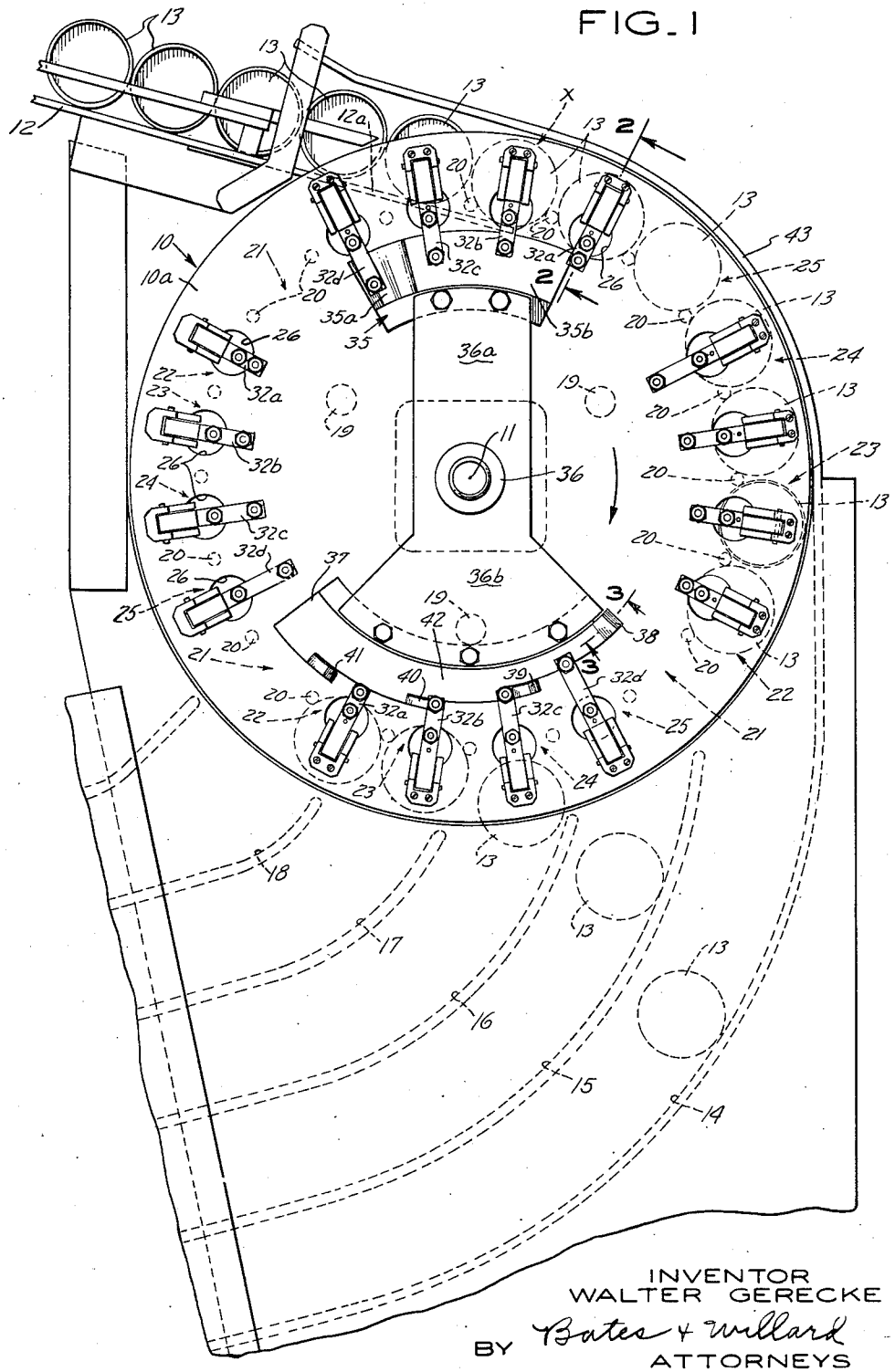
April 2, 1957 W. GERECKE 2,787,359

ROTARY WHEEL DIVIDER FOR CANS OR THE LIKE

Filed Sept. 15, 1955 3 Sheets-Sheet 1

FIG. 1



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ROTARY WHEEL DIVIDER FOR CANS OR THE LIKE

