

July 10, 1962

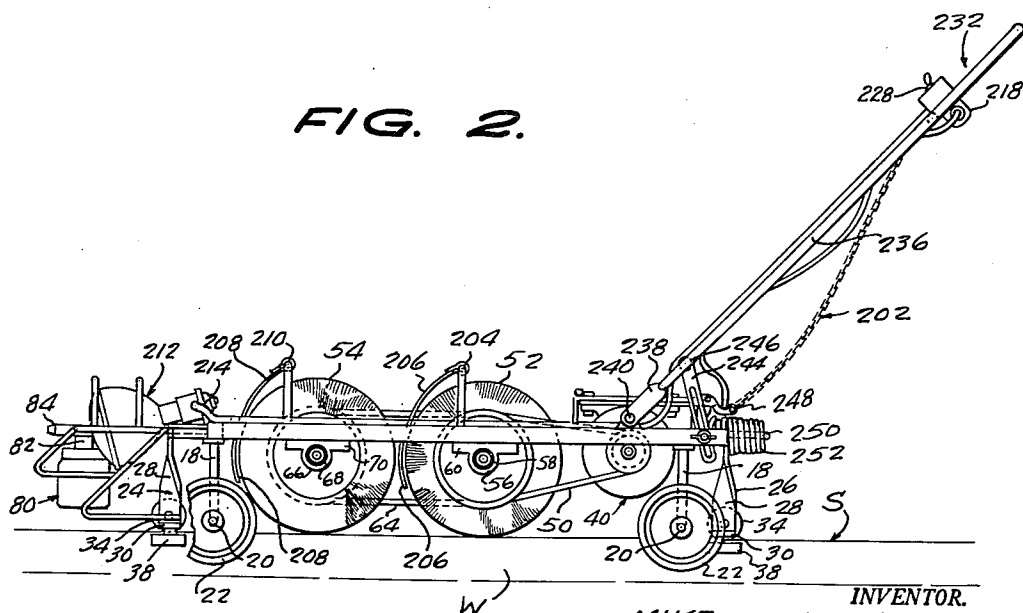
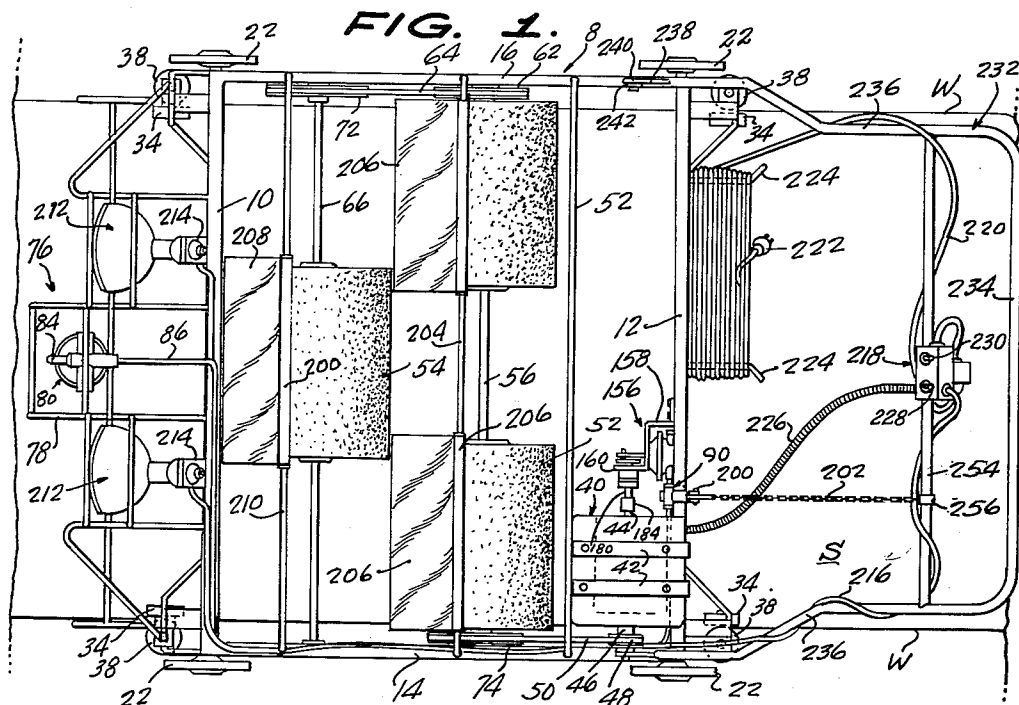
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3,042,950

