

July 9, 1963

R. A. PARKER ETAL
CAN DISPENSING APPARATUS

3,096,908

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2 Sheets-Sheet 1

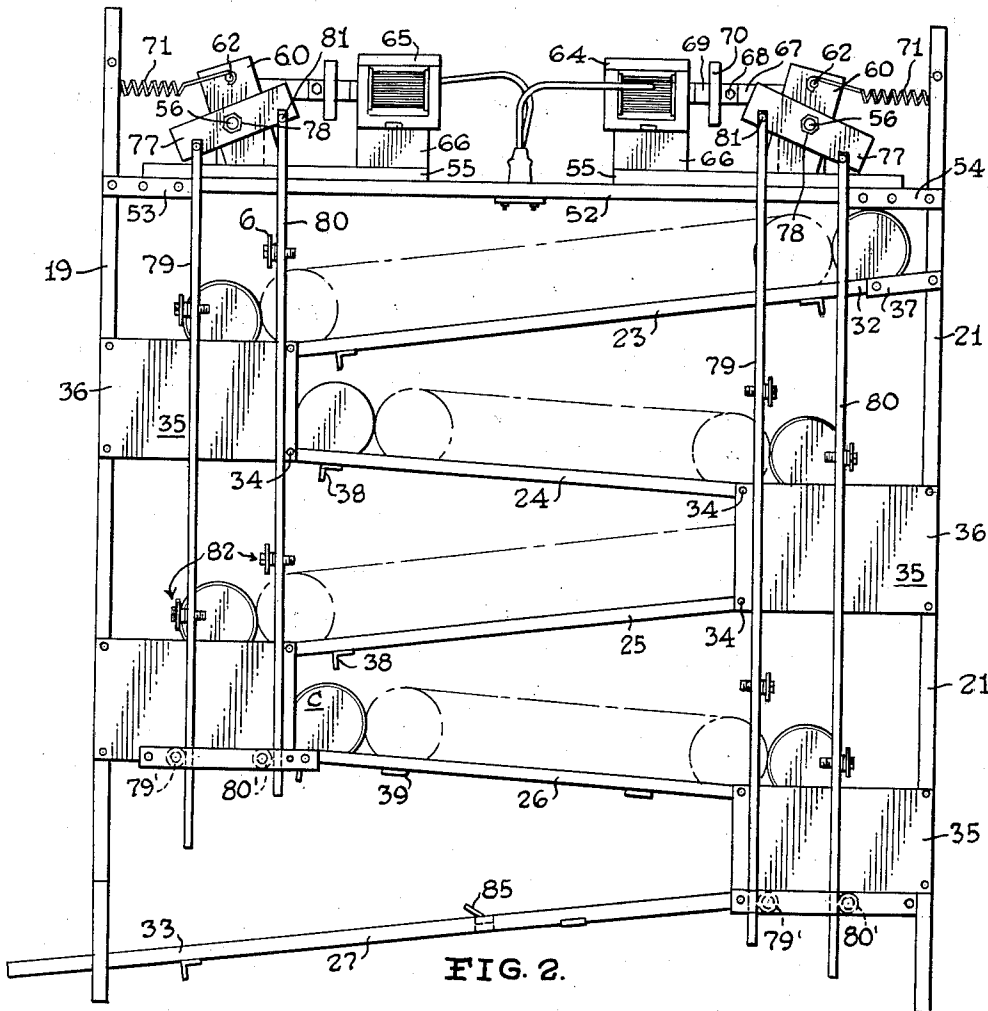


FIG. 2.

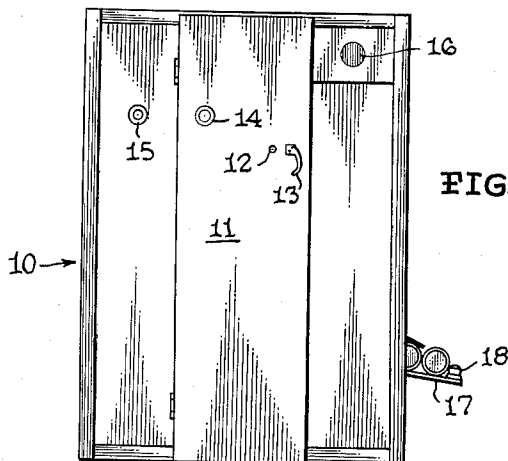


FIG. 1.

