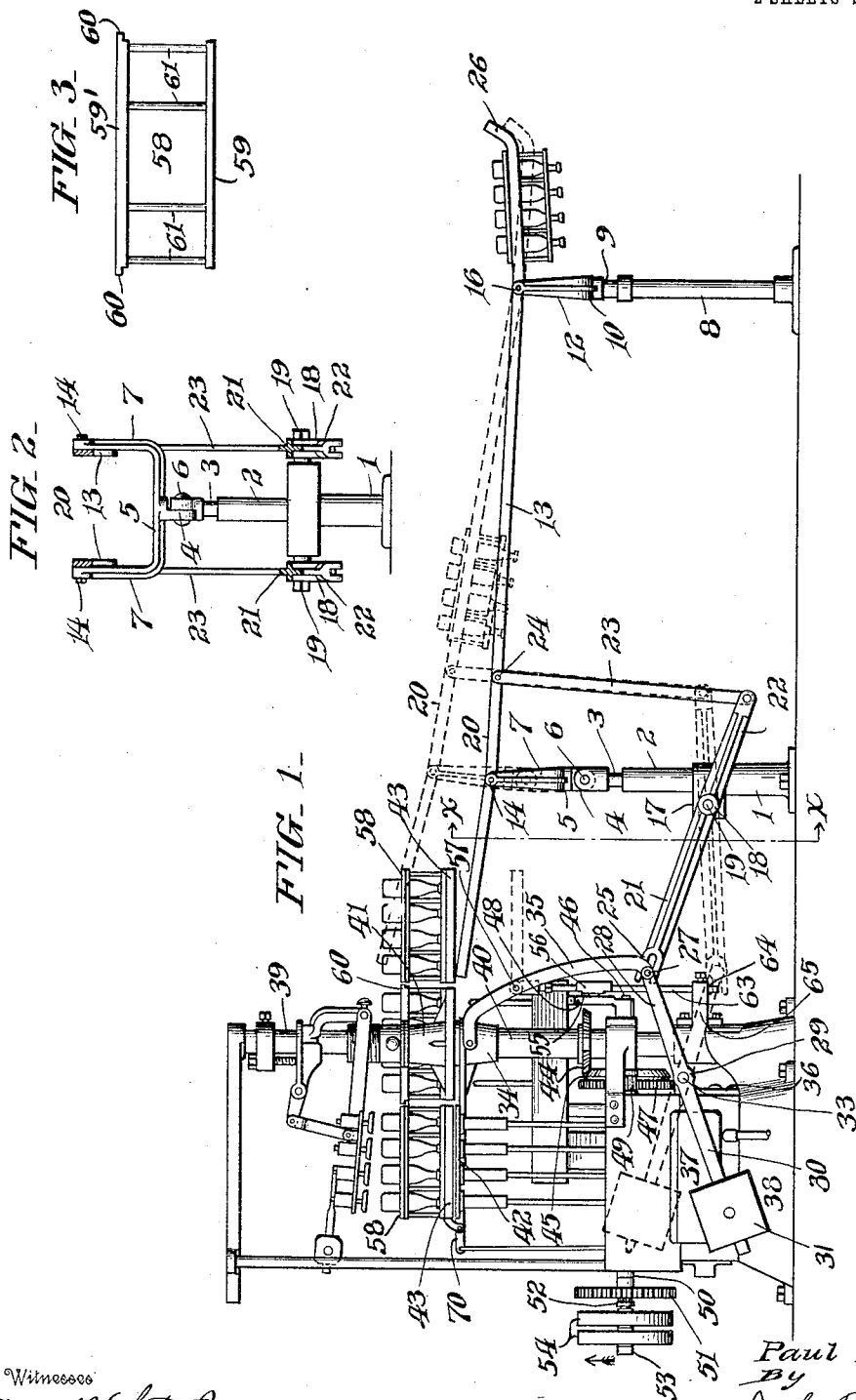


P. POLNISC.
 AUTOMATIC TRACK.
 APPLICATION FILED SEPT. 10, 1910.

1,056,363.

Patented Mar. 18, 1913.

