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2,943,730

PILL DISPENSER

Filed July 29, 1958

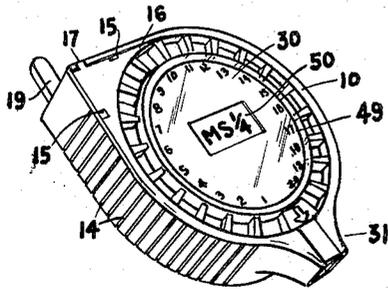


FIG. 1

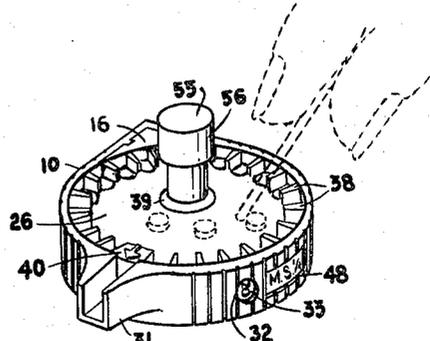


FIG. 2

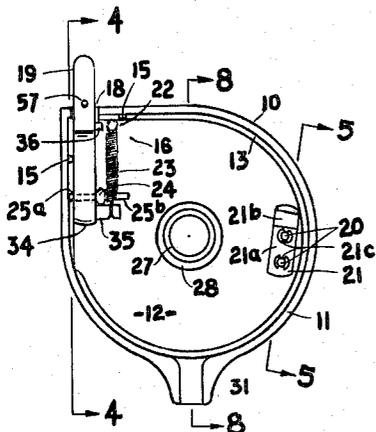


FIG. 3

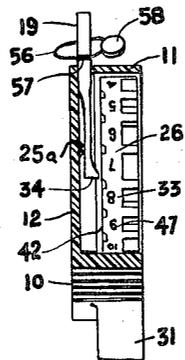


FIG. 4

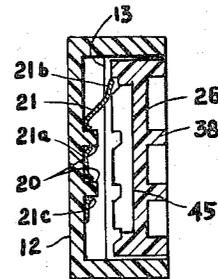


FIG. 5

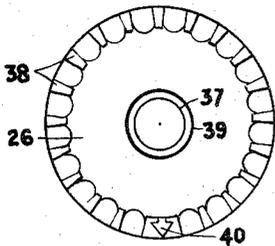


FIG. 6

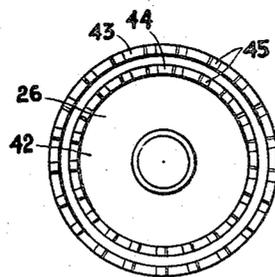


FIG. 7

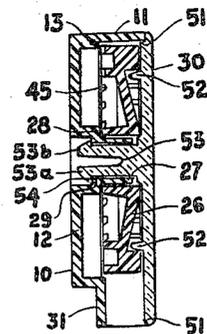


FIG. 8

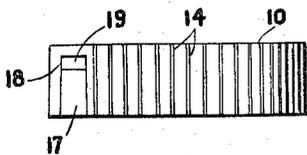


FIG. 9

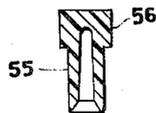


FIG. 10

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2,943,730

PILL DISPENSER

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10 Claims. (Cl. 206—42)

This invention relates to a simplified and compact container for pills, tablets, capsules and the like. The device is actually a multiple purpose counter and dispenser which enables a user to quickly and conveniently obtain drug products. It is particularly adaptable for use in hospitals or doctor's offices as an individual dispenser which maintains a continuous inventory of the drug products contained therein.

Containers presently used for medical products are difficult to open and require excessive handling of the capsules or pills. As an example, the containers presently used for aspirin are difficult to open and as a result the entire contents of the container is often spilled. Plastic or glass jars with screw type lids are also frequently used; however, it is then necessary to handle the products unnecessarily. Furthermore, such devices are either limited in capacity or unduly large for being carried in the pocket or purse of a user.

The applicant's invention presents a visual representation of the quantity of pills remaining in the dispenser, and when the dispenser is empty it can be conveniently refilled. The device is also extremely valuable to persons suffering from heart ailments, diabetes or similar diseases where it is necessary to have a readily available supply of nitroglycerin tablets, saccharin or the like. The advantages of the dispenser can also be seen for persons who are traveling, as the user can obtain relief-giving drugs with the use of only one hand.

