C. D. SAUVÉ.

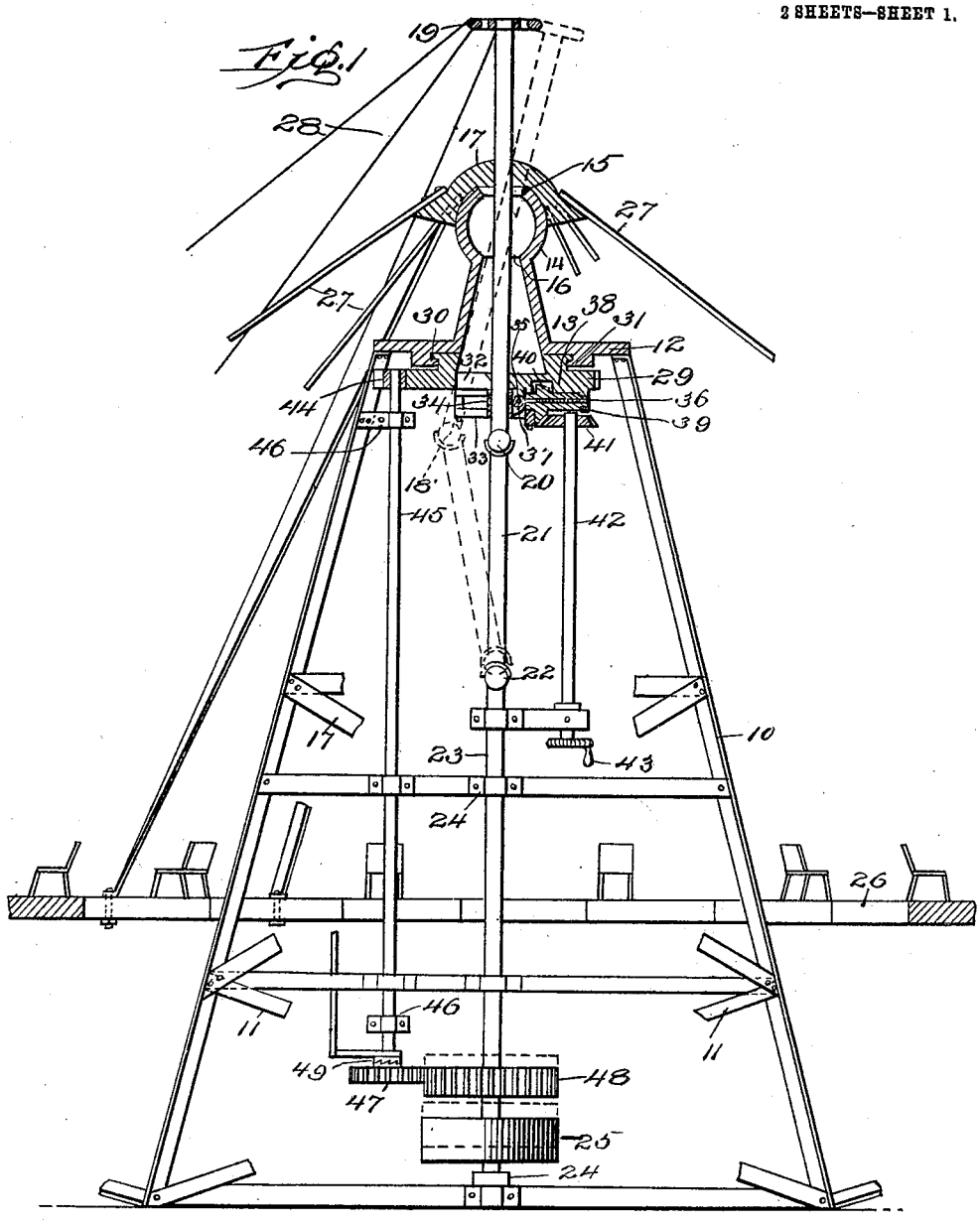
ROUNDABOUT.

APPLICATION FILED MAR. 9, 1907.