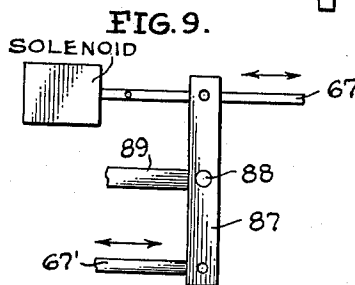


FIG. 9.

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FIG. 3.

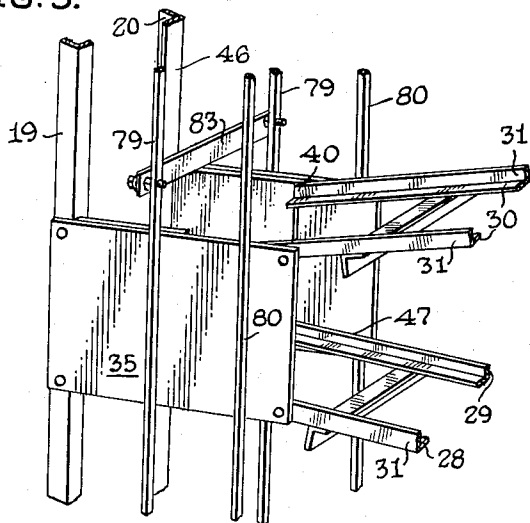
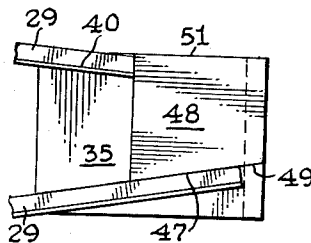


FIG. 5.

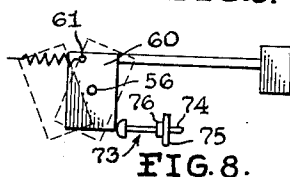


FIG. 8.

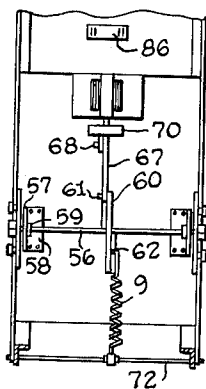


FIG. 7.

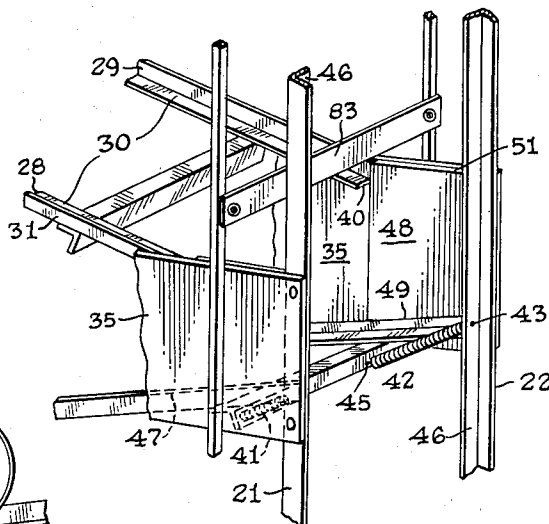


FIG. 4.

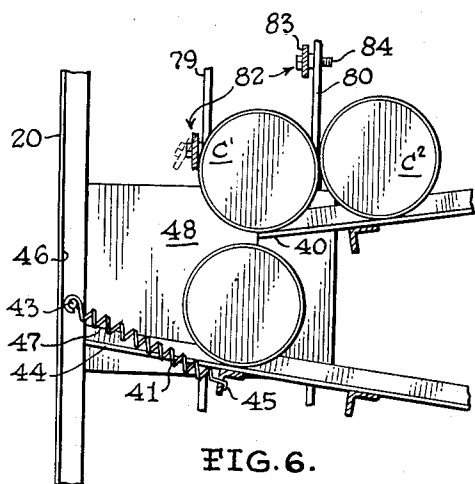


FIG. 6.

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CAN DISPENSING APPARATUS

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13 Claims. (Cl. 221-176)

This invention pertains to dispensers for packaged goods or articles, and more particularly to dispensers for canned goods, such as cylindrical cans of oil.