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FIG. 2

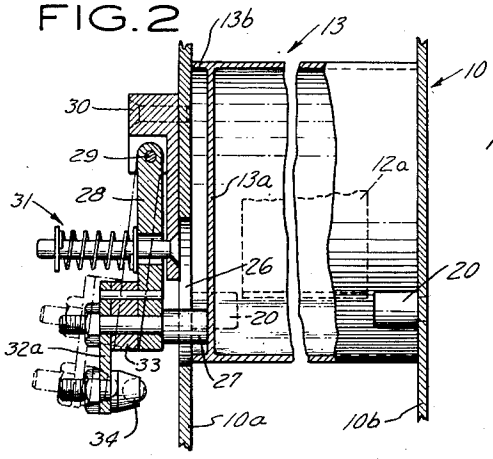


FIG. 4

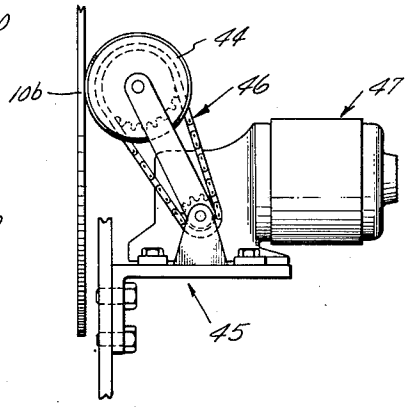


FIG. 5

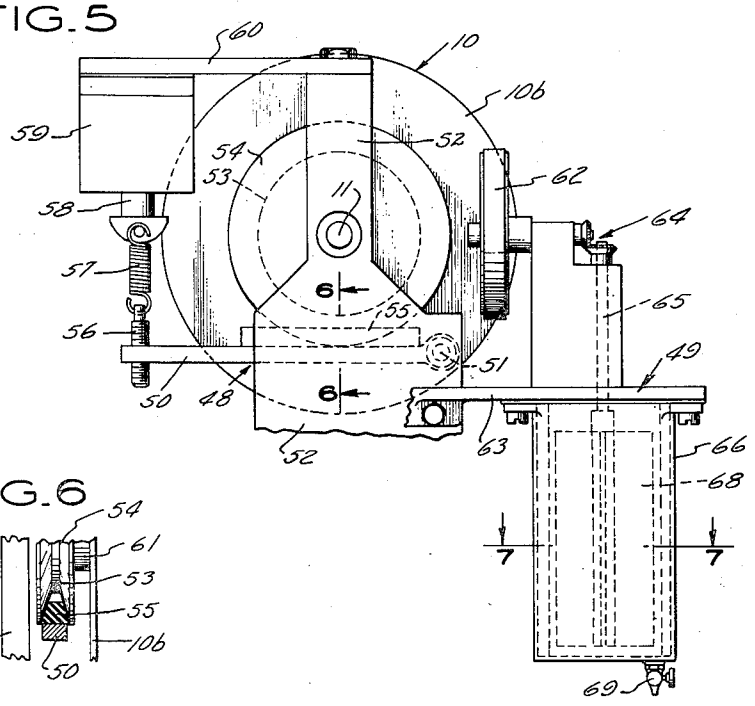


FIG. 6

FIG. 7

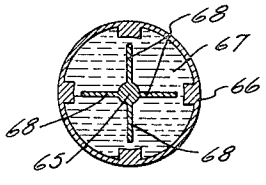
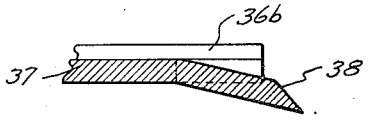


FIG. 3



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ROTARY WHEEL DIVIDER FOR CANS OR THE LIKE

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FIG.8

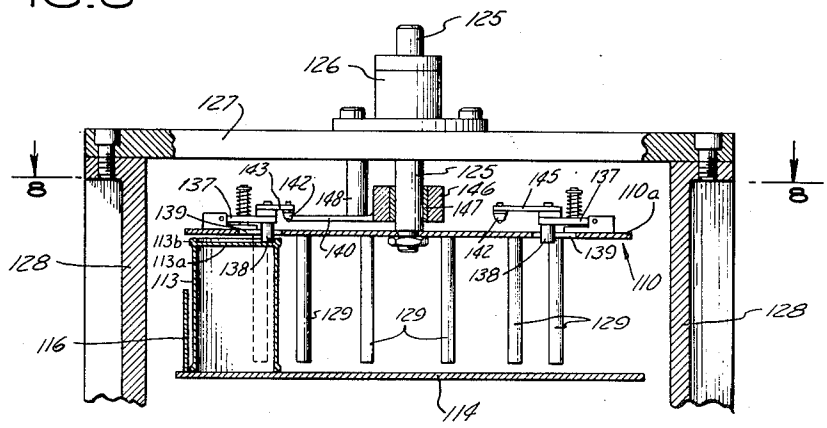
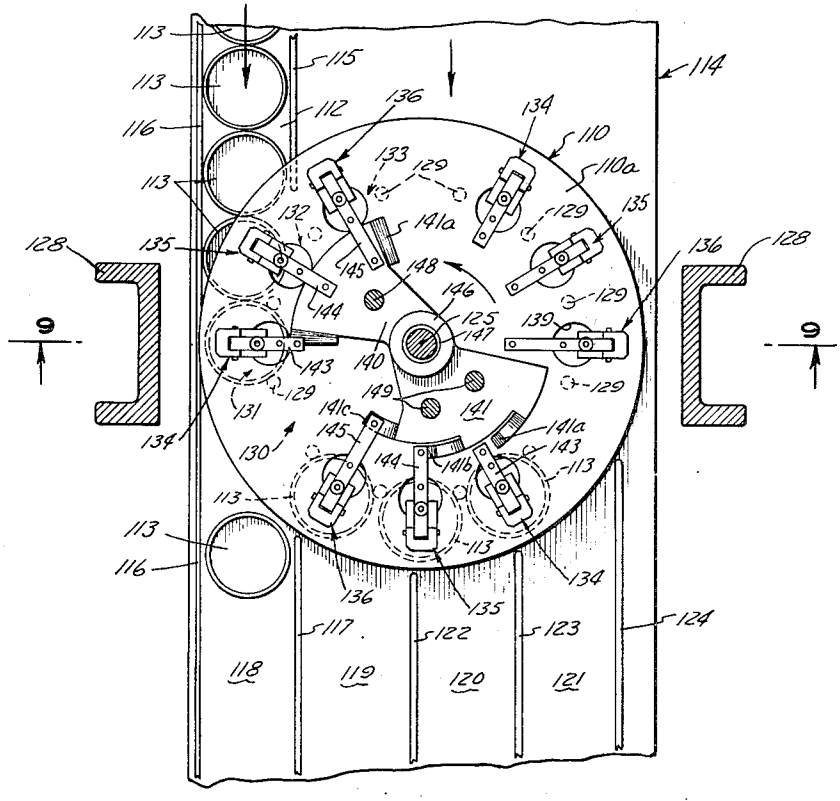