BOWLING ALLEY CONDITIONING MACHINE

Filed Sept. 30, 1960

3 Sheets-Sheet 1



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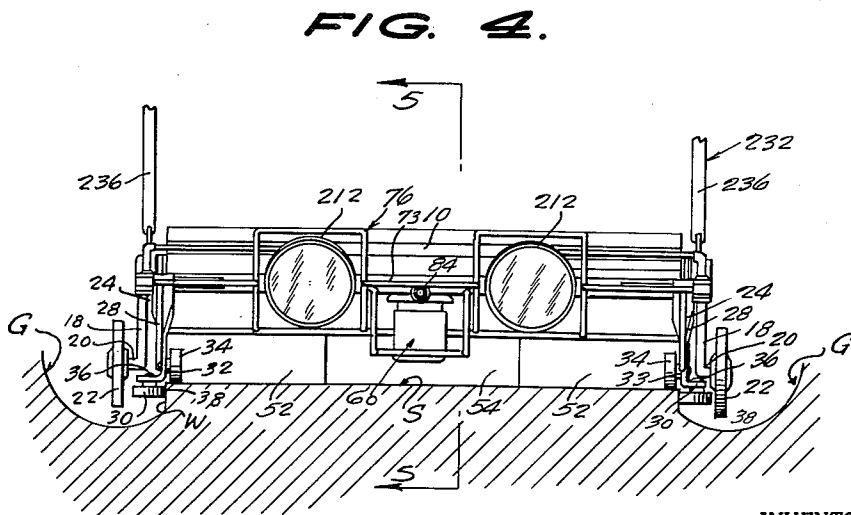
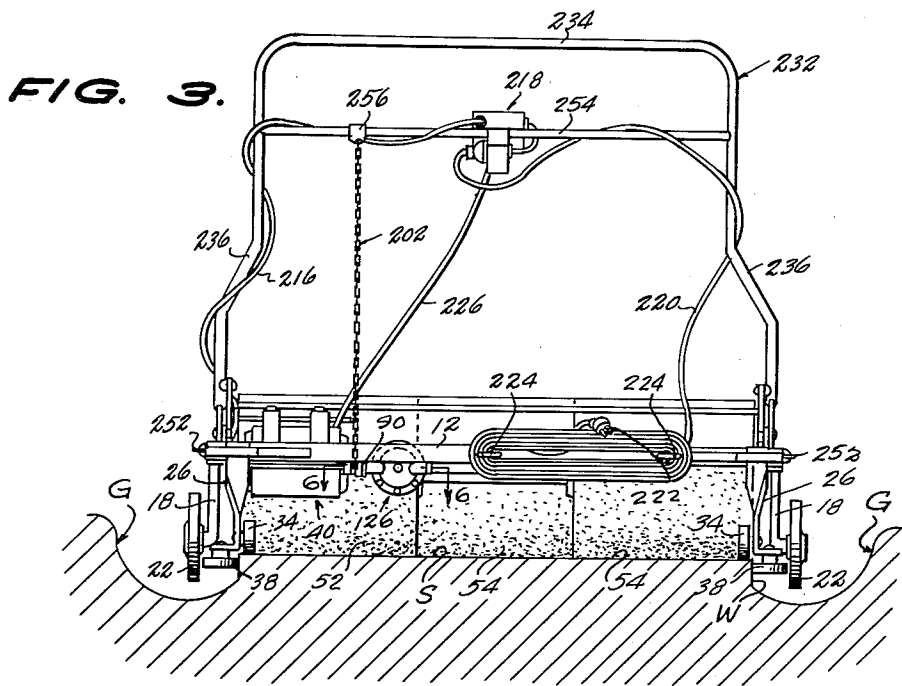
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3 Sheets-Sheet 2



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FIG. 5.