In hospitals and doctor's offices it is often necessary to insert narcotic tablets into a syringe, there to be dissolved, and this can conveniently be done with applicant's device without unnecessary handling of the tablets.

Certain of the prior art devices have been made semi-automatic; however, they normally require the use of complicated mechanisms and are therefore subject to mal-function after a short period of use. Other disadvantages in presently existing devices are the complex mechanism which are difficult to assemble and costly to manufacture. Space limitations in such devices have prevented the adoption of structurally re-enforced parts in order to keep the finished product sufficiently small to receive favorable consumer acceptance.

The invention disclosed herein differs from the devices previously used in that it is more compact, and is comprised of a minimum of operating parts which naturally results in prolonged life and also provides a more positive action. My dispenser is provided with a push-button action that ejects a single pill with each operation. This is an important feature because the device is simple to operate. My device also provides for a continuous inventory of the pills, tablets, or capsules, which remain in the dispenser.

Being aware of the prior art deficiencies, this inventor sought to create a device which would overcome such deficiencies and yet possess esthetic styling, operational simplicity, structural soundness and be adaptable to economical production practices. To overcome these many

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and varied deficiencies it was evident that an entirely novel concept was required to obtain a satisfactory product and, after considerable experimentation, the herein-after described construction was conceived.

5 Accordingly, it is a broad general object of this invention to provide a combination counter and dispenser which is compact, economically produced, simple to operate, and yet structurally sound and pleasingly styled.

10 A primary object of this invention is to provide an automatic counter and dispenser having a minimum number of component parts.

Another object is the provision of a simplified positive action dispensing means for pharmaceutical products which is entirely different.

15 Another object is to provide a dispenser which will function perfectly for extended periods of use and is not generally subject to mal-function.

Another object is to provide a pill dispenser which will provide a continuous inventory of the contents thereof, and will also provide a continuously visible supply.

20 Another object is the provision of a dispenser wherein pharmaceutical products can be dispensed with a greater ease and less effort than is obtainable in presently known containers.

25 It is a further object to provide a container for pills, tablets, aspirin, capsules and the like wherein the product can be easily obtained without removing a cover or opening a lid.

30 It is a further object to provide a dispenser for aspirin tablets and other pharmaceutical products which can be carried in the pocket.

Another object is the provision of a dispenser for the above items which will dispense a unit each time the dispenser is operated.

35 It is a further object to provide a container for medical products stored in such a manner that the items will be readily available for use.

It is still a further object to provide a dispenser having dial means for indicating the number of units of a given product remaining in the device in such a manner that the dispensers can be positioned in side by side relationship and the quantity determined without moving the dispenser from its storage position.

40 Another object of the invention is the employment of structurally reenforced parts designed for minimum space requirements and which will result in a finished product of a size generally acceptable for its intended use.

Another object is the provision of means which will reduce the complexity of assembly of the dispenser.

45 Another object is the use of a locking feature in the dispenser to prevent its operation except by authorized personnel.

Other objects and advantages of the invention will be made apparent in the disclosure of the accompanying drawings and in the following specification and claims.

55 In the accompanying drawing, forming a part of this specification:

Fig. 1 is a front perspective view of my pill dispenser, showing the numerals positioned around the cover;

60 Fig. 2 is a perspective view, showing a method for filling the dispenser;

Fig. 3 is a top plan view of the case with the cover and ratchet wheel removed, and showing the actuator retainer in dotted outline;

65 Fig. 4 is a partial section, taken on the line 4—4 of Fig. 3, with the ratchet wheel positioned in the case;

Fig. 5 is an enlarged section through the ratchet spring, taken on the line 5—5 of Fig. 3;

70 Fig. 6 is a top plan view of the ratchet wheel;

Fig. 7 is a bottom plan view of the ratchet wheel;

Fig. 8 is a section through the dispenser, taken on the

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line 8—8 of Fig. 3, with the ratchet wheel and cover added and shown in assembled condition;

Fig. 9 is a top plan view of the dispenser; and

Fig. 10 is a sectional view through the opening key to show the tapered open end.