FIG.9



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United States Patent Office 2,787,359 Patented Apr. 2, 1957

2,787,359

ROTARY WHEEL DIVIDER FOR CANS OR THE LIKE

Walter Gerecke, Portland, Conn., assignor to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware

Application September 15, 1955, Serial No. 534,472

10 Claims. (Cl. 198—31)

This invention relates to improvements in mechanisms for dividing or distributing cans or similar articles from a single incoming or supply line so as to provide a plurality of outgoing or delivery lines.

An object of the invention is to provide a mechanism of the character described which will distribute the articles from a single line rapidly and accurately to provide the plurality of lines desired, which plurality may be any odd or even number within the operating range of the mechanism.

A further object of the invention is to provide a can dividing or distributing mechanism which is of simple construction, reliable and accurate in operation, and adapted to operate at a high speed.

A more specific object of the invention is to provide an improved can dividing or distributing mechanism of the type which makes use of a rotary can dividing or distributing wheel having pockets in its periphery to accommodate the cans to be divided or distributed and so arranged in relation to means for bringing a single line of cans to the wheel and means for conducting multiple lines of cans away from the wheel that the cans supplied to the wheel from the single line tend to impart operating rotational movement thereto.

Another object of the invention is to provide a novel and efficient rotary wheel type of can dividing or distributing mechanism in which cans are received in open peripheral pockets of the wheel from a single supply line are retained in such pockets until they have been moved by rotatation of the wheel to the particular places at which they are to be discharged from the wheel to provide the desired multiple outgoing lines, whereupon they are released and are discharged from the rotating wheel.

Other objects and advantages of the invention will hereinafter be pointed out or will become apparent from the following description of practical embodiments of the invention as shown in the accompanying drawings, in which:

Fig. 1 is a side elevation of a can dividing or distributing mechanism embodying the invention and having a rotary can dividing or distributing wheel mounted to turn on a horizontal supporting shaft;

Fig. 2 is a fragmentary relatively enlarged cross sectional view on the line 2—2 of Fig. 1, showing details of a means releasably to retain a can in a peripheral pocket of the wheel;

Fig. 3 is an enlarged fragmentary view in section of a cam plate that is provided for actuating releasable can retaining means, the view being on line 3—3 of Fig. 1;

Fig. 4 is a fragmentary elevational view showing a motor driven friction wheel operatively associated with the can dividing or distributing wheel, only a fragmentary portion of the latter being shown;

Fig. 5 is a side elevation of the dividing or distributing wheel equipped with a solenoid operated brake mechanism and with a speed control governor;

Fig. 6 is a fragmentary cross-sectional view of the brake mechanism on the line 6—6 of Fig. 5;

Fig. 7 is a cross-section through the governor mechanism on the line 7—7 of Fig. 5;

Fig. 8 is a vertical cross-sectional view of a mechanism embodying the invention in a form adapted to divide or distribute upright cans from a single incoming horizontal line so as to provide a plurality of horizontal outgoing lines, the view being taken on the line 8—8 of Fig. 9; and

Fig. 9 is a horizontal cross-sectional view of the form of mechanism shown in Fig. 8, the view being taken on line 9—9 of Fig. 8.