In certain businesses where many motor vehicles are involved, such as in the distribution system of a dairy, bakery or newspaper, it is conventional to supply the motor fleet with fuel and lubricating oil at the main company yard. To prevent misappropriation, daily records are kept in the office as to fuel and lubricant consumption, as well as the mileage reading of each vehicle. For economy of operation, it is desirable that the drivers of the several motor vehicles operate the fuel pump. The pump is customarily within easy view from the office, and the pump reading is telemetered to the office simultaneously with the operation of the pump. Where view of the pump is obstructed, an "intercom" system is provided, and by remote control from the office the pump may be locked and unlocked for operation.

As to release of cans of oil to the several drivers, however, prior to the present invention no satisfactory system of self-service had been devised, and this phase of supplying the fleet has suffered severely by reason of misappropriation.

In line with the situation just recited, it is the primary object of the present invention to provide a can dispenser which lends itself to either remote or coin control of the dispensing operation.

Another object of the present invention is to provide a dispenser of the kind aforementioned wherein the cans are maintained out of reach, nor can the dispensing operation be tampered with or forced.

A still further object of the present invention is to provide a dispenser for a series of cylindrical cans arranged on a series of superposed communicating ramps disposed in zig-zag relation wherein means is positioned along the path of movement of the cans and at the juncture of the several ramps and operable conjointly with operation of the final can release or discharge, for preventing jamming of the cans with resultant failure of the cans to advance.

Another important object of this invention is to provide a can dispenser of the kind mentioned which may be constructed, in the main, from commonplace parts, such as angle irons, plates, straps, rods, and the like.

Still another object of the present invention is to provide an improved can dispensing apparatus that is relatively inexpensive in manufacture, efficient and positive in operation, easily maintained, and has a long operational life.

Other objects and advantages of the present invention will become apparent in the detailed description of the invention to follow.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and finally pointed out in the appended claims, it being further understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the accompanying drawings forming a part of this specification and in which like numerals of reference indicate similar parts in the several views:

FIGURE 1 is a front elevation of a casing enclosing apparatus according to the present invention;

FIGURE 2 is a front elevation on a larger scale of the

dispensing apparatus, shown removed from the casing of FIGURE 1;

FIGURE 3 is an enlarged detail in perspective looking toward the left end of the apparatus of FIGURE 2 and showing the juncture of a pair of the several ramps employed in the invention;

FIGURE 4 is a perspective corresponding to FIGURE 3, but viewed from the right hand end of FIGURE 2;

FIGURE 5 is a side elevation showing in detail the juncture of the ramps, only one rail of each ramp being here shown;

FIGURE 6 is a still further enlarged detail in longitudinal section, showing the can releasing means employed at the lower end of each ramp;

FIGURE 7 is a plan view of one of the two duplicate gate actuating means mounted at the top of the frame structure shown in FIGURE 2;

FIGURE 8 is a diagram in side elevation of the arrangement for limiting the return or stop position of the gate devices after a can releasing operation; and

FIGURE 9 is a schematic view in side elevation of a modification wherein but a single power means is employed to operate the several gate devices.

In general, the present invention comprises a casing within which the can dispensing apparatus is enclosed. The apparatus includes an open vertical frame, including a series of inclined communicating ramps disposed in superposed zig-zag descending relation for receiving the cans and leading same to the final discharge station. A platform is mounted atop the frame, and adjacent each end of the platform is mounted a rock shaft. A rocker arm is fixedly mounted at each end of each of said rock shafts and at a point beyond the side edges of the frame structure. Front and rear rods depend one from each end of each rocker arm, and at a point near the juncture of respective pairs of said ramps gate devices extend across said ramps and are connected to corresponding of said front and rear rods to alternately release and block descent of said cans as said rock shaft is actuated. A power device is energized in any suitable way for rocking said shafts.

For a full understanding of the invention, reference will now be made to the annexed drawings, wherein numeral 10 designates a casing or housing for the apparatus of the present invention. The casing includes a hinged door 11, key slot 12, and a handle 13. Cooperating bumpers 14, 15 are mounted on both the door and the casing. The transmitter and receiver of an "intercom" system are disposed at 16 within and adjacent the top of the casing, whereby a driver may request or discuss with the clerk in the plant office regarding release of one or more units or cans of oil. On each activation of the dispenser apparatus a unit will be released onto a terminal extension 17 of the lowermost ramp of the apparatus. A bumper 18 serves as a stop for the discharged cans.