Referring now to the drawings and particularly Figure 3, which is a top view of the case portion with the ratchet wheel and cover removed, the method of assembly and the component parts of my dispenser will be more readily understood.

The case 10 is formed of metal, or other suitable material, and in the illustration shown is formed of molded plastic. The case 10 is generally circular in shape with the exception of the discharge spout 31, and the upper left quadrant when the device is viewed from the front. In the upper left quadrant the case 10 extends tangentially to form a ninety degree corner. Disposed about the outer periphery of the case 10 is an upstanding outer wall 11 which is normal to the bottom or rear wall 12. An annular shoulder 13 extends along the greater portion of the inner surface of the outer wall 11. The annular shoulder 13 is spaced upwardly from the bottom or rear wall 12 of the case 11, and serves to stabilize the ratchet wheel 26 as will be described hereinafter.

Axially extending parallel grooves 14 are positioned about the greatest portion of the outer surface of the outer wall 11. These grooves provide a positive gripping surface and enable the user to handle the dispenser more easily. Individual ribs 15 are also positioned on the inner surfaces of the outer wall 11 in the upper left quadrant. There are two such ribs 15, one positioned along the top surface and the other along the left wall. The purpose of these ribs is to hold the actuator retainer 16 in position. The ribs 15 also cooperate with an upwardly extending shoulder 17 formed on the actuator retainer 16. The outer case 11 also contains an opening 18 in the top surface, of the quadrant section, through which the actuator 19 will extend.

The bottom or rear wall 12 of the case 11 is coextensive with the outer periphery of the outer wall 11. A plurality of upstanding cylindrical lugs 20 are disposed on the inner surface of the rear wall 12, and provide a means for attaching the ratchet spring 21 to the case 10. Located in the upper left quadrant, adjacent the opening 18, is an upstanding spring stake 22 which holds the fixed end of the coil spring 23. Discreetly positioned in the upper left quadrant is an upwardly extending actuator guide 24, with a transverse rib 25 extending therefrom in a direction normal to the movement of the actuator 19. The actuator guide 24 serves to direct the movement of the actuator 19 in a straight line and also serves to limit the inward and outward movement of the actuator 19 as will be described hereinafter. The inwardly extending rib 25b urges the free end of the spring 21 upwardly and assists in directing the lower end of the actuator 19 upwardly into engagement with the ratchet wheel 26. The outwardly extending rib 25a serves as a cam which also urges the lower end of the actuator 19 upwardly into engagement with the ratchet wheel.

Centrally disposed in the case 10 is the hollow axle 27 which is formed integral with the rear wall 12. The axle 27 has an annular shoulder 28 formed thereon of height equal to that of the shoulder 13 on the inner surface of the outer wall 11. The annular shoulder 28 provides a bearing surface for rotation of the ratchet wheel 26, and the remainder of the center axle 27 serves as an axle therefor. The central axle 27 is formed as a hollow sleeve and has an annular catch 29 formed in a recess in the rear wall 12 of the outer case. This annular catch 29 provides a means for attaching the cover 30 to the case 10 as is shown in Figure 8.

Positioned at the lowermost, or "six o'clock," position of the case 10 is a discharge chute 31, the walls of which taper into the outer wall 11. The discharge chute is of lesser axial height than the outer wall 11, and its

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rear wall is positioned slightly above the rear wall 12 of the case 10. This provides for a more accurate discharge of the pills and places the discharge passageway in better alignment with the storage position of the pills on the ratchet wheel 26. The downwardly extending walls of the discharge chute 31 also serve as a convenient grip for the fingers of the user when the dispenser is operated, to prevent rotation of the dispenser when it is operated.

The outer wall 11 has an aperture 32 formed therein in that portion of the wall which passes through the lower right quadrant. This aperture 32 can perhaps be better located by stating it is normally positioned between the "three o'clock" and "five o'clock" position on the dispenser. The said aperture 32 may also be formed with a transparent window thereby preventing the entry into the dispenser of foreign materials. The numerals 33 on the ratchet wheel 26 are visible through the aperture 32 and provide the user with an indication of the number of tablets still remaining within the dispenser. This particularly is of value when the dispensers are positioned in a drawer or cabinet in side by side relationship and a count of the tablets in the several dispensers is desired. It will be seen that when the dispensers are positioned in side by side relationship the quantity of tablets in the individual dispensers can readily be determined by reading the numerals 33 through the side aperture or window 32 without lifting the dispensers out of position to bring the face or cover 30 into view.