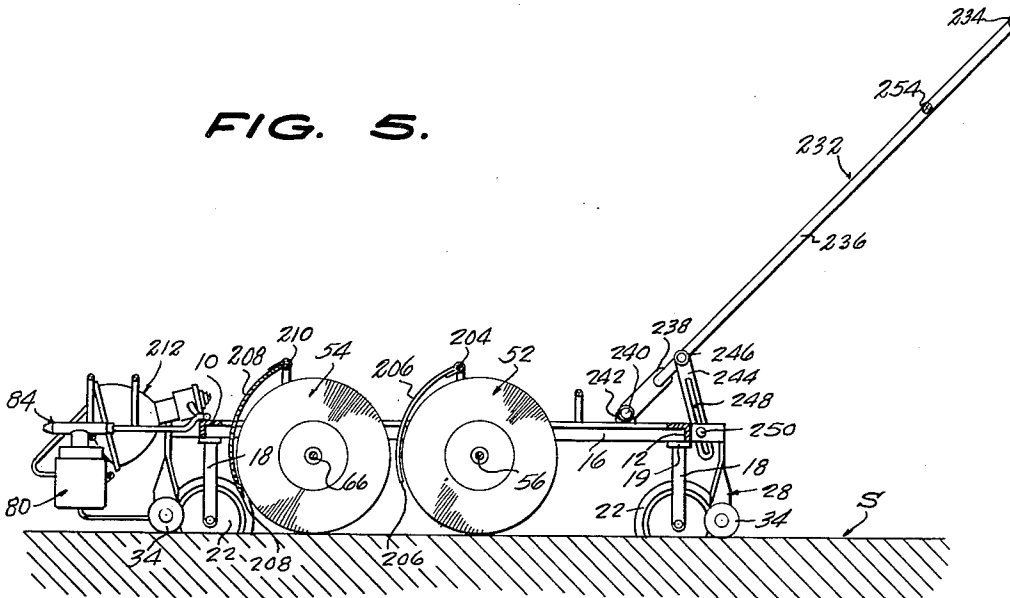
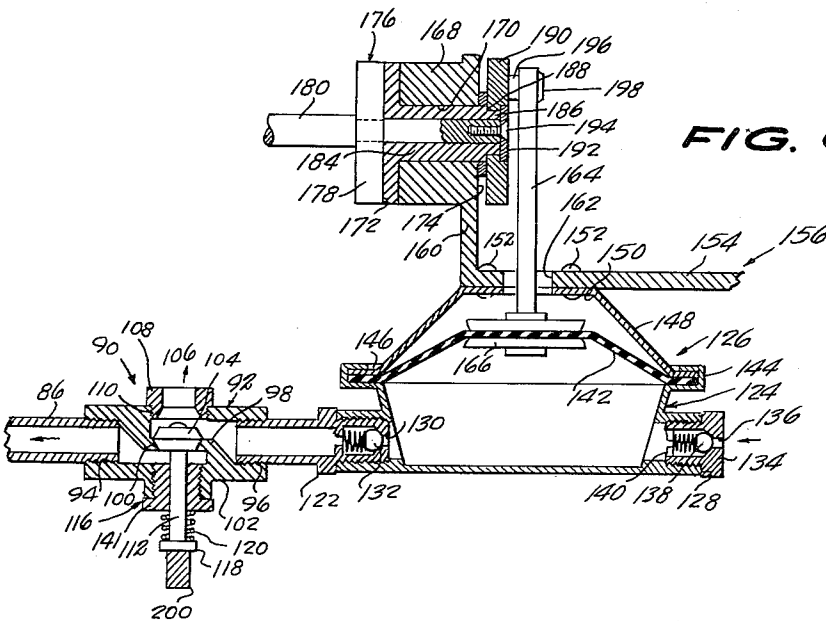


FIG. 6.



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1

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BOWLING ALLEY CONDITIONING MACHINE
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9 Claims. (Cl. 15—50)

This invention relates to a novel bowling alley conditioning machine.