922,723. **Patented May 25, 1909.**

2 SHEETS—SHEET 1.

Fig. 1



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

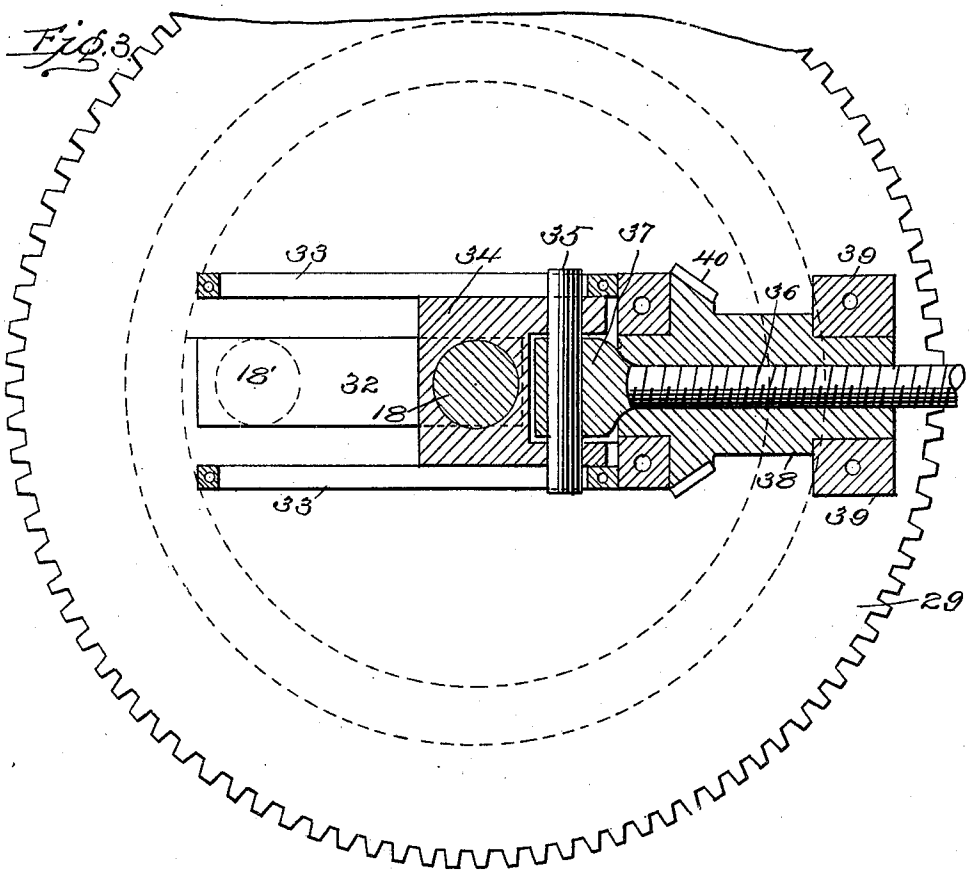
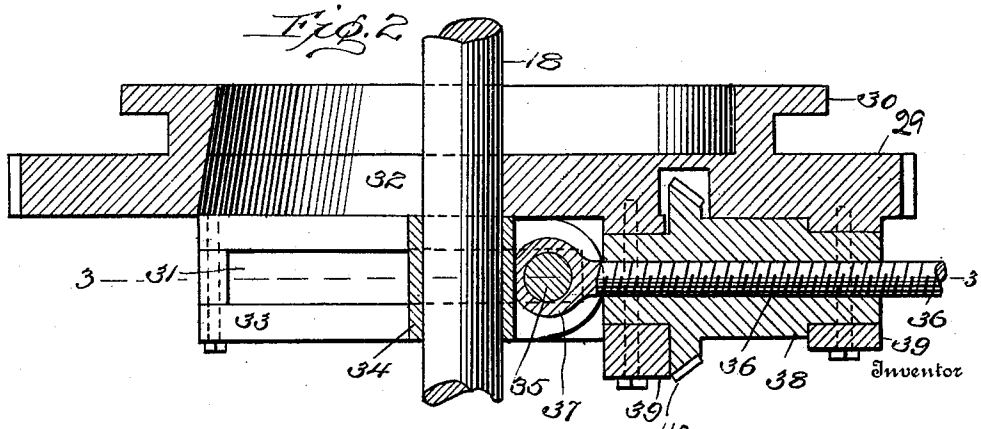


Fig. 2.



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UNITED STATES PATENT OFFICE.

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ROUNDABOUT.

No. 922,723. Specification of Letters Patent. Patented May 25, 1909.