The actuator or trigger 19 is formed of a resilient material and is generally rectangular in cross section. The lower portion of the actuator trigger 19 is of reduced cross section which thereby provides more resiliency in the actuator. As has been pointed out, the lower portion of the trigger 19 is cammed upwardly by the rib 25a into engagement with the ratchet wheel 26. The natural resiliency of the material from which the actuator is formed permits the ratchet wheel 26 to maintain its position while the actuator is springably returned to its normal extended position. The combined effect of the camming rib 25a and the coil spring 23 provide for positive action of the dispenser.

Formed on the lowermost extremity of the actuator or trigger 19 is the ratchet tooth 34 which extends upwardly from the plane of the actuator 19. There is no downward extension beyond the back or bottom surface of the actuator 19. As shown in the drawings, the ratchet tooth 34 is equal in width to the actuator 19 and extends triangularly upward to provide a wide contact surface which will wear for a considerable time.

Extending inwardly from the actuator 19, at a point adjacent to the ratchet tooth 34, is the spring hook 35. The spring hook 35 extends inwardly beyond the actuator guide 24 and thereby limits the outward movement of the actuator 19. The coil spring 23 is attached to the spring hook 35 of the actuator 19 and thereby urges the actuator outward to its normal operating position. Extending inwardly parallel to the spring hook is the stop arm 36, positioned medially between the ends of the actuator 19. The stop arm 36 limits the outward movement of the actuator 19, for as the actuator 19 is urged outwardly by the coil spring 23, the stop arm 36 comes into contact with the inner surface of the outer wall 11. The spring hook 35 and the stop arm 36 cooperatively limit the movement of the actuator 19 in either direction. As the actuator or trigger is urged outwardly, the stop arm 36 comes into contact with the inner surface of the wall 11 at the same time that the spring hook 35 comes into contact with the actuator guide 24. The stop arm 36 also limits the inward movement of the actuator 19 by coming into contact with the upper surface of the actuator guide 24.

A coil spring 23 is attached at one end to the spring stake 22 which extends upwardly from the bottom wall of the case 10. The opposite end of the coil spring 23

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extends over the rib 25 and is attached to the spring hook 35 of the actuator 19. It will be seen that the spring passing over the rib 25 raises the movable end of the spring upwardly and biases the lower end of the actuator arm 18 upwardly for positive contact with the ratchet wheel 26.

The fixed end of the coil spring 23 and the actuator 19 are maintained in position by the actuator retainer 16. This is a small insert piece having two sides which extend at ninety degrees to correspond with the inner surface of the upper left quadrant of the case 10. The other surface of the actuator retainer 16 is arcuated to correspond with the remainder of the wall of the case 10. Disposed in each of the flat surfaces of the actuator retainer 16 are the grooves 36 which cooperate with the ribs 15 to position the actuator retainer. The actuator retainer 16 is also formed with an upwardly extending shoulder 17 which is positioned in the opening 18 of the case 10 and is flush with the upper surface thereof. The extending shoulder 17 also serves to hold the actuator retainer in its position over the actuator 19. The actuator retainer may be press fitted, adhered, or fused to the outer wall 11 of the case 10.

A ratchet spring 21 is positioned within the case 10 diametrically opposite the ratchet tooth 34 on the actuator 19. The ratchet spring 21 is constructed from flat spring-able material and has a flat portion 21a with a spring finger 21b extending annularly upward therefrom. The flat portion 21a of the ratchet spring 21 has two openings formed therein with spring teeth 21c extending upwardly therein which engage with the upstanding cylindrical lugs 20 to retain the ratchet spring 21 in a fixed position within the case. The inwardly extending ratchet teeth 21c enable the easy attachment of the ratchet spring 21 to the rear wall 12 of the case 10.