The form of mechanism shown in Fig. 1 comprises a can dividing or distributing wheel, generally designated 10, mounted to turn about a relatively fixed horizontal axis, as on a fixed position horizontal supporting shaft 11. Shaft 11 and wheel 10 thereon are located so that the periphery of the wheel turns beneath the lower discharge end of an inclined chute or rollway 12 for cans 13 and also directly above the upper receiving ends of a series of outgoing or delivery chutes or rollways for the cans. These outgoing chutes or rollways are five in number in the example shown and respectively are designated 14, 15, 16, 17 and 18.

The can dividing or distributing wheel 10 comprises a pair of circular discs, 10*a* and 10*b*, Fig. 2, rigidly connected together in spaced apart parallel relation, as by suitable cross connectors represented by the dotted small circles indicated at 19 in Fig. 1. Any suitable known means to connect the discs together so that they will turn as a unit on the supporting shaft 11 may be employed, the arrangement to be such as to provide an open space between the peripheral edge portions of the discs slightly wider than the length of the cans to be divided or distributed, so as to permit entry of rolling cans from the rollway 12 into such space. The bottom of rollway 12 may be extended as indicated at 12*a*, Figs. 1 and 2, so as to conduct each of successively leading cans 13 downwardly into the upper part of the wheel 10 until the can is in a peripheral portion of the wheel that has passed its upper dead center position. Such can will then be in position to be supported by and between two angularly spaced adjacent pairs of aligned pins 20 which project from the inner faces of the wheel discs toward each other so that their projecting ends are spaced apart a distance less than the length of the cans to be divided or distributed by the wheel. See Fig. 2. Can marked X in the upper part of Fig. 1 is in the position just described.

The pairs of pins 20 are located on a circle spaced radially inward from and concentric with the periphery of the wheel. Adjacent pairs of pins 20 are spaced apart a distance which is less than the diameter of the cans but is substantial so as to provide an open pocket between each two adjacent pairs of pins in which a can will be seated when delivered thereto from the rollway 12, as in the case of the above mentioned can marked X.

Pockets thus provided in the periphery of wheel 10 are sufficient in number to provide a plurality—four in the example shown—consecutive series or sets of five angularly successive pockets each, the pockets of each such series or set corresponding in number to the outgoing chutes 14 to 18, inclusive, and being indicated at 21, 22, 23, 24 and 25, respectively, in Fig. 1.

Single cross pins obviously may be used instead of pairs of spaced apart, aligned pins 20, in which event the chute bottom extension 12*a* would be shortened enough to clear the cross pins as the wheel 10 rotates.

With the exception of pockets 21 which, in the particular embodiment of the invention shown in Fig. 1, require no such holding means, the can-accommodating pockets of the rotary distributing wheel are provided with releasable individual can latching means, each of which is actuated by a stationary cam to permit a can to enter its

pocket from rollway 12 when that pocket is at the top of the wheel and also actuated again by a second stationary cam at the proper place to release the can in its pocket for discharge into the intended outgoing or delivery chute. The individual can latching means are alike except for features of their release means which hereinafter will be explained.

One of the wheel discs, as disc 10*a*, is provided with holes 26 opening into one end of pockets 22, 23, 24 and 25, respectively. A can latching presser pin 27 projects from the inner side of the free end portion of a latch bar 28 which is pivotally supported at its opposite end, as at 29, on a bracket 30 which is fixed to the outer face of the disc 10*a* radially outward from the associate hole 26 so that spring means, indicated at 31, Fig. 2, which urges the bar 28 toward the limit of its pivotal movement toward the disc 10*a*, will tend to maintain the presser pin 27 projected through the hole 26 into the communicating pocket. If a can 13 is in that pocket, as shown in Fig. 2, when the presser pin is projected inwardly from a retracted position, indicated by dot-and-dash lines in Fig. 2, the presser pin will be pressed firmly against the end wall 13*a* with which such can is provided and this will tend to press the can as an entity against the inner face of the opposite wheel disc and therefore releasably retain the can in its pocket. The can may have its end wall 13*a* fixed in a relatively countersunk position in the end of the can body, leaving a projecting end wall 13*b* into which the presser pin projects. The end pressure exerted by the spring pressed pin on the can therefore need not be enough to preclude all shifting movements of the latched can in its pocket during all conditions of service as lateral contact of the projected pin with the inner face of the projecting can end portion 13*b* will prevent premature or unintended displacement of the can from its pocket even though it may shift about more or less therein as the wheel 10 rotates.