The primary object of the invention is the provision of an efficient, effective, and easily operated and controlled machine of the kind indicated, which combines in one facility, the power-driven functions of cleaning, oiling, heating, and buffing a bowling alley, as the machine is moved along an alley, and which is self-propelling along an alley.

Another object of the invention is to provide an uncomplex and compact machine of the character indicated above, which is provided with wheels for supporting the machine on a floor in approaching and leaving an alley, which drop into and are out of contact with the alleys when the machine is on an alley, and is provided with adjustable vertical guide wheels which bear upon the alley surface, and adjustable horizontal guide wheels which bear upon the side walls of the gutters, whereby the machine is accurately guided along an alley and the downward pressure upon the alley surface, of rotary cleaning and polishing brushes, is variable.

A further object of the invention is the provision, in a machine of the character indicated above, of three rotary cleaning and polishing brushes which are arranged with two transversely spaced brushes in line across the machine and a single brush located in front of and centered with respect to the two brushes, the brushes being individually adjustable, toward and away from an alley surface, in order to be able to produce different surface effects on the alley, as where a drier than usual ball track is wanted.

A still further object of the invention is to provide a machine of the character indicated above, wherein the power-driven functions of cleaning, oiling, heating, and buffing and polishing, are electrically driven, and have their controls on the handle of the machine, within easy and convenient reach of the operator.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

FIGURE 1 is a top plan view of a machine illustrating the present invention;

FIGURE 2 is a left-hand side elevation of said machine, showing the same in position on a bowling alley;

FIGURE 3 is a rear end elevation of the machine, showing the same supported on the surface of a bowling alley and in relation to the gutters of the alley, the alley being in cross section;

FIGURE 4 is a fragmentary front elevation of the machine shown relative to a bowling alley in cross section;

FIGURE 5 is a vertical longitudinal section taken on the line 5—5 of FIGURE 4; and,

FIGURE 6 is an enlarged fragmentary horizontal section taken on the line 6—6 of FIGURE 3, showing details of the oil pump and oil distributing valve.

Referring in detail to the drawings, wherein like numerals designate like parts thereabout the several views, the illustrated machine comprises an open rectangular horizontal frame 8 having front and rear transverse cross members 10 and 12 and left- and right-hand longitudinal side members 14 and 16, respectively. Fixed, at their

2

upper ends, to and extending downwardly from the frame side members, near the cross members, are perpendicular wheel brackets 18, having lateral outwardly extending stub-axes 20, on their lower ends, on which relatively large diameter rubber-tired ground-engaging wheels 22 are journaled, for supporting the machine, in transit between a place of storage for the machine and alley to be conditioned by the machine. The brackets 18 are swivelly connected to the frame side members, at their upper ends, as indicated at 19.

Fixed to and extending downwardly from the front and rear frame cross members 10 and 12, at locations close to and inwardly of the wheel brackets 18, are similar front and rear guide roller brackets 24 and 26, having perpendicular standard portions 28 on whose lower ends are laterally outwardly extending ears 30. Journaled, as indicated at 32, on the inward sides of the standard portions 28, near to and above the ears 30, are horizontal axis guide rollers 34, to bear upon the alley surface S; and journaled, as indicated at 36, on the undersides of the ears 30, are vertical axis guide rollers 38, which bear against the sidewalls W of the alley gutters G. Suitable means (not shown) can be provided to render the guide roller brackets vertically and laterally adjustable.

In operation, when the machine is being moved from storage to a bowling alley, on the wheels 22, the machine is approached to the entrance end of the alley in line therewith, so that the horizontal guide rollers 34 bear upon the alley surface S, with the vertical guide rollers 38 bearing against sidewalls W of the alley, whereat the ground-engaging wheels 22 are elevated out of contact with the gutters G, as shown in FIGURES 3 and 4, so that, in being operated in either direction along the alley, the machine is guidingly supported on the guide rollers, in constant and accurate alignment with and centered relative to the alley.

Mounted across and within the machine frame 8 is a cleaning and polishing brush assembly which is driven by an electric motor 40, which is mounted on the forward side of the rear frame cross member 12, near the left-hand frame side member 14, by suitable means, such as straps 42. The motor 40 has a shaft which has an inwardly extending portion 44, adapted for connection to an oil pump (hereinafter described), and an outwardly extending portion 46 having a pulley 48 thereon, over which is trained an endless drive belt 50.

