No. 765,952. PATENTED JULY 26, 1904.

J. ARMITAGE.

ROUNDABOUT.

APPLICATION FILED AUG. 25, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 4.

Fig. 1.

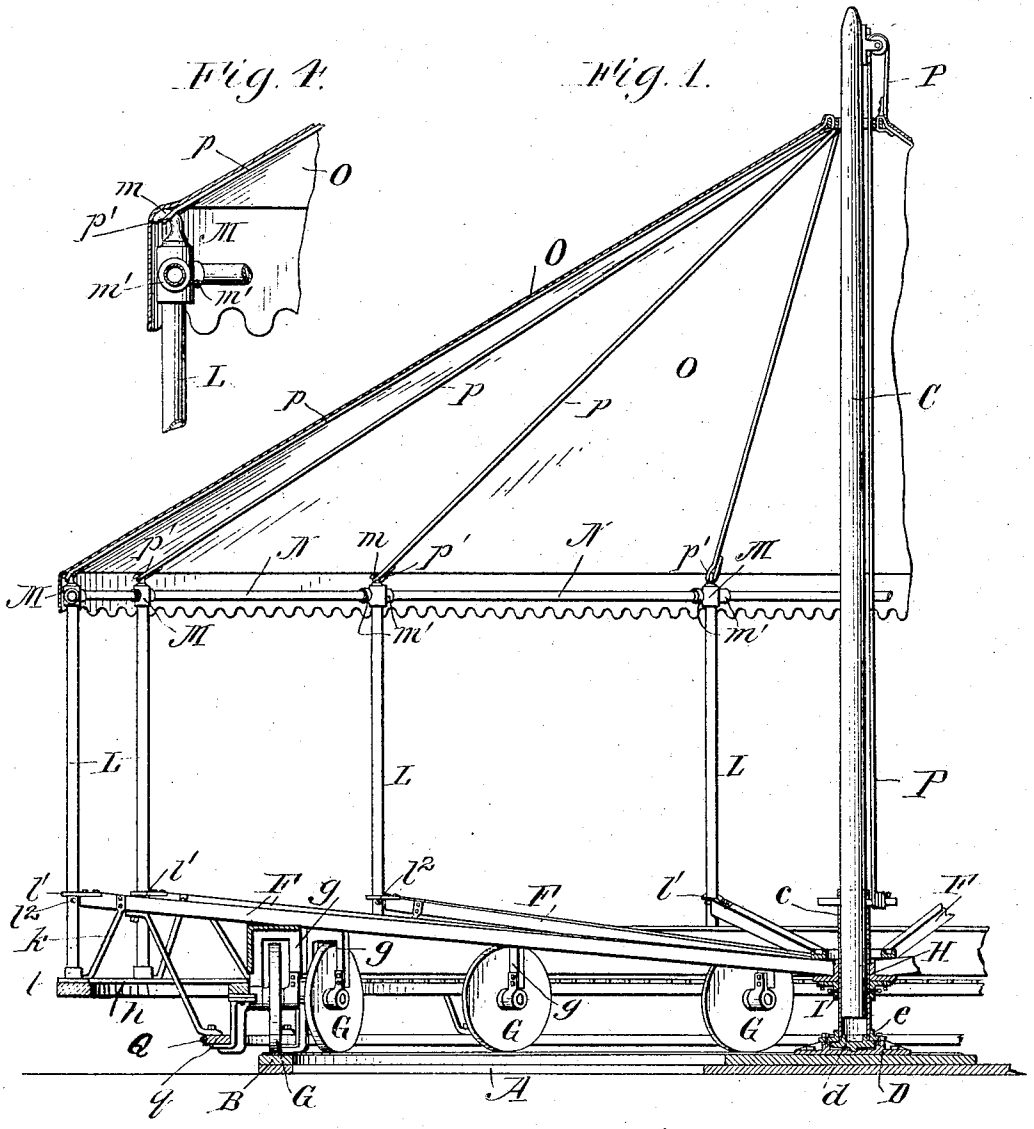
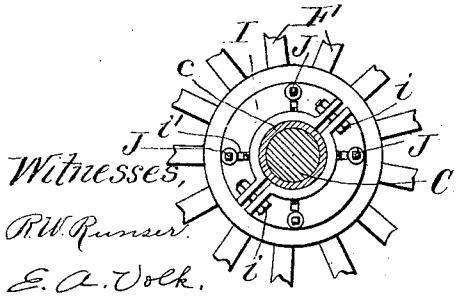


Fig. 3.