The pivoted bars 28, in addition to carrying the presser pins 27 projecting from the inner face of their free ends, as shown for one of these bars in Fig. 2, carry projecting release bars 32*a*, 32*b*, 32*c* or 32*d*, Fig. 1, these bars being of different lengths for the can latching devices associated with the pockets 22, 23, 24 and 25, respectively, but otherwise being alike. Release bar 32*a* for the latching device associated with pocket 22 is shorter than release bar 32*b* for pocket 23, etc., the release bar 32*d* for pocket 25 which is the last of the series being the longest. Each of the release bars may be spaced outward from the outer face of its bar 28 by a spacer block 33, Fig. 2, such spacer block and one end of the release bar being fixed to the free end of the pivoted bar 28 as shown in that view or in any other suitable known manner. A cam follower 34 is fixed on the inner face of the opposite, free end of each release bar. The cam follower 34 of the respective can latching devices associated with pockets 22, 23, 24 and 25, respectively, are actuated at appropriate times and places in a cycle of rotation of the wheel 10 by individual fixed position cams to bias the pivoted presser pin bars 28 outward to withdraw the presser pins from such pockets.

An upper cam plate 35 is mounted adjacent to the outer face of wheel disc 10*a* directly above the axis of rotation of the wheel 10 in a position such that the cam follower 34 on the release bar of each of the individual can latching devices will ride up an inclined cam surface or ramp 35*a* at the end of the cam plate facing counterclockwise as viewed in Fig. 1 as the pocket with which that latching device is associated approaches its can receiving position and then will ride on a constant level surface 35*b* of that cam plate so that the can latching presser pin 27 of that device will be held in its outwardly retracted position until a can from the supply rollway has entered the pocket. The place of entry of such can into the pocket preferably is slightly beyond the upper dead center position of that pocket so that each can entering a pocket will aid rotation of the wheel. The cam follower then will ride off the opposite end of the cam plate 35, thus permitting projection of the presser pin of the latching device to its can-latching position.

In the example shown, cam plate 35 is carried by an upwardly extending arm 36*a* on a hub 36 which is fixed on the stationary shaft 11 outwardly from the disc 10*a*.

Hub 36 also has a depending arm 36*b* which carries an arcuate cam plate 37 which is formed to provide at the end thereof facing counterclockwise a series of inclined cam surfaces or ramps 38, 39, 40 and 41, respectively, these being at different radial distances from the axis of rotation of the wheel 10 corresponding to the radial distances from that axis of the cam followers 34 of the latching devices for pockets 25, 24, 23 and 22, respectively. The inclined cam surfaces 38, 39, 40 and 41 are located at angularly different places along the lower part of the path of travel of the pockets of the wheel so that these cam surfaces and the immediately following portions of uniform level plane surface 42 of the cam plate 37 will act through the cam followers on the release means of the cam latching devices for the pockets 25, 24, 23 and 22 of a series to effect release of the cans therein from the latching devices so that such cans will drop into the open upper ends of outgoing chutes 15, 16, 17 and 18, respectively.

The wheel 10 has four consecutive sets of five pockets 21 to 25, inclusive. In passing beneath the lower delivery end of supply chute 12, these pockets will be supplied in consecutive order with cans rolling into them from such chute. Each can on entering its pocket and thereafter until it is discharged therefrom or has reached the lower dead center position of the pocket will tend to impart an operating rotational movement to the can dividing or distributing wheel.

The unlatched can carried by the leading pocket 21 of a series will be restrained against outward displacement therefrom, if need be, by a suitably positioned guard rail 43 extending along the periphery of the wheel from above the delivery end of the supply chute to the outer side of the entrance of chute 14. The can then will be free to drop into that chute. The can in the next pocket, i. e. pocket 22, has the shortest release bar of the set of can-latching devices and hence, in the operation of the particular assembly of elements shown in Fig. 1, will be retained therein until the entrance of outgoing chute 18 has been reached and then released to drop into that chute. Cans from pocket 23 will be released to chute 17, cans from pocket 24 will be released to pocket 16 and cans from pocket 25 will be released to pocket 15.

The mechanism as just described may be used with either filled or empty cans. If the cans are empty and are closed at only one end, they must be arranged with the closed end thereof turned to face the disc 10*a* as at the time they are deposited in the peripheral pockets of the rotating wheel. This may be done by suitable "twister" conveying mechanism, not shown, arranged to precede or form a part of the incoming can chute or rollway 12.

The cans delivered to the rotary can dividing and distributing wheel will impart rotation thereto with the arrangement described. It may be desirable, however, to equip this wheel with a means to regulate or control rotation thereof so as to assure desirable uniformity of speed and smoothness of rotary movement as well as ability positively to regulate the speed of and stop the rotation of the wheel when this is desirable.

Fig. 4 shows one form of rotation control means for the wheel, this being a friction drive wheel 44 supported, as by supporting structure indicated generally at 45, for rotation with its peripheral surface bearing against the outer face of disc 10*b* of the wheel 10 to impart a rotary motion to the wheel 10 in the desired direction at a uniform speed determined by the peripheral speed of the wheel 44 when the latter is rotated. Wheel 44 may have a driven connection, represented by the chain and sprocket arrangement generally designated 46 in Fig. 4, with a motor

and gear reduction unit designated 47. Unit 47 may be supported on the supporting structure 45 and may of course be started and stopped at will.

