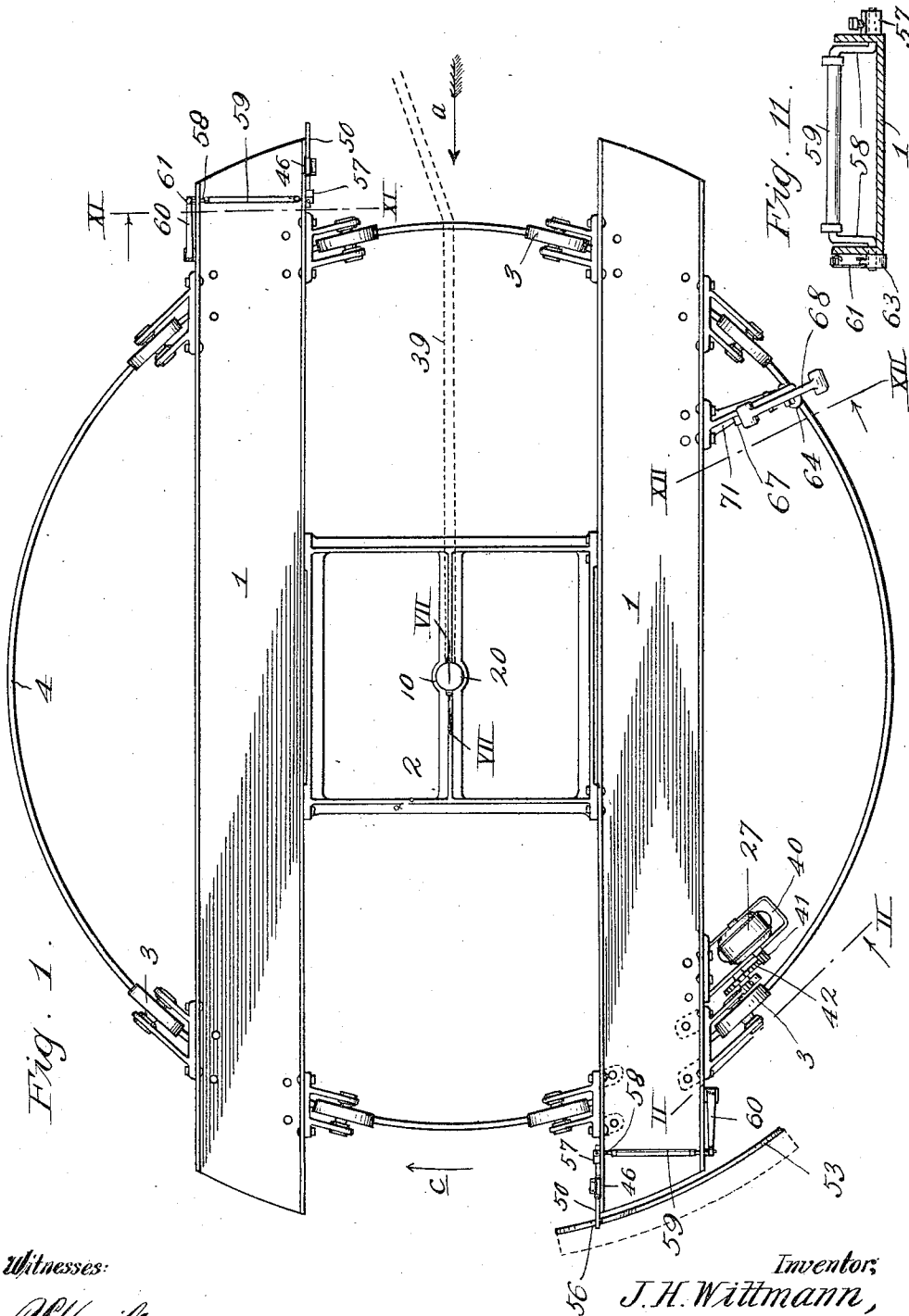


J. H. WITTMANN.
 AUTOMATIC TURN TABLE.
 APPLICATION FILED JAN. 16, 1911.

1,065,091.

Patented June 17, 1913.

3 SHEETS—SHEET 1.



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Fig. 2.