Within the casing and substantially filling the upper portion of same is the apparatus of FIGURE 2, constituting the instant invention. Space is left in the casing beneath the apparatus for storage of a quantity of cans for restocking the apparatus, as becomes necessary. The width and height of the apparatus may be varied to provide sufficient number and length of ramps to accommodate the quantity of cans envisaged as necessary to meet the contemplated demands. The pitch of the ramps may also be varied in accordance with the size of cans to be dispensed. The depth of the apparatus is somewhat greater than the axial length of the cans to be dispensed.

The apparatus comprises a rectilinear frame including vertical corner posts 19-22, the front posts being designated in FIGURE 2 by numerals 19, 21, while the rear posts bear numerals 20, 22, FIGURES 3-4. The posts preferably are of L-shape in cross-section for reasons to

appear hereinafter. A series of five ramps 23-27 for sustaining and rollingly guiding the cans C, are arranged in vertical zig-zag descending relation within the rectangular space defined by said corner posts. Each ramp consists of a trackway comprised of spaced, parallel rails 28, 29. The rails are of L-shape in cross-section and may be cut from conventional angle iron stock. Each pair of rails is disposed with the innermost wall 30 of each rail lying in a common plane, and with the outer wall 31 disposed vertically to maintain the cans on the track and guide same therealong. Save for the start portion 32 of uppermost ramp 23 and the discharge end portion 33 of lowermost ramp 27, the ends of the several ramps are secured, as by bolts, rivets or welding 34, to plates 35, which plates in turn are similarly fixed along one edge 36 to their respective adjacent posts. The start end of the rails of uppermost ramp 23 are each rigidly fixed to one end of a strap 37, the other end of each strap in turn being likewise fixed to a corner post. The discharge end portion 33 of the rails of the lowermost or discharge ramp are fixed directly to the corner posts. The rails of the several ramps are interconnected and braced by angle irons 38 and/or straps 39 to maintain proper spacing of the rails and to make rigid the structure thus far described.

As best seen in FIGURES 3-6, the lowermost terminal end 40 of rails constituting ramps 23-26 terminate short of the corner posts by a distance sufficient to allow free passage of a can to permit it to fall to the high portion of the ramp below. To prevent battering of the cans during said fall and thus impairment of their capacity to roll freely, cushioning means is provided, presently illustrated as a pair of tension springs 41-42. One end of each spring is anchored at 43 to an inner wall of a post at a point above the lead end 44 of the ramp, while the other end of each spring is anchored at 45 to an adjacent one of the bridging angle irons 38, at a point spaced from the adjacent rail. As forecast, the intumed walls 46 of the respective angle iron posts serve as a stop to prevent any can from bouncing or being wedged off the end of the ramp. To prevent a can, during passage from one ramp to another, from shifting axially and thereby landing on the edge 47 of one or the other of the rails, and thus possibly wedge and block the rolling action of the cans, a guide means is provided at the juncture of the ramps to maintain the cans in alignment with the tracks. This guide means is illustrated as consisting of filler plates 48, one being affixed to the inner wall of each of the ramp sustaining plates 35. These filler plates are of approximately the same thickness as the vertical walls of the rails. One edge 49 of each filler plate rests upon the vertical edge 47 of the rail, as best shown in FIGURE 5, while the upper edge 51 thereof is disposed above the ends 40 of the rails.

Power operated gate means is provided for controlling movement of the cans down the several ramps and regulating discharge down the lowermost ramp, as will next be described. A horizontal supporting structure 52 is mounted above the uppermost ramp 23 by means of straps 53, 54 fixed to the ends of said structure and to the several posts. Resting on said structure is a platform 55, shown in two duplicate sections, one section being fixed on each end portion of the supporting structure.