The brush assembly comprises a pair of axially aligned and transversely spaced rear cylindrical rotary brushes 52, and a single front brush 54, of the same diameter, the rear brushes being mounted and non-rotatably connected to a single shaft 56, which is journaled, at its ends, in bearings 58 on the undersides of blocks 60 which are fixed to the undersides of the frame side members, at locations intermediate the front and rear frame cross members. The rear brush shaft 56 has a relatively large diameter pulley 62 at its right-hand end and close to the inward side of the right-hand frame side member 16, over which an endless belt 64 is trained.

The single front brush 54 is fixed on the center of a front shaft 66 which is journaled, at its ends, in bearings 68 on blocks 70, like the bearings and blocks for the rear shaft, the front brush 54 being centered relative to the rear brushes 52 and bridging the gap between the rear brushes, and occupies the major part of the space, within the frame 8, between the rear brushes and the front frame cross members 10. The front shaft 66 has a pulley 72 in its right-hand end, of the same diameter as the rear shaft pulley 62, and has the belt 64 trained thereover, so that the front and rear pulleys rotate at the same speed, and in the same direction, the same being driven by the motor 40, through the belt 50, on the pulley

48, the belt 50 being trained around a large diameter pulley 74 on the left-hand end of the rear shaft 56.

A guard assembly, generally designated 76, is fixed to and extends downwardly and forwardly from the front frame cross member 10, and includes a central horizontal rectangular component 78, within and across which is mounted an alley conditioning oil container 80. The container 80 extends downwardly from the guard component 78 and has, on its upper end, an upstanding head 82 from which a forwardly extending spray nozzle 84 extends, for wide angle spraying of oil on the alley surface S as the machine is moved forwardly therealong. An air pressure pipe or hose 86 leads along the left-hand side frame member 14 and along the front frame cross member 10, to the nozzle 84, and is connected, at its rear end, as shown in FIGURE 6, to the discharge port of a pressure control valve 90, which serves, in effect, also as an oil distributing and control valve.

The valve 90 comprises a tubular body 92 having threaded open ends 94 and 96, which constitute discharge and intake ports, respectively. An internal diagonal wall 98 in the body 92 isolates the ports and has a central portion 100 provided with a seat opening 102 to be closed by a double bevelled valve head 104, which serves, at times, also to close an air pressure relief port 106, which is defined by a plug seat 108 engaged in an opening 110 provided in the sidewall of the body 92 opposite the seat opening 102. The valve head 104 is on the inward end of a valve stem 112 which works through a guide plug 114, engaged in an opening 116 in the valve body sidewall. The stem 112 has a collar 118 thereon, and a helical spring 120 is circumposed on the stem and is compressed between the collar 118 and the guide plug 114, so that the valve head 104 is rearwardly engaged in the seat opening 102 and closes the valve 90.

Connected in the intake port 96 of the valve body 92 is the radial discharge nipple 122 on one side of a flaring circular pan-shaped housing 124 of an air pump 126. Opposite the discharge neck, an air intake nipple 128 is provided on the pump housing 124. The discharge nipple 122 has, at its inward end, a restricted port 130, which provides a seat for a spring-pressed ball check 132, which normally closes the port 130. The air intake nipple 128 has a seat 134 on its outward end, having a restricted port 136 therein, which is normally closed by a spring-pressed ball check 138 positioned by radial fingers 140, at the inward end of the nipple 128, which do not unduly restrict communication between the interior of the nipple 128 and the pump housing 124.

A flexible diaphragm 142 is extended across the open end of the pump housing 124 and secured, at its peripheral edge, in a lateral annular hook flange 144 of the housing. A lateral flange 146 on the open larger end of a flaring annular bracket 148 is also secured in the hook flange 144, and has its smaller end 150 fixed, as by means of rivets 152, to the rear side of the main portion 154 of a mounting bracket 156. The bracket 156 has an inward end portion 158 which is suitably secured to the forward side of the rear frame cross member 12, and an outward end portion 160 which extends forwardly from the main portion 154, as shown in FIGURES 1 and 6. The main bracket portion 154 is provided with an opening 162 through which freely extends the forwardly extending pump shaft 164 which is suitably connected, as indicated at 166, to the center of the pump diaphragm 142.