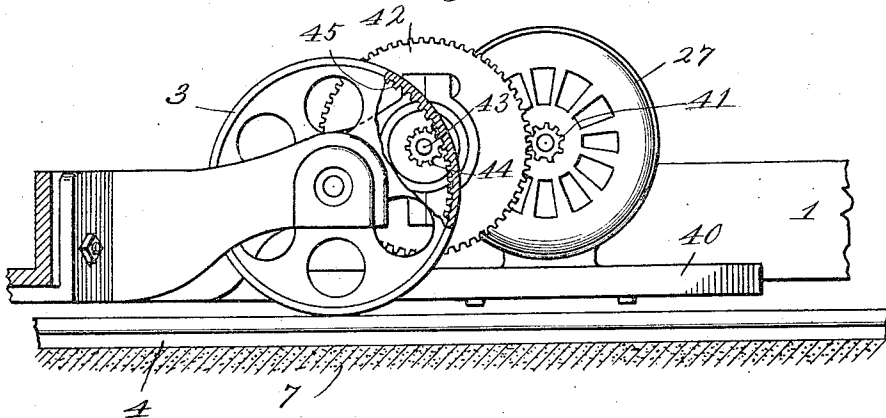


Fig. 3.

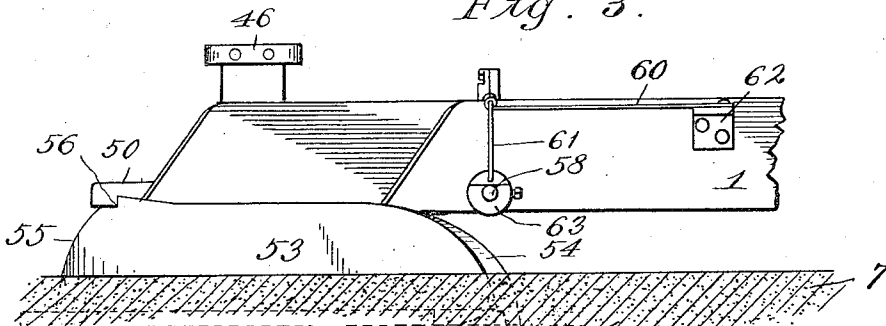


Fig. 4.

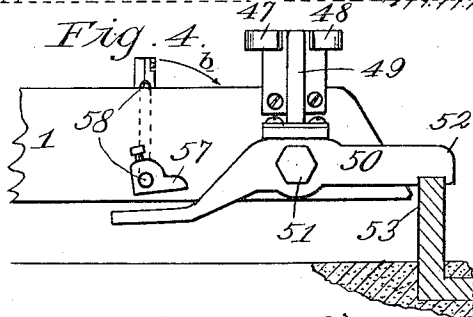
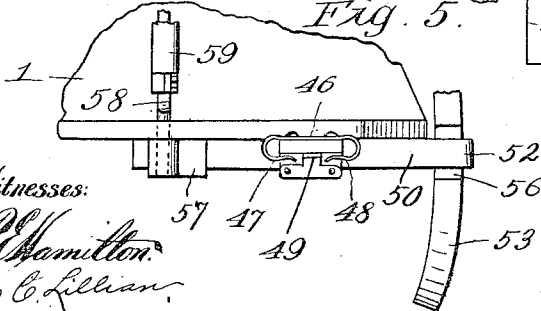


Fig. 5.



Witnesses:

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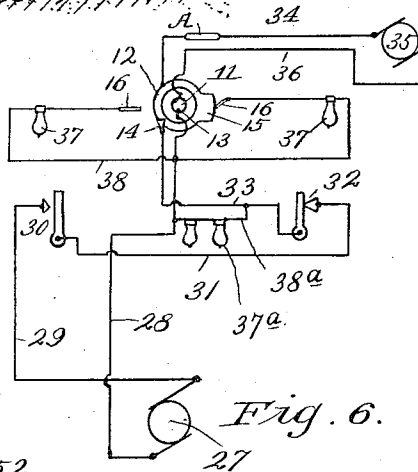


Fig. 6.