Identical gate actuating units are mounted on each platform section. Each unit includes a rocker shaft 56 journaled at each end in an upstanding leg 57 of an L-bracket, the other leg of which is fixed at 58 to its respective platform section. The ends of rock shafts 56 project through the brackets and beyond the sides of the supporting structure 52. Axial movement of the rock shaft is restrained by providing the end portions thereof with shoulders, shown in the form of collars 59, contiguous the brackets. Each rock shaft 56 passes through and is fixed to the center portion of an actuating arm 60, illustrated in the form of an elongate plate disposed in a plane transverse the axis of its respective

shaft 56. A pair of pins 61, 62 are fixed to the opposite faces of the actuator arm adjacent its upper edge, the pins extending in opposite directions and in parallelism with said shaft.

Means for rocking said shafts 56 of said units consists of motor means for applying a sudden pull on corresponding ones of said pins 61. For practical purposes the motor means is depicted as a pair of simultaneously operated solenoids 64, 65, each mounted on a base 66, which in turn is fixed to a platform section. A link 67 is pivotally connected at 68 to one end of the core 69 of the solenoid, while the opposite end of the link is pivotally attached to one of the pins 61. As is conventional, an iron ring 70 is fixed on the exposed end portion of the solenoid core. Considering for the amount the solenoid 64, ring 70 serves to limit movement of the core to the left by abutting against a stop portion on the solenoid casing. As the movement of the core tends to center itself in the field of the solenoid coil, the electromagnetic pull thereon diminishes. Likewise as ring 70 approaches its coil, the electromagnetic pull thereon increases. Thus the pull of the solenoid is instant and substantially uniform throughout the stroke of the core. A tension spring 71 is anchored at one end to a crosspiece 72 extending between posts of the frame, while the opposite end of the spring is secured to one of the pins 62. Thus, when the solenoid 64 is energized, rocker plate 60 and shaft 56 are moved counterclockwise until ring 70 abuts said portion of the solenoid casing. Upon deenergization of the solenoid, spring 71 instantly returns the plate and shaft to their original position. A bumper 73 is provided for controlling return movement of plate 60 to a set position. This bumper includes a threaded shank 74 passing through a tapped opening in a bracket 75. A nut 76 serves to fix the bumper in any adjusted position selected.

A rocker arm 77 is fixedly mounted on each end of each rock shaft by means of nuts 78, with the rocker arms of each shaft parallel and disposed outwardly beyond the sides of the ramps and supporting structure 52. Pairs of front and rear pendent rods 79, 80 are provided on each of the several rocker arms, each pair being pivotally connected at 81 to the opposite end portions of its respective rocker arm. The several pendent rods extend downwardly below the lowermost control station each pair of rods is to service. Reaction rollers 79', 80' for the several pendent rods 79, 80 are fixed near the lower ends of said rods to guide same and prevent deflection of said rods by reason of the thrust imparted thereto by the cans being restrained.

A series of cooperating pairs of gate devices 82 for regulating advance and final release of the cans are mounted on and bridge respective front and rear pairs of the pendent rods 79, 80 (FIGURES 3-4), at such points vertically therealong as to position the pairs of gate devices near the lower end of the ramp to be regulated. The positioning of the several gate devices at the lower end of each ramp is important in that this arrangement prevents jamming and binding of the cans at the most critical points; viz., at the juncture of the ramps. Gate devices are omitted on the discharge end of ramp 33 in order to prevent tampering with the discharge mechanism, as by insertion of a wire or the like into the discharge chute for the purpose of actuating the delivery mechanism.

Each gate device is illustrated as consisting of an elongate rigid flat strip 83 connected at its opposite ends to a respective pair of the pendent rods. The last mentioned connection consists of threaded bolts 84 passing through the ends of the strips and their respective rods, whereby the gate devices may be shifted laterally of the rods to properly position the gate devices relative the cans. The adjustment thereby adapts the apparatus to handle cans of any range of diameter within the limits of the bolt adjustments. In order to effect a face contact, rather than an edge contact of the gate devices with

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the cans, the strips 83 are loosely mounted on the bolts to permit same to pivot about their longitudinal axes, as shown in dotted lines in FIGURE 6. This looseness may be accomplished either by interposing soft rubber washers between the gate members and the bolts, or by forming the gate members with oversize apertures for the bolts and but partially tightening the bolts.