Mounted on and preferably formed as a part of the end portion 160 of the mounting bracket 156 is a journal block 168 having an axial bore 170 extending to its outward and inward ends 172 and 174, respectively. A rotor 176 comprises an enlarged diameter head 178 which bears against the outward end 172 of the journal block 168 and has a stub-shaft 180 which is aligned with and coupled to the inward end portion of the shaft of the electric motor 40, by means of a suitable shaft coupling 182. Extending from the other side of the head 178 is a jour-

nal shaft 184 which extends through the journal block bores 170 and terminates in a reduced extension 186 which defines a shoulder 188. Engaged on the extension 186 is an eccentric ring 190, which is held in place, by suitable means, such as a retaining disc 192, through which extends a screw 194 which is threaded into the extension. The ring 190 has therein an eccentric pin 196, on which the free end of the pump shaft 164 is suitably and securably pivoted, as indicated at 198. Rotation of the rotor 176, by the motor 40, reciprocates the pump shaft 164 and works the pump diaphragm in and out so as to draw outsider air through the intake nipple 128, into the pump housing 124, and forces air, under pressure, out through the discharge nipple 122, to the valve 90. The valve stem 112 has, on its outer end, a lever 200, to which one end of a control chain 202 is secured, for opening the valve 90 to admit air under pressure to the spray nozzle 84 of the oil container 80, to produce forward spraying of oil into the alley surface 15.

An upwardly offset rear transverse bar 204 extends between and is secured, at its ends, to the frame side members, at a location spaced above the forward parts of the rear brushes 52, and carries thereon depending flexible absorbent fabric sheet material aprons 206, of such as burlap, which, as shown in FIGURES 2 and 5, drape around the upper parts of the front sides of the rear brushes 52, so as to wipe excess alley conditioning oil therefrom, as the machine is moved forwardly along the alley. A single similar apron 208 is mounted on a forward transverse bar 210, which is similarly mounted on the frame side members, relative to the front brush 54 and which engages the upper part of the front side of the front brush 54. These arrangements of the aprons 206 and 208 relative to the brushes 52 and 54 provides for flipping the aprons rearwardly over the brushes to engage the rear sides of the brushes, when the machine is moved rearwardly.

Forwardly and downwardly extending alley surface drying lamps 212 are adjustably mounted by brackets 214, secured to the forward side of the front frame cross member 10, at opposite sides of the control guide assembly component 78. An insulated electrical cord 216 is severally connected at one end, to the drying lamps, and is connected, at its other end, to a switch box 218, which is carried by a handle assembly hereinafter described. Also connected to the switch box 218 is a power cord 220 having a convenience current outlet plug 222 on its free end. When not in use in extended condition, the power cord 220 is wound around a pair of storage brackets 224 which extend rearwardly from the rear frame cross member 12. The motor 40 is connected to the switch box 218 by a flexible insulated conductor 226. The switch box 218 has separate switch actuators 228 and 230, for controlling the motor 40, and the drying lamps 212, respectively, the actuator 228 being a two position actuator for reversing the motor 40.

The handle assembly 232 comprises a U-shape having a transverse bight portion 234, serving as an operator's handle, and forwardly extending legs 236 which have plates 238 on their forward ends which are pivoted, as indicated at 240, to upstanding ears 242, and the frame side members, at locations somewhat forwardly of the rear frame cross member 12. The handle assembly 232 is held, in a desired upwardly and rearwardly angled position, by means of a lever bar 244 which is pivoted, at its upper end, as indicated at 246, to a leg 236, above the related pivot 240, and has a longitudinal slot 248 which receives a clamping bolt 250, extended through a frame side member, and provided with a wing nut 252. The handle assembly further comprises a combined brace and mounting bar 254 which extends between the legs 236, in parallel spaced relation to the handle bar 234, and upon which the switch box 218 is mounted, and to which the rear end of the valve-operating chain 202 is secured, as indicated at 256.