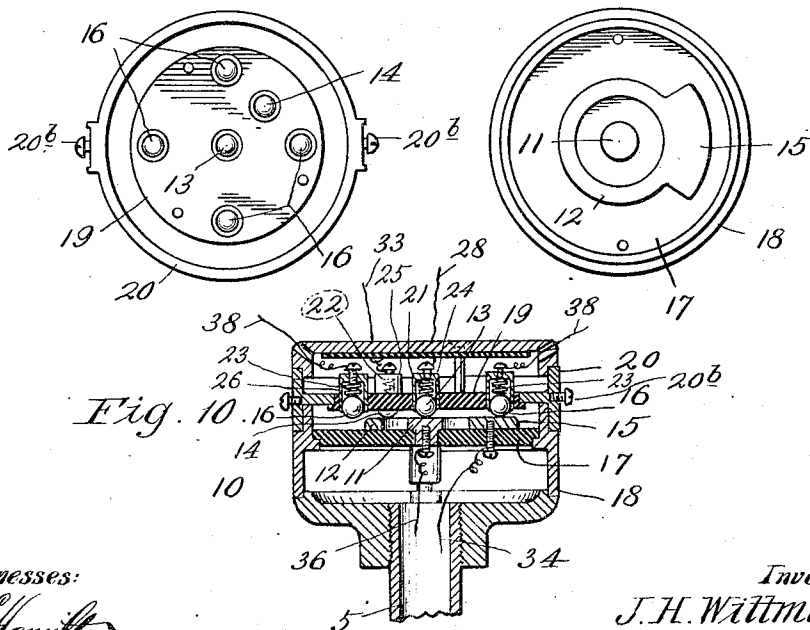
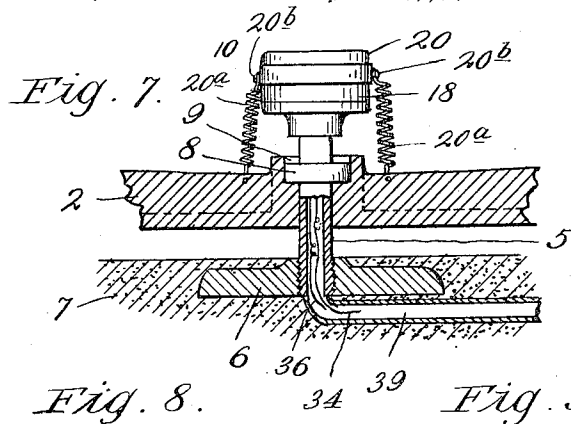
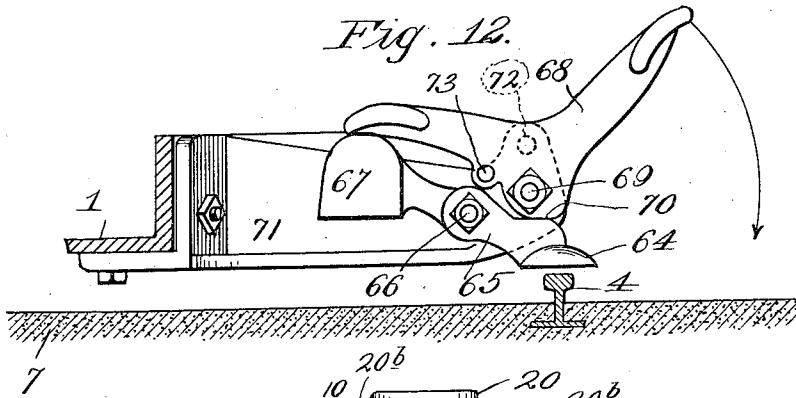
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC TURN-TABLE.

1,065,091.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed January 16, 1911. Serial No. 602,985.

To all whom it may concern:

Be it known that I, JOSEPH H. WITTMANN, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Automatic Turn-Tables, of which the following is a specification.

My invention relates to improvements in automatic turntables, and my object is to provide a novel turntable of this character which may be set in motion by a car or other vehicle running thereon.

While the accompanying drawings show my turntable arranged especially for motor cars and like vehicles, I do not limit myself to this particular use, as by making slight changes in the turntable, it may be readily adapted to railway cars, locomotives, etc.