In FIGURE 2 the several gate devices are shown in the normal deenergized state of the power unit, with the springs 71 biasing the shafts 56 to the normal starting position. FIGURE 3 shows in detail the position of the gate devices of the left hand unit of FIGURE 2. Here one pair of rods 79 of each unit is in the "down" position, carrying with them the several gate devices mounted thereon, which devices are engaging and restraining a can c' at the lower end of each of the ramps, ready to be released on clockwise rocking of shaft 56. Meanwhile the cooperating pairs of rods 80 are in the "up" position with their respective series of gate devices clearing the path of the cans. It is apparent from FIGURE 6 that upon energizing power unit 65 the rods 79 will be elevated, releasing cans c' to topple onto cushioning springs 41 and start down the next ramp. Coincident with elevation of the pair of rods 79 and the gate devices carried thereby, the companion gate devices on rods 80 will be lowered to intercept and restrain the succeeding can c². Upon deenergization of power unit 65 the spring 71 will again return the gates to the starting position mentioned above. Thus, upon each energization of the power units one can will be discharged onto the ramp below, and the series of cans on the several ramps will advance one step or unit. Depletion of the cans on the upper ramps in no way modifies the operation of the apparatus, as to the cans on the ramps below, and the apparatus functions so long as a can remains on the lowermost ramp 26.

The preceding description of operation has dealt largely with the left hand unit of FIGURE 2. The right hand unit is identical save for the transportation of the gates and the thrust rollers 79', 80' to the opposite side of the pendent rods, and the reverse angular position of the rocker arm. The left hand unit controls release of cans step by step from the lower ends of ramps 23 and 25, while the right hand unit controls step by step descent on ramps 24, 26 and final discharge down ramp 27. Upon each energization of the power units the lowermost can (FIGURE 2) is released and will roll down final ramp 27 to pick up station 17. Enroute each discharged can passes over the trigger finger 85 of a counter device. This counter device may be of the well known Veeder type, which totalizes on the spot the number of cans dispensed. Each actuation of the counter finger also telemeters the result into the plant office by conventional means.

The two power units 64, 65 are plugged in to a common outlet box 86 and are under control of a common switch to operate simultaneously. The switch may be part of a conventional coin control mounted in the casing; but for the presently envisaged usage it is proposed to have the switch in the plant office.

While two power units are shown in FIGURE 2, this has been dictated by economy and present availability of suitable small power units. In FIGURE 9 a single power unit is disclosed in the form of a solenoid. Here an additional rocker plate 87 extends vertically above and below its pivot 88 on bracket 89. The links 67' to one gate mechanism is attached to the upper end of rocker plate 87, while the link to the other gate mechanism is attached to the lower end of the rocker plate.

In operation, upon energization of motor means 64, 65 (or the single solenoid of FIGURE 9), either by a coin control or from the plant office, as pointed out above, one can will be released and roll down lowermost ramp 27, all other cans on the several ramps simultaneously advancing by one increment or can unit. By reason of the several sets of gate devices, excessive downward thrust

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on the lowermost can is obviated, the gate devices at the same time precluding jamming at the juncture of the ramps. The open frame and ramp structure permits easy placement of the cans on the several ramps in stocking the apparatus. In the event all cans on the ramps have dispensed, this fact will be immediately apparent from the failure of signals by the telemeter counter 85 to the plant office.

While we have illustrated and described with particularity only a single preferred form of our invention, we do not desire to be limited to the exact structural details thus illustrated and described; but intend to cover all the forms and arrangements which come within the terms employed in the definition of our invention constituting the appended claims.

What is claimed is:

1. Can dispensing apparatus comprising frame open on at least one side and end, a series of communicating ramps mounted on said frame in vertical zig-zag descending relation and rollingly guiding therealong a series of contiguous cans, each of said ramps comprising spaced tracks each rail of which has along its outer edge an upstanding guide wall for restraining the cans against unwarranted axial movement, the juncture of the lowermost end of each ramp terminating short of the uppermost end of the underlying ramp to permit cans to fall from one ramp to the next below, a plurality of oppositely reciprocating dual gate units for controlling descent of said series of cans on said ramps, each unit adapted upon being actuated to pass a single can for descent and admit said series to move one can increment, said units being disposed at said junctures along the path of descent of said cans, to prevent jamming of contiguous cans moving down said ramps and excessive thrust on the lowermost can, and means for simultaneously operating all of said gate units.

2. The apparatus as defined in claim 1, further including filler plates at said junctures disposed between the upper and nether rails and preventing engagement between the cans and the upper edge of said upstanding guide walls of said rails.