Witnesses,

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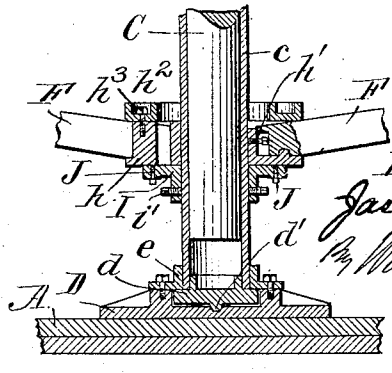
Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 5.

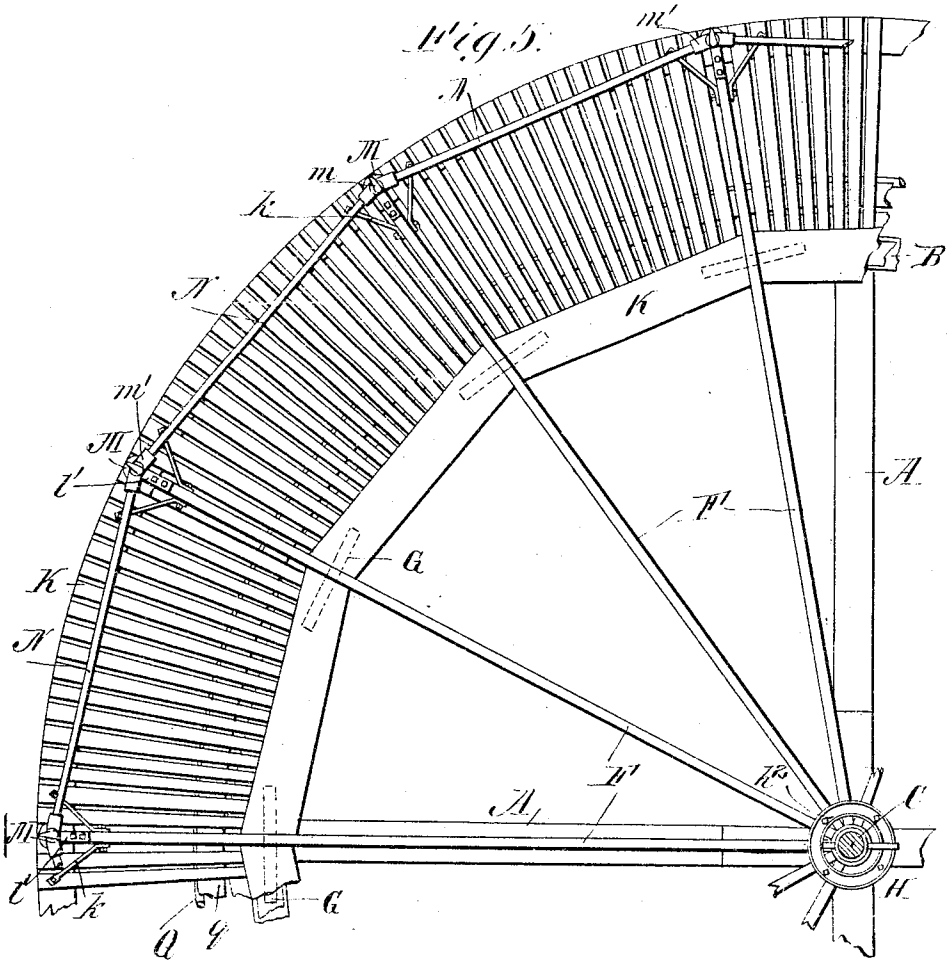


Fig. 6.