In order that the invention may be fully understood, references will now be made to the accompanying drawings in which:

Figure 1 shows a plan view of my improved turntable. Fig. 2 is a section on line II—II of Fig. 1, showing a motor and gearing for rotating the turntable. Fig. 3 is a broken side elevation of one end of the turntable and an element for alternately opening two circuit-breakers employed in carrying out the invention. Figs. 4 and 5 are broken side and plan views, respectively, of one end of the turntable and certain parts carried thereby. Fig. 6 is a diagram of the electric circuits employed in carrying out the invention. Fig. 7 is a broken section on line VII—VII of Fig. 1. Figs. 8 and 9 show the rotary and stationary members, respectively, of a contact employed in carrying out the invention, the rotary member being inverted. Fig. 10 is a central vertical section of said contact. Fig. 11 is a cross section on line XI—XI of Fig. 1. Fig. 12 is a broken cross section of the turntable on line XII—XII of Fig. 1, showing a brake to stop the turntable at any desired point.

The turntable proper consists of a pair of runways 1, connected by a centrally-disposed skeleton frame 2, and mounted upon a plurality of wheeled-trucks 3. To adapt the turntable to railway-cars or locomotives it is only necessary to substitute a pair of rails for the runways 1.

4 designates an annular track upon which the trucks 3 travel, said trucks being pre-

vented from leaving the track by a tubular king-bolt 5, extending down through the central portion of frame 2, and secured at its lower end to a base-plate 6, preferably embedded in concrete 7, in which the track 4 is also embedded. Accidental upward movement, or tipping of the turntable is prevented by a collar 8 fixed to king-bolt 5 and arranged in a central recess 9 in the upper portion of frame 2.

10 designates a contact embodying permanently-engaging conductors and intermittently-engaging conductors, the former comprising part of a motor circuit, hereinafter described, and the latter part of a display circuit, hereinafter referred to. The permanently-engaging conductors embody a centrally-disposed stationary conductor 11, an annular stationary conductor 12 surrounding conductor 11, but insulated therefrom, a rotary conductor 13 engaging conductor 11, and a rotary conductor 14 engaging conductor 12. The intermittently-engaging conductors consist of a segmental conductor 15, integral with conductor 12, and a plurality of rotary conductors 16, which engage conductor 15 at each revolution. Conductors 11 and 12 are secured to an insulator 17, fixed to a stationary cup 18, and conductors 13, 14 and 16 are carried by an insulator 19, fixed in a cap 20, rotatably-mounted upon cup 18, which latter is fixed to and communicates with the upper end of king-bolt 5.

Conductors 13, 14 and 16 consist, preferably, of balls, so that they may roll, with but little friction, over conductors 11, 12 and 15, respectively, with which they are reliably forced into contact by expansion springs 21, 22 and 23 arranged in caps 24, 25 and 26, which carry the ball conductors 13, 14 and 16. Cap 20 is yieldingly held upon cup 18 by a pair of retractile springs 20^a, secured at their lower ends to frame 2, and at their upper ends to cup 20 through the intermediacy of screws 20^b.

27 designates a motor for rotating the turntable. Said motor is in a circuit consisting of a wire 28, communicating with the pole of conductor 11, and one pole of motor 27, a wire 29 communicating with the opposite pole of motor 27 and a circuit-breaker, 30, a wire 31 communicating with circuit-breaker 30 and a duplicate circuit-breaker 32, a wire 33 communicating with circuit-breaker 32 and the

pole of conductor 14, a wire 34 communicating with the pole of conductor 12 and one pole of a source of current, such as dynamo 35, and a wire 36 communicating with the other pole of dynamo 35 and the pole of conductor 11.

37 designates a plurality of lamps for display purposes. Said lamps are in an intermittent circuit consisting of a wire 38 communicating with wire 28 and the poles of conductors 16, which engage, one at a time, the segmental conductor 15, and thus intermittently close the circuit.

37^a designates a plurality of lamps, also for display purposes. Said lamps are in a constant circuit consisting of a wire 38^a communicating with wire 28, and wire 33.

39 designates a conduit communicating with king-bolt 5 and embedded in the concrete 7 for the protection of wires 34 and 36, communicating with the poles of dynamo 35 and the poles of conductors 12 and 11, respectively.

Motor 27 is carried by a bracket 40 projecting from one of the runways 1. The shaft of motor 27 is provided with a pinion 41 intermeshing with a large gear wheel 42 (Fig. 2) mounted on a shaft 43, carrying a fixed pinion 44, which intermeshes with internal teeth 45 in one of wheels 3, to drive the same and thus rotate the turntable. Shaft 43 is journaled in the adjacent sides of bracket 40 and the wheeled-truck.