Instead of the motor driven speed control appliance shown in Fig. 4, wheel 10 may be equipped with either or both of a brake mechanism generally designated 48 and a governor generally designated 49, both shown in Fig. 5.

Brake 48 comprises an arm 50 pivotally supported at one end, as at 51, on a suitable support 52 which may form part of the structural support for the wheel supporting horizontal shaft 11. The arrangement is such that the pivoted arm 50 may be swung about the axis of its pivotal connection with support 52 toward and away from the bottom of a peripheral V-groove 53 (see Fig. 6) of a brake wheel 54 which is fixed to and coaxial with the wheel 10. A brake shoe 55, which is made of compressible material such as rubber and is of V-shape in cross-sectional configuration to match the cross-sectional configuration of brake wheel groove 53, is fixed to the inner side of swingable arm 50. When the latter has been swung toward the axis of rotation of the brake wheel, the brake shoe will be compressed by the sides of the V-groove of the brake wheel to exert a braking action adequate, if desired, to stop rotation of wheel 10. The opposite end of pivoted swingable arm 50 is connected adjustably by an adjusting connector 56 with one end of a coil spring 57, the opposite end of which is connected to the movable element 58 of a solenoid 59, which is supported in a relatively stationary position, as by an overhanging arm 60 attached to the top of the supporting member 52.

The brake wheel 54 may be connected to the adjacent disc 10*b* of the wheel 10 to rotate therewith in any suitable or preferred manner, as by rigid connectors such as that indicated at 61 in Fig. 6.

The adjustment by element 56 of the spring link 57 with pivoted arm 50 may be such that the brake shoe 55 will be completely disengaged from the brake wheel groove when the solenoid is deenergized, the coil spring link 57 then being free from tension. With this adjustment, energization of the solenoid will pull the brake shoe arm toward the periphery of the brake pulley so as to stop rotation of the can dividing and distributing wheel 10. A suitable known electric circuit, none shown, may be provided to energize the solenoid whenever a condition arises which makes stoppage of the wheel 10 desirable. Thus, a suitable known photoelectric signalling device and operative connections to the solenoid may be provided and arranged to energize the solenoid and stop the rotation of the wheel 10 whenever there is a gap or discontinuance of the line of cans rolling down the supply chute 12 to the pockets of the wheel 10. Alternatively, the adjusting device 56 may be adjusted to put the spring link 57 under sufficient tension to cause the brake shoe 55 to exert a predetermined drag on the brake wheel when the solenoid is de-energized and thus tend to retard rotation of wheel 10 and make it more smooth and regular. Stoppage of the rotation of the wheel 10 would be effected in the manner described, that is, by energization of the solenoid.

The governor 49 comprises a rotary wheel 62 arranged to bear at its periphery against the face of disc 10*b* of the wheel 10 so as to be driven by rotation of the latter. Driven wheel 62 is mounted operatively, as on a bracket 63 attached to the support 52. Rotation of wheel 62 by rotation of the wheel 10 will cause motion to be transmitted through a suitable transmission generally indicated at 64 to a vertical spindle 65 which depends into a container 66, suspended from the bracket 63. Container 66 is adapted to hold a viscous fluid, such as oil 67, Fig. 7, against which vertical vanes 68 on the submerged portion of spindle 65 will act when spindle 65 is rotated about its axis by the means and in the manner described. This will oppose resistance to the rotation of wheel 10 so as to retard and stabilize or render uniform the rate of such rotation. The retardation of the rotation of wheel 10 by the device 49 may be varied by filling the container 66 so as to submerge the vanes 68 more or less with a fluid of a given viscosity according to the amount of retardation desired. The container may have a valved bottom outlet such as indicated at 69 in Fig. 5 for convenience in regulating the level of the retarding fluid in the container. The regulation of such retardation could, of course, be effected by using oils or other suitable fluids of different viscosities.

An embodiment of the invention adapted and intended for use with cans in upright position, indicated at 113, is shown in Figs. 8 and 9. These cans are brought in a single line on a horizontal conveyor 114 moving in the direction indicated by the arrow thereon in Fig. 9. The incoming cans may be guided in a lane 112 defined by parallel guide strips 115 and 116, respectively. Guide strip 116 extends above a marginal edge portion of conveyor 114 and may be extended past a can dividing and distributing wheel generally indicated at 110 so as to serve in cooperation with a spaced parallel strip 117 to provide an outgoing lane 118 for cans at the opposite side of the wheel 110 from incoming lane 112. Other outgoing lanes, indicated at 119, 120 and 121 are provided above the horizontal conveyor 114 at the opposite side of wheel 110 from lane 112 by suitably spaced parallel guide strips 122, 123 and 124, respectively.