The ratchet wheel 26, best shown in Figures 6 and 7, is circular in shape and is formed of a light-weight material such as plastic. The top surface is convex, tapering radially outward from a greater height near its center. This convex construction facilitates refilling as will be described later. The center hub 37 of the ratchet wheel 26 is cylindrical and fits over the axle 27. The cylindrical hub extends through the surface of the ratchet wheel 26 and, in assembled position, will rest upon the annular shoulder 28 of the axle 27. The center hub 37 is formed with an upwardly extending ridge around its periphery. The ridge 39 extends upwardly to a plane level with that of the top surface of the peripheral dividers 38.

Positioned upon the top surface of the ratchet wheel, at its outer periphery, are a plurality of dividers 38. The dividers 38 extend radially inward and are spaced equidistantly from each other along the outer edge of the ratchet wheel 26. The dividers 38 extend upward slightly higher than the pills or tablets which they are to contain, thereby forming individual compartments for the pills, tablets or the like. The portion of the ratchet wheel 26 lying between the dividers 38 may contain indentations or depressions to provide for better storage of the tablets or pills to be positioned therein. The ratchet wheel 26 also carries an indicator block 40 along its outer surface. The indicator block 40 is approximately the same size as a table compartment, and when the dispenser is full the indicator block will be positioned directly over the discharge chute 31. Appropriate scribing or an arrow marking is imprinted on the indicator block to readily identify it, and enable the user to quickly position it over the discharge chute 31. The rear surface 42 of the ratchet wheel 26 is concave, and has concentric ratchet surfaces 43 and 44 disposed along its outer edge. The outermost ratchet surface 43 is positioned along the outer periphery of the ratchet wheel 26. This outer ratchet surface 43 will come into contact with the annular shoulder 13 of the case 10 if the ratchet wheel 26 is tilted from its normal plane. In normal usage however, the center hub 37 is

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the only bearing surface, as it rotates upon the axle shoulder 29, thereby providing for a minimum friction between the two parts. The second ratchet surface 44 is spaced concentrically inward from the ratchet surface 43. Ratchet slots 45 are spaced periodically around the ratchet surfaces, and are generally in alignment with the dividers 38 located on the opposite face of the ratchet wheel 26. The leading or operating edges of the slots 45 are generally perpendicular or normal to the plane of the ratchet wheel. The trailing edge of the slot is inclined angularly to facilitate the release of the actuator trigger 19 when the dispenser is operated.

A plurality of numerals 46, beginning with the numeral 1 and continuing upward to correspond with the capacity of the dispenser are positioned on the rim 47 or peripheral wall of the ratchet wheel adjacent the tablet compartments. The numerals 46 will appear through the side aperture or transparent window 32 and will give a visual and continuous inventory when the dispenser is stored on its side. As has been stated, it is therefore unnecessary to lift the dispenser from a storage position on its side to determine the number of tablets remaining therein. An indented surface 48 is disposed on the outer surface of the wall 11, adjacent the aperture 32, for receiving a name plate or label to indicate the type of tablets in the dispenser.

The cover 30 is preferably formed entirely of transparent material; however, only the track portion which overlies the pills in the ratchet wheel 26 need be made of transparent material. The outer shape of the cover 30 corresponds to that of the case 10. Positioned around the face of the cover 30, at a radius slightly less than that of the inner edge of the dividers 38, is a second series of numerals 49. The numerals increase clock-wise around the face of the cover 30 and are spaced radially inward from the tablet compartments in the ratchet wheel 26. The numerals begin slightly to the left of the discharge chute 31 and progress around the face of the cover 30 to a position slightly to the right of the discharge chute. The numerals 49 are adjacent to, and correspond with, the individual tablets contained in the dispenser. Therefore, as the dispenser is operated to discharge a single unit the last tablet in the dispenser will be opposite the numeral 19 in the embodiment shown. When the dispenser is operated a second time the last tablet will appear opposite the numeral 18. The cover 30 may also be provided with an indentation 50 to receive a label descriptive of the contents of the dispenser. This is best illustrated in Figure 1.

Viewing the cover 30 from its back face a shoulder 51, spaced inwardly from the outer edge, will be observed. The shoulder 51, which depends into the case 10, corresponds with the inner surface of the outer wall 11. Stated otherwise, the flange which extends from the shoulder 51 is equal in thickness to the outer wall 11. In the area of the discharge chute 31, the shoulder portion corresponds to the opening or passageway in the discharge chute. The portion of the cover immediately inward from the shoulder 51 has but a slight clearance between it and the top surface of the divider walls 38 and thus prevents the tilting of the ratchet wheel 26 as it rotates in the dispenser.