3. The apparatus as defined in claim 1, further including cushioning means below each dual gate unit and at the juncture of said ramps for absorbing the impact of cans falling from an upper to a lower ramp, and wherein said cushioning means is comprised of a pair of elongate elastic members disposed under tension below the juncture of said ramps, said elastic members being fixed at one end at a point above the nether ramp and at the other end at a point along and below the lastnamed ramp.

4. Apparatus for dispensing cylindrical cans comprising four vertical posts disposed corresponding to the corners of a rectangle, a series of communicating ramps arranged within the confines of said posts one above the other and descending downwardly in zig-zag relation, the opposite end portions of said ramps being secured to corresponding pairs of said posts, each ramp being comprised of parallel dual tracks, and each track being of L-shape in cross-section and the two tracks comprising each ramp being disposed with adjacent wall portions of said L-shaped tracks lying in a common plane to provide a surface on which said cans may roll and the outer leg surface extending vertically to form guides to prevent axial movement of said cans, the lower end of each ramp terminating short of the high end of the ramp beneath to permit said cans to pass from one ramp to the other, means mounted on said posts and above said ramps for controlling incremental movement of cans along said ramps and discharge thereof down the lowermost ramp, said lastnamed means including a pair of rock shafts extending parallel with the axes of said cans, one rock shaft being disposed above the junctures at one end of said ramps and the other rock shaft above the junctures at the other ends thereof, a rocker arm fixed to each end

of each rock shaft at a point outwardly of said vertical guide surfaces of said tracks, pairs of front and rear pendent rods, each pair being pivotally connected to its respective rocker arm, pairs of gate devices disposed adjacent the junctures of said ramps and extending parallel with said rock shafts, the ends of each gate device being connected to corresponding front and rear rods, whereby upon rocking of said shaft in one direction one set of said gate devices will be raised to permit the proximate can to advance and the other set of gate devices will engage the next oncoming can to restrain it, and remote controlled power means for rocking said shaft.

5. Can dispensing apparatus comprising a series of communicating ramps in vertical zig-zag descending relation for sustaining and rollingly guiding therealong a series of contiguous cylindrical cans, a pair of dual gate units, each unit comprising spaced gate devices extending past a plurality of said ramps and alternately raised and lowered into can engaging position for controlling descent of said series of cans, each unit adapted upon being actuated to pass a single can on each of said ramps for descent and thus admit said series to move one can increment, said units being spaced along the path of descent of said cans to prevent jamming of contiguous cans moving down said ramps and excessive thrust on the lowermost can, and means for simultaneously operating all of said gate units.

6. Gating means for effecting incremental rolling movement of a series of cylindrical cans down a descending ramp structure, said gating means comprising a pair of parallel rock shafts arranged at spaced points along said ramp structure and extending transversely and beyond the sides thereof, a front and rear rocker arms each of a length substantially equal to the diameter of one of said cans and fixed to the respective ends of each of said rock shafts, a rod pivotally depending from each end of each rocker arm and reaching below said ramp, lateral thrust guide rollers for the lower ends of said rods, at least two pairs of elongate gate devices adjacent said ramp structure, with each pair of gate devices fixed at opposite ends to corresponding front and rear of said depending rods, means including a remote control power means connected to said rock shafts for simultaneously rocking said shafts through a complete cycle upon energization and deenergization thereof, whereby upon rocking of said shafts in one direction one of each of said pairs of gate devices will be raised to permit the proximate can to descend and the others of said pairs of gate devices will be simultaneously lowered to engage and restrain the next oncoming can.

7. The apparatus as defined in claim 6 wherein said power means comprises a solenoid connected medially of said shafts for rocking same in one direction, and tension spring means also connected to said shafts for automatically returning same to their initial positions upon deenergization of said solenoid means.

8. Apparatus for dispensing cylindrical cans comprising a frame, a series of communicating ramps mounted on said frame in vertical zig-zag descending relation for sustaining and rollingly guiding therealong a series of contiguous cans, each of said ramps comprising spaced parallel tracks, and each track having a side guide rail for the cans, a plurality of dual gate units for controlling descent of said series of cans, each gate unit comprising a pair of spaced can restraining devices alternately movable into and out of the path of the cans and adapted upon each actuation thereof to pass a single can for discharge and admit said series to move one can increment, said units being spaced along the path of descent of said cans to prevent jamming of contiguous cans moving down said ramps and excessive thrust on the lowermost can, and means for simultaneously operating all of said gate units.