2 SHEETS—SHEET 1.



Witnesses
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 Wm Portner

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 Paul Polnisch
 By
 J. S. Prentner
 Attorney

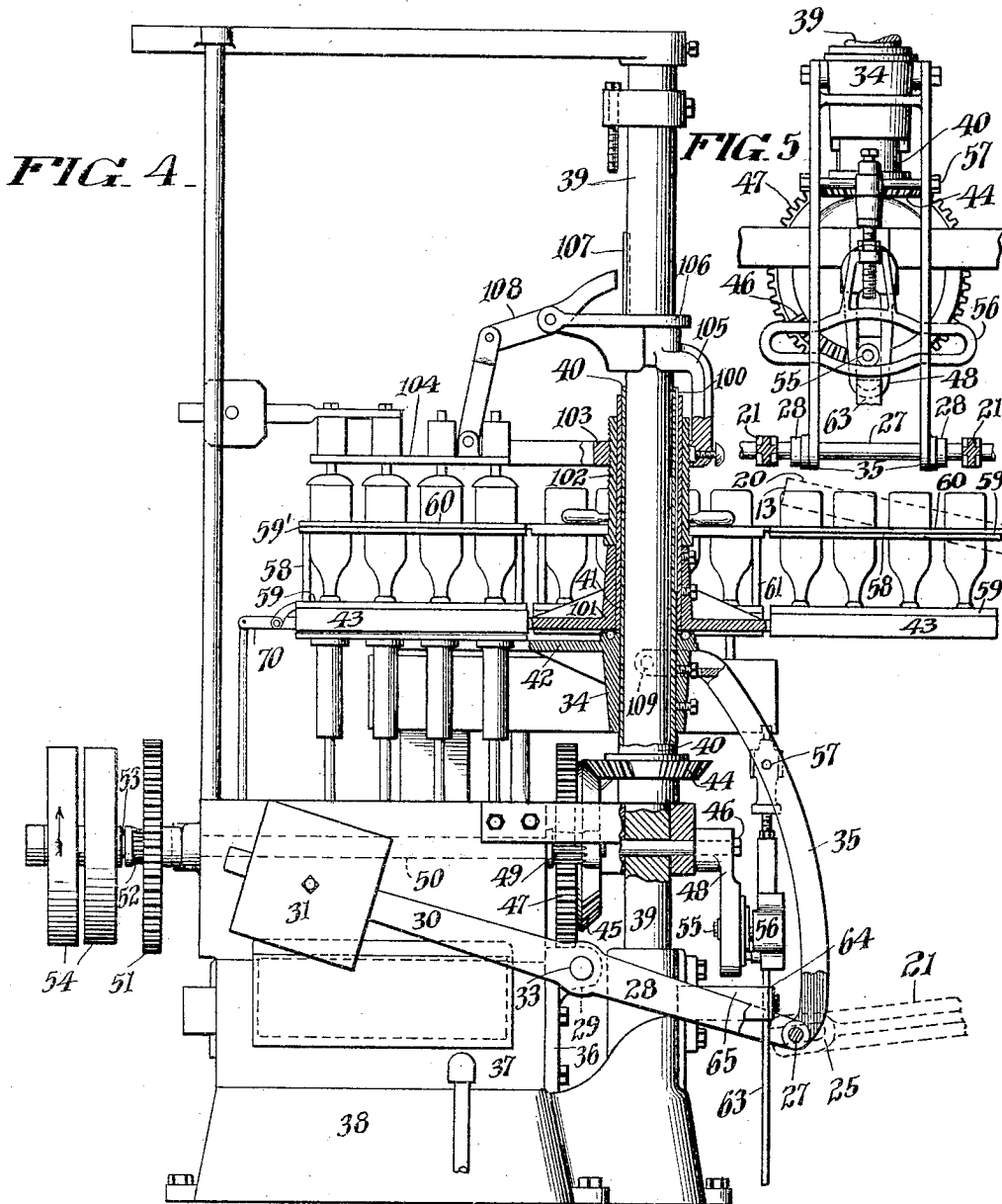
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AUTOMATIC TRACK.

1,056,363.

Specification of Letters Patent.

Patented Mar. 18, 1913.

Application filed September 10, 1910. Serial No. 581,344.

To all whom it may concern:

Be it known that I, PAUL POLNISCH, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in an Automatic Track, of which the following is a specification.