Positioned inwardly from the shoulder 49 is the depending annular wall 52 having a radius equal to the inner extension of the dividers 38. The depending wall 52 is inclined angularly inward and downward from the back face of the cover 30. The portion of the cover 30 between the angular wall 52 and the depending shoulder 49 has been referred to herein as the transparent track. The wall 52 serves to close off the divider compartments on the inner side and consequently hold the tablets in a fixed position in the compartment between the dividers 38. The wall 52 also stabilizes the movement of the ratchet wheel 26.

Formed integrally with the cover 30 and depending

from the center thereof is the split tongue assembly latch 53. The latch 53 is generally cylindrical in shape and is formed of resilient material. It is bifurcated across one diameter and the opposing sections 53a and 53b thereof can be springably urged together. The rearmost end of the latch is tapered conically inwardly, and carries a shoulder 54 in inwardly spaced relationship from the annular catch 29 at the juncture of the axle 27 in the recess in the rear wall 12. Therefore, as the cover 30 is positioned over the case 10 and the assembly latch 53 is inserted through the axle 27, the bifurcated opposing sections 53a and 53b will be springably urged together until the shoulder 54 is released from contact with inner surface of the cylindrical axle 27. The opposing sections 53a and 53b then spring outwardly, because of the resiliency of material, and engage with the annular catch 29 of the axle 27. In the preferred embodiment shown, the final assembly of the dispenser is thus simplified; however, other suitable means can be employed to attach the cover to the case. In addition to providing for easy assembly, the assembly latch construction makes it inconvenient for anyone to open the dispenser, without a release key, which need be issued only to authorized personnel.

The assembly latch 53 is cooperable at its tapered ends with an opening plunger or key 55 when it is desired to remove the cover 30 to refill the dispenser. The opening key 55 may be constructed of metal or plastic and contains an enlarged gripper end 56, which may be serrated for more positive finger engagement. The operative end of the opening plunger is hollow with the inner surface of the walls tapering conically inward. To open the dispenser the opening key 55 is inserted through the rear of the axle 27 until the end of the key 55 comes into contact with the tapered ends of the assembly latch 53. A slight inward pressure on the key compresses the bifurcated portion of the assembly latch 53, causing the shoulder 54 on the latch 53 to move out of engagement with the annular catch 29 at the rear of the axle 27. The opening key 55 is also utilized when the dispenser is being filled, as is illustrated in Figure 2. It is simply inserted through the axle 27 when tablets are deposited upon the upper surface of the ratchet wheel 26. Because the opening key 55 completely fills the opening in the hub, no tablets will become lodged therein. It should be noted that the latch 39 on the ratchet wheel 26 also keeps the tablets from being moved into the opening in the axle 27.

The dispenser may be rendered inoperative by the insertion of a cord or wire 56 through an opening 57 in the actuator 19. As will be seen in Fig. 9 the opening in the case 10, around the actuator 19, is very small, and therefore the positioning of a wire through the opening 57 will prevent the depression of the trigger 19. This is of particular value when the dispenser is used in a hospital, for the device can be filled in the pharmacy, a wire installed through the opening 57, and the ends of the wires sealed together with a lead shot 58, or some similar sealing means. The locking provision for the dispenser is best illustrated by reference to Figures 3 and 4.

When the dispenser is loaded the cover 30 is removed leaving the upper surface of the ratchet wheel exposed to view. The key 55 is then inserted into the opening in the axle 27, thereby preventing tablets from falling into the hub. Fig. 2 illustrates a convenient method for filling the dispenser. With the key 55 in place, a number of tablets are deposited upon the upper surface of the ratchet wheel 26. The user then guides the tablets down the convex face surface of the ratchet wheel 26 into position in an individual compartment between the dividers 38. A small glass rod or stick will normally be employed for this purpose. Before the dispenser is filled the indicator block 40 should be placed directly over the discharge chute 31. After all compartments, or the desired number of compartments, have been filled the key 55 is removed from the

axle 27 and the cover 30 again positioned on the case. The cover 30 is aligned with the case 10 and the assembly latch inserted through the opening in the axle 27. As the cover is urged into position the two sections of the assembly latch will be forced toward each other until the tension thereon is released by the expansion in the axle at the point where the annular catch 29 occurs.