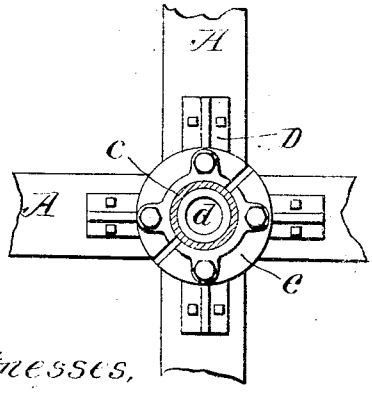
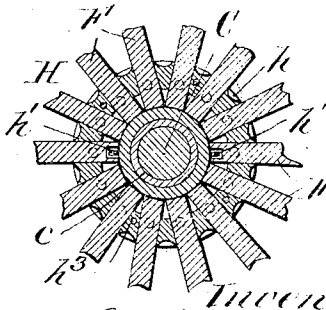


Fig. 7.



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No. 765,952. Patented July 26, 1904.

UNITED STATES PATENT OFFICE.

JAMES ARMITAGE, OF NORTH TONAWANDA, NEW YORK, ASSIGNOR TO ARMITAGE-HERSCHELL COMPANY, OF NORTH TONAWANDA, NEW YORK.

ROUNDABOUT.

SPECIFICATION forming part of Letters Patent No. 765,952, dated July 26, 1904.

Application filed August 25, 1903. Serial No. 170,686. (No model.)

To all whom it may concern:

Be it known that I, JAMES ARMITAGE, a citizen of the United States, residing at North Tonawanda, in the county of Niagara and State of New York, have invented new and useful Improvements in Roundabouts, of which the following is a specification.

This invention relates more particularly to a roundabout or merry-go-round in which the supporting-frame for the seats, figures, or devices for the riders, together with the central upright pivot-post and the canopy top or cover for the machine, all rotate together upon a supporting-base.

One object of the invention is to provide a light strong rigid supporting structure for the cover consisting of the minimum number of parts, enabling the machine to be quickly and easily set up.

Another object of the invention is to utilize the cover to hold the upright supports for the outer edge of the cover rigidly in their vertical position.

Another object of the invention is to provide a simple device for adjusting the hub for the radial frame-arms vertically on the upright pivot-post.

Another object is to provide an improved end bearing for the central pivot-post.

In the accompanying drawings, consisting of two sheets, Figure 1 is a fragmentary vertical sectional elevation of portions of a roundabout embodying the invention. Fig. 2 is a fragmentary section, on an enlarged scale, of the lower portion of the pivot-post and its bearing. Fig. 3 is a horizontal section through the pivot-post, showing the hub-adjusting device in bottom plan. Fig. 4 is a fragmentary sectional elevation, on an enlarged scale, showing the bead of one of the upright cover-supports. Fig. 5 is a fragmentary plan view of the roundabout, the cover being removed. Fig. 6 is a horizontal section through the pivot-post, showing the bearing therefor in plan. Fig. 7 is a horizontal section through the hub for the radial frame-arms.

Like letters of reference refer to like parts in the several figures.

The supporting-base for the machine consists of horizontal timbers or arms A, which are bolted or otherwise rigidly secured together at their centers and are detachably connected at their outer ends to a circular track B, which to facilitate shipping is preferably constructed of sections detachably connected in any suitable manner.

C represents the vertical center or pivot post, which consists of a wooden pole provided at its lower end with a metal sleeve or tube *c*, which is securely fixed to the wooden pole in any desired manner.