My invention relates to conveyers and the object of my improvements is an automatic track for removing crates carrying bottles from the platforms of a bottle cleaning machine, and particularly adapted for use in connection with my machines described and illustrated in the United States Letters Patent, No. 944,499 and dated Dec. 23, 1909, and in my application for Letters Patent filed Jan. 24, 1910, Ser. No. 539,852 and since issued as Patent No. 1,012,170.

With these and other objects in view, my invention consists of the construction, combination and the arrangement of parts as will be hereinafter more fully described and claimed and illustrated in the accompanying drawing, it being understood that changes in form, size, shape and other minor details may be made within the scope of my claims without departing from the spirit or sacrificing any of the advantages of this invention.

In the accompanying drawing, Figure 1, is a side elevation of my track in connection with the machine, described and illustrated in the application for Letters Patent, filed Jan. 24, 1910, Ser. No. 539,852; Fig. 2, is a rear elevation of the track along the line $x-x$ of Fig. 1; Fig. 3, is a front elevation of a crate in connection therewith. Fig. 4 is a side elevation of the machine shown partly in cross section, and Fig. 5 is a fragmentary rear elevation thereof.

Similar figures refer to similar parts throughout the several views.

A pedestal 1, is provided with a socket 2. In the socket 2, is mounted a plunger 3. On the plunger 3 is pivoted a central leg 4 of a span 5 by a pin 6. The span 5 is provided with vertical arms 7, 7 at equal distances from the leg 4. On a pedestal 8 is fixedly

mounted a leg 9 of a span 10 provided with a pair of arms as 12, similar to the arms of the span 5.

Parallel rails 13, 13, which lie in a plane at a fixed distance apart, form a track 20 between the spans 5 and 10 and above the pedestals 1 and 8. Each rail is pivoted on an arm 7 of the span 5 by a pin 14, and on an arm 12 of the span 10 by a pin 16. The section of the track between the pedestals, is of a uniform grade. Beyond the pedestal 8, the track takes an upward turn and then terminates, as at 26, by a sharp upward bend of the rails. Ahead of the pedestal 1, the track again takes an upward turn and is of a higher grade than the section beyond the pedestal 8.

A bar 23 is pivoted on each of the rails by a pin 24. On the pedestal 1 is mounted a bracket 17. On the bracket 17 are pivoted the levers 18, 18 by pins 19, 19. Each lever is provided with an arm 22 pivotally connected with one of the bars 23, and with an arm 21 having a recess 25, which forms a seat for the horizontal rod 27. On the rod 27 is pivoted an arm 28 of a lever 29 which has also an arm 30 carrying a weight 31. The lever 29 has its fulcrum 33 on a bracket 36 mounted on a chest 37 above a base 38.

On a shaft 39 is revolubly mounted a sleeve 40. The shaft 39 is vertically supported by the base 38. On the sleeve 40 is slidably mounted a sleeve 34. On the sleeve 34 is pivoted a lever 35 at 109 which is pivotally connected with the arm 28 of the lever 29 and with the arm 21 of the lever 18 by the rod 27.

On the sleeve 40, above the sleeve 34, is slidably keyed a sleeve 41, by a key 100, to rotate with the sleeve 40 and to slide with the sleeve 34. The sleeve 34 is provided with a horizontal platform 42. The sleeve 41 is provided with a hub 101 carrying horizontal platforms 43 parallel with the platform 42 and adapted to pass between the track rails 13. On the sleeve 41, above the hub 101 is movably mounted a threaded sleeve 102. The threaded sleeve 102 is en-

gaged with a threaded collar 103 which supports a platform 104. On the post 39 is slidably mounted a collar 106 by a key 107. The collar 106 is rigidly connected
 5 with the collar 103 by an arm 105, and has a lever 108 pivotally connecting it with the platform 104.