As shown by Fig. 8, wheel 110 comprises a horizontally disposed disc 110*a* attached to the lower end of a rotary suspending shaft 125 which is journaled in and supported by a suitable bearing structure 126 which is mounted on a cross frame 127 carried by uprights 128. Disc 110*a* carries a circular series of depending pins 129, adjacent pins being spaced apart a distance less than the diameter of a can 113 and the pins being located in a circle spaced radially inward from the periphery of disc 110 preferably somewhat greater and not appreciably less than the diameter of such a can. The wheel 110 thus is provided with consecutive sets of pockets indicated at 130, 131, 132 and 133, respectively. The number of pockets of each such set corresponds with the number of outgoing lanes 118 to 121, inclusive, and three of the four pockets of each set are provided with individual releasable can latching devices, respectively, indicated at 134, 135 and 136.

Each device 134, 135 or 136 is substantially like the can latching device for the embodiment of the invention shown in Fig. 1. It therefore will suffice to state that each such device includes a spring loaded pivoted latch pin arm 137 mounted on the upper face of wheel disc 110*a* and urged continuously toward such disc so that a can presser pin 138 carried by the pivoted arm 137 is urged through a hole 139 in disc 110*a* to position to bear against the end closure 113*a* within the confines of the projecting upper end portion 113*b* of the can body so as to retain the can in its pocket during rotation of the wheel 110 until presser pin 138 has been raised above the level of can end 113*b*. For raising the presser pins 138 of the several latching devices in their turn to admit cans to and subsequently release the cans in the associated pockets, stationary cam plates 140 and 141 are provided and formed appropriately for co-action with cam followers 142 carried by different length release arms 143, 144 and 145 which are carried by the pivoted arms 137 of the can latching devices 134, 135 and 136, respectively.

As shown, stationary cam plate 140 projects from a hub 146 having a bearing 147 through which a portion of the vertical shaft 125 extends and in which such shaft may turn freely. Cam plate 140 may be connected with overhead frame member 127 by a rigid suspension element 148.

With the wheel 110 rotating counterclockwise as indicated by the arrow in Fig. 9, the cam followers 142 of the several latching devices 134, 135 and 136, respectively, will ride up an inclined cam surface 141*a* at the proximal side of the cam plate 140 so as to raise the presser pins

138 of the can latching devices above the level of the tops of the cans entering the pockets in turn from the lane 112. The presser pins 138 will be kept raised until the cam follower elements of such devices are moved off the opposite edge of the cam plate 140 and the latching devices will then automatically clamp down on the cans in the underneath pockets. The pocket 130 does not have a can latching device and the can carried thereby will be discharged into the first encountered outgoing lane, which is 118. The cans in the other pockets will be held therein until the latching devices associated with such pockets are actuated to release them. This will occur for the pocket 131 when the cam follower 142 of its latching device rides up an inclined surface 141*a* of a stationary cam plate 141. Stationary cam plate 141 projects from the hub 146 at the opposite side of the axis of rotation of wheel 110 from cam plate 140 and is suspended from cross frame member 127 by suspension elements 149. This will permit cans from pocket 131 to pass into the more remote of the outgoing lanes, which is lane 121. The cans from pocket 132 will be released for entry into lane 120 when the cam follower 142 of its latching device rides up an inclined surface 141*b* of cam plate 141. Likewise, each can in the pocket 133 will be released to enter its lane, which is lane 119, when the cam follower 142 of its latching device rides up inclined surface 141*c* of cam plate 141.

The rotation of the wheel 110 will be effected by the cans entering the pockets thereof from the supply lane 112 and the speed thereof will, of course, depend on the speed of linear movement of conveyor 114.

Obviously many modifications of and changes in the illustrative embodiments of the invention shown in the drawings will now become apparent or readily occur to those skilled in the art and I therefore do not wish to be limited to the details of these illustrative embodiments.

I claim:

1. A divider mechanism for cans or similar articles comprising a rotary divider wheel having a series of open pockets in its periphery, each adapted to accommodate one such article, means to feed successive articles from a single supply line into said pockets at a pocket-loading station to which said pockets are brought successively by rotation of the wheel, article-latching elements mounted on the wheel so as to project into individual pockets and to be withdrawable therefrom, means to actuate each of said article latching elements to withdraw it temporarily from its pocket to permit entry of an article thereinto at said pocket-loading station, and other means to actuate said latching elements to withdraw them from their pockets to release the articles therein for discharge from the wheel at angularly different locations around the axis of rotation of the wheel, said rotary divider wheel being formed in part of a circular disc having holes therein through which said article-latching elements project into pockets in the periphery of the wheel and said article-latching elements being pivotally mounted on said disc and spring pressed toward their projected positions.

2. A divider mechanism as specified by claim 1 wherein said first named means to actuate said latching elements and said other means to actuate such elements are stationary cam means arranged to actuate the pivotally mounted latching elements.