The lower end of the pivot-post has secured thereto a circular bearing block or piece *d*, having a vertical annular flange seated in the lower end of the sleeve *c* and a central semi-spherical bearing projection *d'*, which bears in a corresponding central seat in a stationary bearing-plate D, which is bolted centrally to the cross timbers or arms A of the base. The bearing-block projects beyond the sleeve of the pivot-post to provide a lateral annular flange, which is surrounded by an upwardly-projecting circular flange on the stationary bearing-plate. The pivot-post is held in its bearing by a sectional retaining-collar *e*, the sections of which are bolted on the circular flange of the stationary bearing-plate and overhang the annular flange of the bearing-block. The circular flange of the stationary bearing-plate provides an oil-receptacle, and the retaining-collar serves to cover the space between said circular flange and the pivot-post, thereby excluding dust and dirt from the bearing. When the oil-receptacle has been filled with oil, the bearing will run smoothly for a long period without further lubrication.

F represents frame-arms which project radially from the upright pivot-post and are supported at their outer ends by wheels G, which are journaled in bearing-frames *g*, of any suitable construction, secured to the radial frame-arms, and travel on the circular track B of the base. The inner ends of the radial frame-arms are seated in a hub H, which is rigidly secured to and rotates with the pivot-post. The hub (see Figs. 2 and 7) preferably consists of a lower ring *h*, having

a horizontal flange and a vertical flange which surrounds the sleeve of the pivot-post to which it is secured by set-screws h', working in threaded holes in the vertical flange. The lower ring of the hub is provided with vertical spacing-blocks forming sockets in which the inner ends of the radial frame-arms are seated and removably held by a top ring h^2, which is arranged over the ends of the frame-arms and spacing-blocks and detachably secured to the lower ring by screws or bolts h^3. The hub is preferably adjustable vertically on the pivot-post to cause the wheels at the outer ends of the arms to properly travel on their circular track. I, Figs. 2 and 3, represents a fixed hub-supporting collar which is formed of halves or sections having vertical and horizontal flanges and clamped about the sleeve of the pivot-post by bolts i, Fig. 3, connecting the ends of the sections. The collar is fixed to turn with the pivot-post by set-screws i', passing through the vertical flange of the clamping-collar. The hub for the radial frame-arms bears on vertical adjusting screws or bolts J, which pass through the horizontal flange of the hub-supporting collar and can be raised and lowered by turning the screws. The hub can thus be readily adjusted vertically on the pivot-post to cause the supporting-wheels at the outer ends of the arms to travel properly on their circular track.

K represents the usual annular platform or walk around the outer portion of the roundabout for persons entering and leaving the machine. The platform is of any suitable construction and is supported below the outer ends of the radial frame-arms by the bearing-frames for the supporting-wheels and suitable braces k, connected to the outer ends of the radial frame-arms. The seats, figures, or other devices which are occupied by the persons riding on the roundabout are not shown, but, as usual, are arranged around the outer portion of the machine and supported directly or indirectly by the radial frame-arms.

L represents upright supports or columns for the outer edge of the canopy top or cover for the machine. One of these supports is preferably located at the outer end of each of the radial frame-arms, being steadied or held in upright position by a socket-plate l, secured to the platform, and a holding device or loop l' at the outer end of the radial frame-arm through which the support passes. The cover-supports are preferably held from rising out of their sockets by pins or keys l^2, inserted in holes in the supports beneath the holding devices at the ends of the frame-arms. Each of the upright supports is provided at its upper end with a head M, Fig. 4, having a goose-neck or hook m and oppositely-projecting lateral sockets or tubular bosses m'.

N represents horizontal brace-rods which are arranged between the upper ends of the upright supports, with their ends loosely seated in the lateral sockets m' on the heads of the supports.

O represents the canopy top or cover for the roundabout. The cover is made, as usual, in conical form of one or more sections of canvas provided with radial strengthening ropes or cords p and has a central hole strengthened by the usual ring or loop through which the pivot-post passes. The center of the cover is supported on the pivot-post and raised and lowered by an ordinary hoisting-rope P secured thereto and passing over a sheave or pulley at the top of the pivot-post, the free end of the rope extending down alongside of the pivot-post to a suitable securing pin or device. The outer or lower end of the strengthening-ropes p of the cover are provided with loops p', engaging over the goosenecks or hooks on the heads of the upright cover-supports.