On the sleeve 40 is mounted a gear 44 provided with a number of groups of teeth
 10 corresponding with the number of platforms around the sleeve 41. Meshing with the gear 44 is a gear 45 provided with a single group of teeth arranged to be successively engaged with a group of teeth of
 15 the gear 44. When the teeth of said gears are engaged the sleeve 41 is rotated by the sleeve 40, and the platforms 43 revolve past the platform 42 and the track 20. When said teeth are disengaged one of the plat-
 20 forms of the sleeve 41 is directly above the track in a position to pass between the rails 13. The gear 45 is mounted on a shaft 46 carrying a spur gear 47 and a crank 48. The gear 47 meshes with a pinion 49 mount-
 25 ed on a shaft 50. The shaft 50 carries a spur gear 51, which meshes with a pinion 52 mounted on a power shaft 53 which is driven by the pulleys 54. The crank 48 carries a pin 55 which travels over the inner
 30 surface of a slotted bar 56. The slot of the bar 56 consists of two vertical oppositely disposed curved sections, each of a radius equal to the distance of the center of the pin 55 from the axis of the shaft 46 plus
 35 the radius of the pin. The pin can therefore roll over said sections of the slotted bar without transmitting any motion thereto. On the right and left of said curved sec-
 40 tions are horizontal sections for the pin to roll over and to cause the bar 56 to reciprocate in a vertical plane. The bar 56 is pivotally connected with the arm 35, as at 57, and is constrained to move in a vertical plane
 45 by a bar 63 slidably supported in a guide 64 of a bracket 65.

Assume that the pulleys 54 revolve in the direction of the arrow. The pinion 52 mounted on the shaft 53, which is driven
 50 by the pulleys, transmits its motion to the shaft 50 by means of the gear 51. The pinion 49 of the shaft 50, meshing with the gear 47, transmits its motion to the shaft 46. The gear 45, mounted on the shaft 46, meshing with the gear 44 transmits its mo-
 55 tion to the sleeve 40. The crank 48, mounted on the shaft 46, transmits its motion to the slotted bar 56 by means of the pin 55. The relative positions of the teeth of the gear 45 and of the pin of the crank 48 is
 60 such that, when the teeth of the gear 45 are engaged with a group of teeth of the gear 44, the pin is caused to travel in the slotted bar to the right along its upwardly curving section, and when said teeth are
 65 disengaged the pin first travels through the

right handed horizontal section and causes the bar to descend, it then travels along the downwardly curving sections causing the bar to remain stationary and finally along
 70 the left handed horizontal section causing the bar to ascend.

When the bar 56 is caused to ascend, the arm 35 transmits its motion to the sleeve 34 and to the levers 18, causing the sleeve to slide upwardly and the levers to swing with
 75 the arms 22 downwardly. The upward movement of the sleeve 34 forces the sleeve 41 to slide upwardly on the sleeve 40 and to carry its platforms vertically away from the track 20; the track is, at the same time, 80 caused to swing in the opposite direction by the bars 23 which connect the arms 22 of the levers 18 with the track rails 13. When the bar 56 is at the end of its upward stroke, the platforms 43 are clear above the track 85 and are free to be revolved past the track by the sleeve 41, which is rotated by the sleeve 40 when the teeth of the gear 44 are engaged with those of the gear 45. Every
 90 time the teeth of the gears become disengaged one of the platforms is always above the track in a position to pass between the track rails. When the bar 56 is caused to descend, the arm 35 causes the sleeve 34 to slide downwardly on the sleeve 40, and this
 95 is followed by the sleeve 41 which causes the platform to descend. The arm 35 also causes the levers 18 to swing, with the arms 22 upwardly, and the bars 23 cause the track to become elevated. The platform above 100 the track is thus made to pass between the track rails. The platform 43 carries a crate of bottles 58, which crate consists of a base 59, coincident with the platform, of vertical posts 61, and of a top frame 59', which is 105 joined with the frame 59 by the posts 61. The frame 59' is provided with flanges 60 adapted to overlap the track rails 13. As the track rails are swung upwardly and the crate carrying platform is moved down- 110 wardly between them, the ends of the rails meet with the flanges of the crate, and the crate is lifted off the platform and is tilted on the track, along which it slides until it is stopped by the terminals 26. 115

Having thus described this invention, what I now claim as new and desire to protect by Letters Patent, is—

1. An automatic track, comprising a pair of pivoted rails lying in a plane parallel to 120 each other and at a fixed distance apart, a pedestal, a span provided with a leg mounted on said pedestal and with arms, a pedestal provided with a socket and a plunger mounted therein, a span provided with a leg 125 pivoted on the plunger and with arms, and means pivotally supporting the rails on the arms and across the spans, for the purposes set forth.

2. An automatic track, comprising a pair 130

of rails lying in a plane parallel to each other and at a fixed distance apart, a pedestal and a span provided with a leg fixedly mounted on said pedestal and also provided with vertical arms, a pedestal provided with a vertical socket and a plunger slidingly mounted therein, a span provided with a leg pivoted on the plunger and also provided with vertical arms, and means pivotally supporting the rails on the arms and across the spans, for the purposes set forth.