Circuit-breakers 30 and 32 are duplicates, and one is arranged near the terminal of one runway, while its companion is arranged near the opposite terminal of the other runway, as shown in Fig. 1. Each circuit-breaker (Figs. 4 and 5) consists of a conductor 46, having a pair of oppositely-disposed resilient contact terminals 47 and 48, a conductor 49 adapted to rock into engagement with either of terminals 47 or 48, and a latch 50 carrying conductor 49 and pivotally-mounted upon a screw 51 projecting from the adjacent side of the runway. The forward end 52 of latch 50 overbalances its rear end and thus normally holds conductor 49 in engagement with terminal 48 until raised to the neutral position shown in Fig. 4, by an element 53, having sloping ends 54 and 55, and a notch 56 to receive latch 52 and thus hold the turn-table stationary. Latch 50 may also be thrown to the neutral position by a cam 57, fixed upon a U-shaped rock-shaft 58 mounted in the upturned flanges of the runway and in the path of a vehicle running upon the turntable. The upper horizontal portion of crank-shaft 58 is provided with a roller 59. Shaft 58 is normally held in the upright position shown in Fig. 4, by resilient means consisting of a spring 60 and a link 61, the former of which is fixed at one end to a bracket 62, and the latter at its lower end

to a collar 63, fixed to the end of shaft 58 opposite the cam 57.

After switch A is thrown open, the turntable may be stopped at any point in its rotation by a brake engaging track 4 and consisting of a shoe 64, a lever 65, fulcrumed at 66 and carrying shoe 64 at one end and a counterweight 67 at its opposite end to normally hold shoe 64 off of rail 4, and a foot-lever 68 fulcrumed at 69 and provided with a cam-face 70, engaging lever 65, and adapted to force the same downward to cause shoe 64 to frictionally engage track 4. The fulcrum bolts 66 and 69 are carried by a bracket 71 projecting from the adjacent runway and provided at its outer terminal with an eye 72. Lever 68 is also provided with an eye 73 adapted to be brought into coincidence with eye 72, so that both may receive the hasp of a padlock employed to lock the brake in operative position to prevent unauthorized persons from operating the turntable.

A vehicle running upon the turntable in the direction indicated by arrow *a* Fig. 1, is brought to a standstill when one of the front wheels engages roller 59 at the left side of the turntable, and the shaft 58, carrying said roller, is swung downward in the direction of arrow *b* Fig. 4, to a horizontal position. This operation of shaft 58 causes cam 57 to swing downward into engagement with the rear end of the adjacent latch 50 and raise the forward end of the same out of notch 56. This movement of latch 50 throws its respective conductor 49 into engagement with the adjacent conductor 47 and thus completes the motor circuit. The motor being thus energized rotates the turntable in the direction of arrow *c* until the companion latch 50, at what was formerly the right side of the turntable, rides upon element 53 which raises said latch and throws its respective conductor 49 to neutral position between its adjacent conductors 47 and 48, thereby interrupting the motor circuit. The momentum acquired by the turntable, however, will continue to turn the same until the latch drops into notch 56 and thereby arrests further movement of the turntable. The turntable having now made a half revolution places the vehicle thereon in position to return in the direction from which it came.

When it is desired to have the turntable rotate continually to exhibit a vehicle thereon, the motor circuit is held closed. Lamps 37 and 37^a having been strung upon the vehicle for decorative or advertising purposes, are illuminated by currents passing through wires 33 and 36^a respectively. As the turntable rotates the circuit wires 34 and 36 are prevented from becoming twisted, or wound around the king-bolt 5, by the stationary and rotary conductors of contact 10.

Having thus described my invention what I claim, and desire to secure by Letters Patent, is:

1. In combination, a turntable, a motor for actuating the same, a latch to hold the turntable in position to receive a vehicle and vehicle-controlled means for actuating said motor permanently mounted thereon and geared thereto.

2. In combination, a turntable, an electric motor for actuating the same, a motor circuit, and vehicle-controlled means for controlling said circuit.

3. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, means at opposite ends of the turntable adapted to be alternately closed by a vehicle running upon said turntable, and means alternately engaged by the circuit-breakers to open the same to interrupt the motor circuit.

4. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, provided with latches, said circuit-breakers being near opposite ends of the turntable and adapted to be alternately closed by a vehicle running upon said turntable, and an element alternately engaged by the circuit-breakers to throw the same open to interrupt the motor circuit, said element being adjacent that end of the turntable most remote from the approach thereto and provided with a notch to alternately receive the circuit breaker latches and thus stop the turntable.

5. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, near opposite ends of the turntable and provided with latches, an element alternately engaged by said latches to open their respective circuit-breakers and stop the turntable, and means to disengage the latches from said element and close the circuit-breakers.

6. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, near opposite ends of the turntable and provided with latches, an element alternately engaged by said latches to open their respective circuit-breakers and stop the turntable, and vehicle-controlled means at opposite ends of the turntable to disengage the latches from said element and close the circuit-breakers.

7. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, near opposite ends of the turntable, and provided with latches, an element alternately engaged by said latches to open their respective circuit-breakers and stop the turntable, and means including rock-shafts to disen-

gage the latches from said element and close the circuit-breakers.

8. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, near opposite ends of the turntable and provided with latches, an element alternately engaged by said latches to open their respective circuit-breakers and stop the turntable, and means including rock-shafts to disengage the latches from said element and close the circuit-breakers, and means to restore said rock-shafts to normal position after each operation.

9. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, near opposite ends of the turntable and provided with latches, means alternately engaged by said latches to open the respective circuit-breakers and stop the turntable, cams to disengage the latches from said means, and means to actuate said cams.

10. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit, near opposite ends of the turntable and provided with latches, means alternately engaged by said latches to open the respective circuit-breakers and stop the turntable, cams to disengage the latches from said means, means including rock-shafts to disengage the latches from said means and close the circuit-breakers, and resilient means to restore said rock-shafts to normal position after each operation.

11. In combination, a turntable, an electric motor for actuating the same, a motor circuit, circuit-breakers in said motor circuit near opposite ends of the turntable and provided with latches, means alternately engaged by said latches to open their respective circuit-breakers and stop the turntable, links connected to the last-mentioned means, and springs connected to said links to cooperate therewith for restoring said last-mentioned means to normal position after each operation.

12. In combination, a wheeled-turntable, an electric motor carried by said turntable and geared to a wheel thereof to rotate the turntable and vehicle-controlled means for closing the motor circuit.

13. In combination, a turntable consisting of connected runways mounted upon wheels, an annular track traversed by said wheels, a motor carried by said turntable and geared to a wheel thereof, a latch to hold the turntable in position to receive a vehicle and vehicle-controlled means carried by the turntable to control said motor and said latch.

14. In combination, a wheeled-turntable, a king-bolt around which said table rotates, a contact on said king-bolt, embodying sta-

tionary and rotary conductors, a motor carried by the turntable and geared thereto to rotate the same, and a motor circuit embodying the motor and said contact.

5 15. In combination, a wheeled-turntable, a king-bolt around which said table rotates, a contact on said king-bolt embodying constantly-engaging conductors and intermit-
10 tently-engaging conductors, circuit wires communicating with the constantly-engaging conductors and a source of supply, circuit wires communicating with said constantly-engaging conductors and the motor, and a lamp-circuit communicating with the
15 motor circuit and the intermittently-engaging conductors.

20 16. In combination, a wheeled-turntable, a king-bolt around which said table rotates, a contact on said king-bolt embodying constantly-engaging conductors and intermit-
tently-engaging conductors, circuit wires communicating with the constantly-engag-

ing conductors and a source of supply, circuit wires communicating with said constantly-engaging conductors and the motor, 25 and a lamp-circuit communicating with the motor circuit.

17. In combination, a wheeled-turntable, a tubular king-bolt around which said turn-
table rotates, a contact on said king-bolt 30 embodying rotary and stationary conductors, circuit wires communicating with a source of supply and said conductors, a motor carried by the turntable and geared there-
to to rotate the same, and circuit wires com- 35 municating with said motor and the contact conductors.

In testimony whereof I affix my signature, in the presence of two witnesses.

JOSEPH H. WITTMANN.

Witnesses:

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E. C. LILLIAN.

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