabout, of a fixed base having an upright shaft mounted thereon, a main platform supported on said base and rotatable about said shaft, auxiliary platforms supported above said main platform in planes oblique thereto, a master-gear fixed upon said base beneath said main platform, spur-gears mounted on said main platform and continuously in mesh with said master-gear, gears rigidly attached to the under surface of said auxiliary platforms, gear connections between the spur-gears on the main platform and the gears on the auxiliary platforms, and means for throwing said connections into and out of operative engagement.

4. The combination in a roundabout of a fixed base, a main platform supported on said base for rotation in its own plane, a pair of auxiliary platforms supported above said main platform for rotation in planes oblique thereto, a master-gear upon said fixed base, spur-gears on the main platform continuously in mesh with said master-gear, gears rigidly attached to the under side of said auxiliary platforms, gear-supporting brackets supported by said main platform beneath said auxiliary platforms, gears in said brackets meshing with the gears on said auxiliary platform, gears also mounted in said brackets operatively connected with the spur-gears on said main platform, fast and loose

4
5 pulleys associated with the gears in said
brackets in mesh with the gears on the aux-
iliary platforms, fast pulleys associated with
the gears in said bracket connected with the
spur-gears on the main platform, belts con-
necting said pulleys and belt-shifting means
whereby said belts may be shifted from fast
to loose pulleys and vice versa.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

CHARLES P. BEISEL.

Witnesses:

J. A. WOOD,

JOHN P. POLLOCK.