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To all whom it may concern:

Be it known that I, CLARENCE D. SAUVÉ, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Roundabouts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to round-abouts and has for an object to provide a round-about embodying new and improved features adapted to tilt the rotating platform.

A further object of the invention is to provide in a round-about new and improved means for varying the angle of inclination of the rotating platform.

A further object of the invention is to provide in a round-about a rotating platform with means for tilting the platform and improved means whereby the platform may be continuously rotated at a given inclination to a vertical with or without carrying the inclined platform around the central axis of the body, thereby either giving to the platform a simple rotation upon its own axis, or adding to such rotation a revolution, as it were, in an inclined position round the frame of the structure.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a vertical, sectional view of the improved round-about. Fig. 2 is a vertical, detail, sectional view similar to the view shown in Fig. 1 of the tilting mechanism on an enlarged scale. Fig. 3 is a horizontal, sectional view of the tilting device taken on line 3—3 of Fig. 2.

Like characters of reference designate corresponding parts throughout the several views.

The improved round-about forming the subject-matter of this application comprises a structure of any approved design shown here as the posts 10 braced in any approved manner as by the braces 11 and with a platform or plate-like portion 12 secured upon and joining their upper ends.

Centrally upon the platform or plate-like portion 12 is erected a tapered, hollow column 13 having at its upper end a substantially spherical head 14 with an opening 15 at the top of the said head and an opening 16 at the lower side of said head communicating with the tapered hollow interior of the column 13.

Upon the head 14 is mounted a hood 17 provided with a concavity in its lower side proportioned to bear and fit upon the spherical exterior of the head 14. Extending upwardly through the hood 17 in a normally vertical position is a shaft 18 preferably rigidly connected with the hood and extending upwardly above the head and provided with a head 19 and downwardly through the interior opening of the column 13 and below the plate 12 and provided with a universal joint 20. A shaft section 21 extends downwardly from and is connected with the shaft 18 at the universal joint 20 and provided with another universal joint 22 which, in turn, is connected with a shaft 23 journaled in any approved manner as in the bearings 24, and having at its lower end means for rotating the shaft here conventionally shown as the belt pulley 25, although it is to be understood that any approved means for imparting rotary movement to the shaft 23 and its associated shaft sections 21 and 18 may be substituted for the belt pulley 25. Encircling the structure represented by the posts 10 is a platform shown conventionally at 26 which may be of any approved size and form and carry thereon any approved or desired means for the accommodation of passengers. The platform, at 26, is suspended from the hood 17 by means of guys 27 and is further supported by other guys 28 from the head 19, whereby a rotary movement of the shaft 18 is imparted to the hood 17 and head 19 and through the guys 27 and 28 to the platform 26.

Beneath the plate 12 is journaled a gear wheel 29 in any approved manner as by the employment of a flange 30 upon the said gear wheel interengaging with an annular flange 31 formed upon the under side of the plate 12. The gear wheel 29 is provided with a slot 32 positioned to permit the shaft 18 to be disposed concentrically with the said gear and extending radially from the said central position to permit the movement of the shaft 18 in the said slot to the position 18′ and to intermediate positions.

To control the position of the shaft 18 relative to the gear 29 guides 33 are provided upon the under side of the said gear and in said guides is mounted a sliding bearing block

34 through which the shaft 18 extends and in which it is journaled. To compensate for the change in the angular position of the shaft 18 incident to its movement to the position 18′ or intermediate positions the block 34 is mounted upon a pin 35 by means of which connection with the guides 33 is provided which permits the angular movement of the block 34 relative to the guides and to the gear 29.

The position of the block 34 radially to the gear 29 is controlled by means of a screw 36 pivoted by means of the head 37 upon the pin 35 and actuated by means of a nut 38 embracing the said screw 36 and journaled in bearings 39. The nut 38 is provided with gear cogs 40 forming a beveled pinion thereon, which said pinion is intergeared with a pinion 41 carried upon the upper end of a shaft 42 and controlled by any approved means as the hand wheel 43.

The gear 29 is rotated in any approved manner as by the pinion 44 on a shaft 45 journaled in bearings 46 and intergeared by means of gears 47 and 48 with the positively driven shaft 23. The shaft 45 is preferably connected with the gear 47 by means of a clutch conventionally shown at 49 by means of which the said shaft 45 may be disassociated from the gear 47 permitting the shaft 45 to remain stationary while the shaft 23 is being rotated.