9. Gating means for effecting incremental rolling movement of a series of cylindrical cans down a descending

ramp structure, said gating means comprising a pair of parallel shafts arranged at spaced points lengthwise said ramp structure and extending transversely and beyond the sides thereof, front and rear rocker arms each of a length substantially equal to the diameter of one of said cans and fixed to the respective ends of said rock shafts, a rod pivotally depending from each end of each rocker arm and reaching below said ramp structure, thrust means for guiding the lower ends of said rods, at least two pairs of elongate gate devices adjacent said ramp structure, with the gates of each pair of gate devices fixed at opposite ends to corresponding front and rear of said depending rods, means including a remotely controlled power means connected to said rock shafts for simultaneously rocking said shafts through a complete cycle, whereby upon rocking of said shafts in one direction one each of said pairs of gate devices will be raised to permit the proximate can to descend and the others of said pairs of gate devices will be simultaneously lowered to engage and restrain the next oncoming can.

10. The apparatus as defined in claim 9 wherein said gate devices consist of rigid flat strips secured at each end to respective of said front and rear pendent rods by threaded bolts permitting adjustment of said individual gate devices lengthwise said ramp structure.

11. The apparatus as defined in claim 10 wherein said gate strips are mounted on said bolts for limited pivotal movement about their longitudinal axes to permit face contact of said strips with said cans.

12. Gating means for effecting incremental rolling movement of a series of cylindrical cans down a descending ramp, said means comprising a pair of parallel rock shafts arranged at spaced points along said ramp and extending transversely and beyond the sides thereof, a front and rear rocker arm each of a length substantially equal to the diameter of one of said cans and fixed to each end of said rock shafts, a rod pivotally depending from each end of each rocker arm and reaching below said ramp, guide means for the lower ends of said rods, at least two pairs of elongate gate devices adjacent said ramp, with each pair of devices fixed at opposite ends to corresponding front and rear of said depending rods, remote control power means connected to rocker plates fixed medially of said rock shafts for simultaneously rocking said shafts in one direction upon energization thereof, a tension spring for each rock plate, one end of each spring being anchored and the other end connected to its respective one of said rocker plates to bias said shafts to a fixed initial angular position, and adjustable stop means engageable with said rocker plates for determining said angular position, whereby upon rocking of said shafts in one direction one of each of said pairs of gate devices will be raised to permit the proximate can to pass and the others of said gate devices will be simultaneously lowered to engage and restrain the next oncoming can.

13. Apparatus for dispensing cylindrical cans comprising a frame including four vertical corner posts, a series of overlying communicating ramps arranged within said frame in zig-zag downwardly descending relation, said ramps being connected to and sustained by said posts, the lower end of each ramp terminating short of the high end of the ramp beneath to permit passage of a can from one ramp to next below, said connections of said ramps to said posts including supporting plates fixed to said posts and to said ramps at the ramp junctures, each of said ramps being comprised of a pair of tracks of L-shape in cross-section thus presenting two walls with the adjacent walls lying in a common plane and the outer walls disposed vertically to serve as can guides, filler plates on the inner side of said first-named supporting plates, said filler plates being of substantially the thickness of said outer walls of said tracks and resting on the latter to prevent cans from striking the edge of said guides when passing said junctures, a platform structure also fixed to

said posts and overlying said ramps, rock shafts, one adjacent each end of said platform and extending transversely thereof and beyond the sides of said ramps while substantially overlying the junctures of said ramps, rocker arms, one fixed to each end of each rock shaft, pendent rods pivotally connected to each end of each rocker arm, vertically spaced pairs of elongate gate devices, one pair adjacent each juncture of said ramps, each device of each of said gate devices being connected at its opposite ends to corresponding of said pendent rods at opposite ends of said shafts, whereby upon rocking of said shafts in one direction one set of said gate devices will be raised to permit a proximate can to advance and the other set of gate devices will be lowered to engage the next oncoming can and restrain same, and means for simultaneously rocking said shafts.

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