In setting up the machine the upright cover-supports are loosely placed in their sockets and holding-loops at the ends of the radial frame-arms. The horizontal brace-rods N are then loosely inserted in the lateral sockets on the heads of the upright supports, and the loops at the ends of the strengthening-ropes of the cover are engaged over the goosenecks at the heads of the supports. Then by raising the center of the cover by means of the hoisting rope or cable in the usual manner the upper ends of the upright supports are all drawn inwardly, thereby binding or clamping the brace-rods N between them and forming a rigid stiff structure. The frame thus constructed is very rigid and strong and does not require any additional brace or stay rods for the upper ends of the upright columns or supports or any ropes or devices secured to stakes in the ground, enabling the machine to be quickly set up on a street pavement or elsewhere without any anchoring devices. The weight of the machine is thus materially reduced, while the strength thereof is not sacrificed.

The roundabout is rotated by the usual power-driven cable Q, running around a grooved rail q, Figs. 1 and 5, secured to the lower portion of the frame, or by any other suitable means.

I claim as my invention—

1. The combination of a rotatable frame comprising an upright rotatable center-post, lateral portions secured to and rotating with said center-post, uprights at the outer portions of the frame, brace-rods arranged between and connecting the upper portions of said uprights, and means connecting the center-post and upper portions of said uprights for drawing the latter toward the center-post to hold said uprights and brace-rods rigid, substantially as set forth.

2. The combination of an upright center-post, rotary frame-arms supported by and radiating from said center-post, uprights secured to the outer portions of said radial arms, brace-

rods arranged between and detachably supported at their ends on the upper portions of said uprights, and means connecting the center-post and upper portions of said uprights for drawing the latter toward the center-post to hold the same and the brace-rods rigidly together, substantially as set forth.

3. The combination of an upright center-post, rotary arms supported by and radiating from said center-post, uprights at the outer ends of said arms, brace-rods arranged between and connecting the upper ends of said uprights, a cover connecting the center-post and the upper ends of said uprights, and means for raising the center of the cover on the center-post to draw the upper ends of said uprights inwardly to hold the same and the brace-rods rigid, substantially as set forth.

4. The combination of an upright center-post, a bearing in which the same is mounted to rotate, radial arms secured to and rotating with said center-post, traveling supports for the outer ends of said arms, uprights at the outer ends of said radial arms, horizontal brace-rods arranged between and connecting the upper portions of said uprights, a cover connecting the center-post and the upper ends of said uprights, and means for raising the center of said cover to draw the upper ends of said uprights inwardly and hold the same and said brace-rods intact, substantially as set forth.

5. The combination of a vertical center-post, radial arms supported by said center-post, traveling supports for the outer ends of said arm, uprights arranged at the outer ends of said radial arms and provided at their upper ends with sockets, horizontal brace-rods arranged between and connecting said uprights with their ends removably seated in said sockets at the upper ends of the uprights, a cover connecting the center-post and the upper ends of said uprights, and means for raising the central portion of said cover on said center-post to draw the upper ends of said uprights inwardly to hold said brace-rods rigid in said sockets, said cover constituting the only connection between the upper ends of said uprights and said pivot-post, substantially as set forth.

6. The combination of an upright center-post, radial frame-arms, a hub surrounding said center-post and supporting said frame-arms, a collar secured to said center-post below said hub, and vertical adjusting-screws passing through said stationary collar and which adjustably support said hub, substantially as set forth.

7. The combination of a center-post, radial frame-arms, a hub surrounding said center-post and in which said radial arms are secured, a divided clamp-collar surrounding said center-post below said hub, means for clamping the same on said center-post, and vertical adjusting-screws working in threaded holes in said clamp-collar and which adjustably support said hub, substantially as set forth.

Witness my hand this 29th day of July, 1903.

JAMES ARMITAGE.

Witnesses:

H. W. CLARKE,

J. M. PATTEN.