5

In operation, when the machine has been lined up with the approach end of a bowling alley, with the brush and the spray nozzle inoperative, and with the forward guide rollers assembly engaged with the alley surface S and the gutter sidewalls W, the machine is moved forward up to the foul line (not shown) whereat the spray nozzle 84 is operated, by pulling on the chain 202, so as to spray conditioning oil on the surface S beyond the four line, whereupon the brushes are operated to turn in a direction toward the pin deck of the alley, and the machine is pushed further forwardly to apply the brushes to the oil on the alley surface S and to permit the brushes to make frictional contact with the surface S which allows the brushes to serve thereafter as the means for moving the machine along the alley, without being pushed by the operator. The drying lamps can be turned on, at this point, for heating the alley surface S and for liquifying the sprayed oil, so as to promote better cleaning action and better absorption of the oil, or can be left turned off until the final buffing operation.

When the machine nears the pin deck, the spray nozzle and the drying lamps are turned off and the machine continued over the pin deck and stopped. The brushes are then operated in reverse direction, by changing the position of the switch actuator 228, and the machine backs itself rearwardly along the alley, so that the brushes buff the surface S. When the brushes reach the alley foul line they are shut off, whereat the operator uses the handle bar 234, to pull the machine off of the alley surfaces S and out of the gutters G, and moves the machine toward another alley or toward a place of storage.

Although there have been shown and described herein preferred forms of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. A bowling alley conditioning machine comprising a mobile frame, an alley surface rotary polishing brush assembly on said frame intermediate the ends thereof, motor means operatively connected to said brush assembly for driving said assembly in opposite directions in frictional contact with the alley surface for moving the machine along the alley, a conditioning oil container mounted on said frame forwardly of said brush assembly, a forwardly-extending spray nozzle on said container, air under pressure means operatively connected to said container for directing a spray of oil from said nozzle onto the alley, and alley surface drying lamps mounted on said frame at opposite sides of said nozzle.

2. A bowling alley conditioning machine comprising a mobile frame, an alley surface rotary polishing brush assembly on said frame intermediate the ends thereof, motor means operatively connected to said brush assembly for driving said assembly in opposite directions in frictional contact with the alley surface for moving the machine along the alley, a conditioning oil container mounted on said frame forwardly of said brush assembly, a forwardly-extending spray nozzle on said container, air under pressure means operatively connected to said container for directing a spray of oil from said nozzle onto the alley, alley surface drying lamps mounted on said frame at opposite sides of said nozzle, and an open-work guard assembly mounted on said frame and extending forwardly therefrom around said container, said spray nozzle, and said drying lamps.

3. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets extending downwardly from the frame in the region of its corners

6

at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the alley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the rear brushes, and means connecting the front and rear brushes to rotate together in the same direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve.

4. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets extending downwardly from the frame in the region of its corners at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the alley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the rear brushes, and means connecting the front and rear brushes to rotate together in the same direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve, alley surface drying lamps mounted on and extending forwardly from the front frame cross member at opposite sides of the spray nozzle.

5. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets extending downwardly from the frame in the region of its corners at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the alley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels

to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the rear brushes, and means connecting the front and rear brushes to rotate together in the same direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve, alley surface drying lamps mounted on and extending forwardly from the front frame cross member at opposite sides of the spray nozzle, an electric conduit having a forward end connected to the drying lamps and extending rearwardly along the frame, said motor means being an electric motor, an electric conduit having a forward end connected to the motor, and a rear end, a handle assembly inserted on and extending upwardly from the frame at the rear end of the frame, a switch box mounted on the handle assembly, the rear ends of the lamp and motor conduits being connected to the switch box, said valve operating means comprising a chain secured at one end to the handle assembly alongside of the switch box, and separate switch actuators for the lamps and the motor, the switch actuator for the motor being reversible.

6. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets extending downwardly from the frame in the region of its corners at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the alley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the rear brushes, and means connecting the front and rear brushes to rotate together in the same direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve, alley surface drying lamps mounted on and extending forwardly from the front frame cross member at opposite sides of the spray nozzle, and an open-work guard assembly mounted on said front frame cross member and extending forwardly therefrom around the oil container and the spray nozzle and the drying lamps.

7. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets extending downwardly from the frame in the region of its corners at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the alley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the rear brushes, and means connecting the front and rear brushes to rotate together in the same direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve, alley surface drying lamps mounted on and extending forwardly from the front frame cross member at opposite sides of the spray nozzles, an electric conduit having a forward end connected to the drying lamps and extending rearwardly along the frame, said motor means being an electric motor, an electric conduit having a forward end connected to the motor, and a rear end, a handle assembly inserted on and extending upwardly from the frame at the rear end of the frame, a switch box mounted on the handle assembly, the rear ends of the lamp and motor conduits being connected to the switch box, said valve operating means comprising a chain secured at one end to the handle assembly alongside of the switch box, and separate switch actuators for the lamps and the motor, the switch actuator for the motor being reversible, said handle assembly being a U-shape having a bight portion serving as a handle and forwardly and downwardly extending legs having forward ends pivoted on the frame side members, a positioning lever pivoted at one end on a leg and having a longitudinal slot, a frame side member carrying a bolt extending through the slot and having a wing nut thereon.

8. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets extending downwardly from the frame in the region of its corners at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the alley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the

rear brushes, and means connecting the front and rear brushes to rotate together in the said direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve, alley surface drying lamps mounted on and extending forwardly from the front frame cross member at opposite sides of the spray nozzles, an electric conduit having a forward end connected to the drying lamps and extending rearwardly along the frame, said motor means being an electric motor, an electric conduit having a forward end connected to the motor, and a rear end, a handle assembly inserted on and extending upwardly from the frame at the rear end of the frame, a switch box mounted on the handle assembly, the rear ends of the lamp and motor conduits being connected to the switch box, said valve operating means comprising a chain secured at one end to the handle assembly alongside of the switch box, and separate switch actuators for the lamps and the motor, the switch actuator for the motor being reversible, said handle assembly being a U-shape having a bight portion serving as a handle and forwardly and downwardly extending legs having forward ends pivoted on the frame side members, a positioning lever pivoted at one end or a leg and having a longitudinal slot, a frame side member carrying a bolt extending through the slot and having a wing nut thereon, said handle assembly having a mounting bar spaced from said bight portion and extending between the legs, said switch box and end of the valve operating chain being secured to the mounting bar.

9. A bowling alley conditioning machine comprising a horizontal open frame having longitudinal side members and front and rear cross members, ground-engaging swivel wheels mounted to and extending downwardly from the frame in the region of its corners, brackets ex-

tending downwardly from the frame in the region of its corners at locations laterally inwardly of the ground-engaging wheels, said brackets having horizontal rollers thereon to bear upon the surface of a bowling alley adjacent to the gutters of the valley and vertical rollers, said vertical rollers being spaced below the horizontal rollers and spaced inwardly from related ground-engaging wheels to bear against adjacent sidewalls of the gutters, an alley surface rotary polishing brush assembly mounted on and within said frame, and motor means for driving said assembly in opposite directions, in frictional contact with the alley surface for moving the machine along the alley, said brush assembly comprising a pair of aligned and transversely spaced rear brushes, and a single front brush positioned in front of and centered with respect to the rear brushes, and means connecting the front and rear brushes to rotate together in the same direction, a conditioning oil container mounted on said front frame cross member having a forwardly extending spray nozzle, an air pressure conduit having a forward end connected to said nozzle, said conduit extending rearwardly along the frame and having a rear end, a normally spring closed valve mounted on the rear frame cross members having a discharge port to which the rear end of the conduit is connected, an air pump mounted on said rear cross member and operatively connected to said motor means, said pump having a housing to which said valve is connected, and operating means for said valve, said pump being a diaphragm pump having a flexible diaphragm, a shaft connected at one end to said diaphragm, rotary eccentric means mounted on the rear frame cross member to which the other end of the pump shaft is pivoted, and means operatively connecting the eccentric means with said motor means.

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