3. A divider mechanism for cans comprising a rotary divider wheel having open pockets in its periphery, each pocket being adapted to accommodate a can positioned parallel to the axis of rotation of the wheel, said wheel being mounted to rotate about a horizontal axis, an inclined rollway from which successive leading cans of an incoming line may roll into successive pockets of the wheel at a pocket-loading station at the top of the wheel, a plurality of inclined rollways for outgoing cans having upper, receiving end portions disposed in a series along the bottom of the wheel, individual can-latching elements pivotally mounted on said wheel and spring loaded to project into successive pockets against adjacent ends of the cans therein, the successive pockets thus equipped with can-latching elements being preceded by a pocket free from a latching element so as to be adapted to discharge its can into the upper, receiving end of the first rollway for outgoing cans, stationary cam means to actuate said latching elements to withdraw them from their pockets to permit entry of cans thereinto from said rollway for incoming cans, and other stationary cam means to actuate said latching elements to withdraw them from their respective pockets to release the cans therein for discharge into inclined rollways for outgoing cans.

4. A divider mechanism of the character described comprising a divider wheel comprising a pair of spaced circular discs connected together and mounted to turn as a unit about a horizontal axis, angularly spaced pairs of aligned cross pins fixed to said discs on a circle having said horizontal axis as a center and having a radius less than that of said circular discs, the distance between adjacent pairs of cross pins being less than the diameter of cans to be divided by the wheel, a rollway arranged to bring a line of rolling cans into the space between said discs at the top of the wheel so that each of successive leading cans of the line will be transferred to adjacent pairs of the cross pins so that a closed end of the can faces one of said discs and so that the can tends to rotate the wheel in one direction about its axis, spring-loaded pivotally mounted latching elements on said one disc in position to project through holes in the disc against the closed ends of the cans on certain of said adjacent pairs of cross pins to retain said cans against outward displacement therefrom, and cam means to actuate said latching elements to withdraw them from engagement with said cans to permit discharge of the cans from their pockets.

5. A divider mechanism as specified by claim 4 and, in combination therewith, a means operatively associated with the wheel and in addition to the cans supplied thereto to control the rotation of the wheel.

6. A divider mechanism as specified by claim 5 wherein said means to control the rotation of the wheel comprises a motor driven friction disc mounted with its periphery bearing against one of said wheel discs.

7. A divider mechanism as specified by claim 5 wherein said means to control the rotation of the wheel comprises a brake wheel connected to turn with the divider wheel, a cooperative brake shoe, and means, including a solenoid operatively connected to the brake shoe, to control the positioning and movements of the brake shoe relative to the brake wheel.

8. A divider mechanism as specified by claim 5 wherein said means to control the rotation of the wheel comprises a friction driven wheel having its periphery bearing against one of said discs so as to be rotated by rotation of the divider wheel, a rotary dampening wheel having vanes and being immersed in a confined body of viscous fluid, and motion-transmitting means operatively connecting said friction driven wheel and said dampening wheel.

9. A divider mechanism as specified by claim 5 wherein said means to control the rotation of the wheel comprises a brake mechanism and a speed governor both operatively associated with one of said wheel discs.

10. A divider mechanism for cans or similar articles comprising a divider wheel comprising a circular disc suspended at its center to rotate about a vertical axis, horizontal conveying means passing beneath said wheel disc at a distance therebelow slightly greater than the height of the articles to be divided by the wheel, a circular series of angularly spaced pins depending from said disc nearly to the plane of said conveying means, said pins being spaced radially inward from the edge of said disc at a distance not substantially less than the diameter of the articles to be divided and the distance between adjacent pins being less than said diameter, guide means associated with said conveying means at one side of the axis of rotation of said disc to provide a lane for a line of incoming

upright cans or similar articles on the conveying means extending approximately tangential to the circular series of depending pins so that each of successive leading articles of said line will be seated in a pocket between two adjacent pins and will rotate the disc in one direction about its axis, guide means associated with said conveying means at the opposite side of the axis of rotation of said disc to provide a plurality of parallel lanes for outgoing articles to be supplied thereto by said divider wheel, one of said lanes being substantially aligned with the lane for incoming articles and the others being located at spaced, more remote places along the path of movement of articles by the divider wheel, the wheel disc having holes therein above the pockets for receiving articles to be delivered to said more remote lanes for outgoing articles, pivotally mounted, spring loaded latching elements arranged on said disc to project through said holes into the pockets therebeneath so as to engage with the adjacent

end portions of the articles in said pockets and retain such articles in their pockets, stationary can means to actuate said latching elements to raise them above the underneath pockets to permit entry of incoming articles from the supply line into such pockets, and other stationary cam means for actuating said latching elements to raise them out of engagement with the articles in the underneath pockets when such articles have been moved by rotation of the divider wheel to positions to enter the lanes for outgoing articles for which they are intended.

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