With the parts disposed as shown in full lines in the drawings, the platform 26 will be disposed substantially horizontally and will rotate with the rotation of the pulley 25 in a substantially horizontal plane. When it is desired to tilt the platform 26 the hand wheel 43 is rotarily moved rotating thereby the nut 38 and moving the block 34 and the shaft 18 to the position 18′ or to a position intermediate the full line and dotted line positions shown.

With the clutch 49 disassociated it will be apparent that the shaft 18 will rotate at an inclination to a vertical, but rotate continuously at such inclination and that the platform 26 carried thereby will rotate at a fixed inclination to a horizontal. When it is desired to cause the platform in its inclined position to rotate about the whole structure, which movement taken in connection with its rotation with the shaft, might be called a "sun and planet" motion, it is only necessary to connect shaft 45 with the gear 47 by means of the clutch 49, and as the shaft 23 rotates with the belt pulley 25 to rotate the platform, the shaft 45 is also rotated, rotating thereby the gear 29 at a rate very much lower than that of shaft 23 due to the fact that the gear 29 is much larger than the pinion 44, and the gears 47 and 48 are nearly equal in diameter. The shaft being in an inclined position, such as the position 18′ shown in dotted lines in Fig. 1, and engaging in slot in the gear 29, will thereby be carried around the vertical axis with the gear 21 when rotated as described.

What I claim is:—

1. In a roundabout, a structure, a vertical shaft rotatable therein, a shaft in two sections connected by a universal joint and to the vertical shaft by a second universal joint, a platform suspended from the upper section, a means for laterally adjusting the connecting ends of the two sections to alter the inclination of the upper section.

2. In a roundabout, a structure, a hollow head carried upon the structure and provided with openings in its upper and lower surfaces, a hood bearing upon the upper surface of the head and covering the opening, a platform carried by the hood, a shaft rotatable within the structure carrying the hood and formed in sections connected by universal joints, means to rotate the shaft and hood, and means to vary the position of the shaft and hood relative to the axis of the structure.

3. In a round-about, a structure, a column mounted upon the structure, a substantially spherical head mounted upon the column, a hood embracing and bearing upon the head, a platform carried by the hood a shaft extending upwardly through the head and engaging the hood, and means to vary the position of the shaft and hood relative to the head.

4. In a round-about, a structure, a hollow spherical head mounted upon the structure, and provided with openings in its upper and lower surfaces communicating with the hollow interior, a hood having a concavity in its under side mounted and bearing upon the upper surface of the head, a platform carried by the hood a shaft extending upwardly through the head, and rigidly engaging the hood, means to rotate the shaft and hood, and means to move the shaft and hood angularly relative to the head.

5. In a round-about, a structure, a substantially spherical hollow head mounted upon the structure, and provided with an opening in its upper and under surface, a hood mounted and bearing upon the upper surface of and covering the opening in the head, a shaft extending normally vertical through the head and rigidly connected with the hood, a platform carried by the hood, means to rotate the shaft, hood and platform, and means to move the shaft from a vertical.

6. In a round-about, a structure, a head mounted upon the structure provided with a convex upper surface, a hood provided with a concave under surface mounted and bearing upon the convex surface of the head, a platform carried by the hood a shaft extending upwardly through the head and rigidly connected with the hood, means to rotate the shaft and hood, means to move the shaft

from a vertical, and means to rotate the shaft about the vertical in its inclined position.

7. In a round-about, a structure provided with a platform at its upper end, a hollow tapered column rising from the platform, a substantially spherical hollow head carried upon the column and provided with an open upper side and an opening in the lower side communicating with the interior of the column, a hood mounted upon the upper side of the head and covering the opening, a shaft extending normally vertically through the head and rigidly connected with the hood, a platform suspended from the hood, a rotatable member secured to the under side of the platform and provided with a radial head embracing the shaft, a movable block carried by the rotatable member and adapted to move radially thereof and embracing the shaft, means to move the sliding block, depending means connected with and adapted to actuate the block sliding mechanism, means to rotate the shaft, means associated with the shaft rotating means and adapted to rotate the rotatable member, and means to disconnect the shaft rotating means from the means for rotating the rotatable member.

In testimony whereof he has affixed his signature in presence of two witnesses.

CLARENCE D. SAUVÉ.

Witnesses:
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CARLE WHITEHEAD.