3. An automatic track arranged to swing on a horizontal axis and comprising a pair of rails lying in a plane parallel to each other and at a fixed distance apart, a pedestal and a span provided with a central leg fixedly mounted on said pedestal and with arms pivotally supporting the rails along the axis of the track, a pedestal provided with a socket and a plunger slidingly mounted therein, a span provided with a central leg pivoted on the plunger and with arms pivotally supporting the rails, for the purposes set forth.

4. The combination of a pair of rails forming a track, a pedestal fixedly supporting a span provided with means pivotally supporting the rails and forming an axis for the track to swing on, a pedestal slidingly supporting a span also provided with means pivotally supporting the rails, and means to cause the track to swing comprising levers pivoted on the pedestal of the slidingly supported span, and bars pivotally connecting the levers with the rails for the purposes set forth.

5. The combination of a track forming an inclined plane, means for changing the inclination of the track, and a machine comprising a base and a post vertically supported thereby, a sleeve rotatably mounted on the post, a sleeve slidingly mounted on the rotatable sleeve and a hub constrained to rotate with the rotatable sleeve and free to slide with the slidable sleeve, means for rotating the rotatable sleeve intermittently and to reciprocate the slidable sleeve periodically during the intermissions of rest of the rotatable sleeve, said means pivotally connected with the means for changing the inclination of the track for the purposes set forth.

6. In combination with a bottle washing and rinsing machine provided with an intermittently rotating sleeve, a hub constrained to rotate with said sleeve and a bar to cause said hub to reciprocate during the intermissions of rest of the sleeve, a track and means operatively connected with the bar to cause said track to swing in a direction opposite to that of the reciprocating hub substantially as described and for the purposes set forth.

7. In combination with a machine provided with an intermittently rotating sleeve,

a hub constrained to rotate with said sleeve and a reciprocating device to cause said hub to slide during the intermissions of rest of the sleeve, a swinging track and means operatively connected with the reciprocating device to cause said track to swing, substantially as described and for the purposes set forth.

8. In combination with a machine provided with an intermittently rotating sleeve, a hub provided with platforms uniformly distributed around it constrained to rotate with said sleeve and reciprocating means to cause said hub to reciprocate during the intermissions of rest of said sleeve, a track comprising a pair of rails and means supporting the rails parallel to each other and at a fixed distance apart, and oscillating means to cause the track to swing, and means operatively connecting the reciprocating means with the oscillating means to cause the hub platforms to pass between the track rails, substantially as described and for the purposes set forth.

9. In combination with a machine provided with an intermittently rotating sleeve, a hub constrained to rotate therewith and provided with platforms adapted to carry crates of bottles and a reciprocating means to cause the hub to slide during the intermissions of rest of the sleeve, a swinging track having rails lying in a plane parallel to each other and at a fixed distance apart and adapted to remove crates from the platforms, oscillating means to cause the track to swing, and means operatively connecting the reciprocating means with the oscillating means to cause the rails to lift the crates off the platforms substantially as described and for the purposes set forth.

10. In combination with a machine provided with an intermittently rotating sleeve, a hub constrained to rotate therewith and provided with platforms carrying removable crates, a reciprocating means to cause the hub to reciprocate periodically, a track having rails adapted for guiding the crates thereon, oscillating means for changing the inclination of the track periodically, and means operatively connecting the reciprocating means with the oscillating means to cause the rails to lift a crate off the platforms periodically, substantially as described and for the purposes set forth.

11. In combination with a machine provided with a sleeve rotating intermittently in a horizontal plane, a hub constrained to rotate therewith and provided with horizontal platforms carrying crates, periodically reciprocating means to cause the hub to slide up and down during the intermissions of rest of the sleeve, a track for the crates to slide along having rails adapted to cause the crates to slide down said track, oscillating means to chance the inclination

of the track periodically, and means operatively connecting the reciprocating with the oscillating means to cause the rails to remove the crates from the platforms during
5 the downward movements of the hub, substantially as described and for the purposes set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PAUL POLNISCH.

Witnesses:

EMANUEL KLINE,
WM. PORTNER.

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