To operate the dispenser the actuator 19 is depressed on its upper end, and the operating end of the actuator 19 is urged upwardly into engagement with the slots 45 on the reverse face of the ratchet wheel 26.

The stop arm 36 on the actuator 19 comes into engagement with the actuator guide 24, and the inward movement of the actuator is limited by an amount equal to the rotation of the ratchet wheel 26 through one position. As has been pointed out previously, the lower end of the actuator 19 is urged upwardly by the cooperative action of the camming rib 25a and the upward portion of the coil spring 23. This movement brings a tablet compartment into alignment with the passageway in the discharge chute 31 and the tablets will fall by gravity therethrough. The actuating lever 19 is returned to its normally outward position by the coil spring 23. The natural resiliency of the material from which the actuator is formed permits the flexing of the ratchet tooth end out of engagement with the ratchet wheel 26. To prevent the ratchet wheel from returning with the actuator, the ratchet spring 21 is provided. This spring is positioned in the case approximately diametrically opposite the actuator. The ratchet spring 21 has an upwardly extending spring finger 21b which is engageable with the slots 45 on the back surface of the ratchet wheel 26. Therefore, as the ratchet wheel 26 is advanced by the actuator, it will also be advanced one position over the ratchet spring 21. The spring finger 21b engages with the perpendicular surface of the slots and prevents the rearward rotation of the ratchet wheel 26.

The embodiment shown is related to the use of a pill dispenser; however, by an increase in proportions, the dispenser may be employed for use with capsules with equal advantages. If capsules are used, the compartments between the dividers 38 may be slightly deeper axially, or may extend further inward radially. The same principles of dispenser operation will of course apply. In like manner, the dispenser may be adapted for pills and tablets of varying size, and the capacity of any given dispenser varied to fit the existing requirements.

This invention provides a convenient and easily operated combination dispenser and inventory, or counter, and it should be understood that the invention concept may be varied somewhat. Therefore, the scope of this invention should not be limited to the embodiment described, but should be construed in the light of the following claims.

I claim:

1. A pill dispenser comprising an outer case, a discharge chute formed integrally on said case, a hollow cylindrical axle extending inwardly into said case, a ratchet wheel having a central hub formed thereon rotatable about said axle in said case, a plurality of pill compartments disposed on the upper surface of said wheel around its outer periphery, actuator means positioned within said case engageable with ratchet means on said wheel to cause rotation thereof when said actuator is depressed, spring means cooperable with said actuator to bias said actuator into a normally outward position, a transparent cover adapted to be positioned upon said case, and bifurcated latch means adapted to retain said cover on said case.

2. A combination counter and dispenser for drug tablets comprising an outer casing having a discharge opening therein, a transparent window formed in a side wall of said casing, a hollow cylindrical axle extending inwardly from the back surface of said casing, annular shoulder means formed on said axle, storage wheel means rotatable within said casing, a plurality of upstanding divider walls positioned on the upper surface of said wheel at the

periphery thereof, centrally disposed hub means cooperable with said axle in said casing, a plurality of ratchet slots formed on the rear surface of said wheel, a plurality of numerals disposed on the rim of said wheel in reverse numerical order, transparent cover means attachable to said casing, an actuator member positioned within said casing, said actuator having a ratchet tooth formed thereon cooperable with said ratchet slots in said wheel, means extending from said actuator to limit the inward movement thereof, spring coil means biasing said actuator to a normally outward position, and ratchet spring means affixed to the back surface of the said case to prevent reverse rotation of said wheel.

3. An automatic inventory dispenser for narcotic and barbiturate tablets comprising a container having a back wall and upstanding side walls, a discharge chute formed integral with said upstanding side walls, centrally disposed axle means attached to said back wall, a compartmented storage wheel rotatable within said container over said axle, ratchet means formed on the rear surface of said storage wheel, cover means conformable with the outline of said upstanding wall to provide a closure for said container, latch means holding said cover to said container, drive means within said container cooperable with said storage wheel to rotate the same, and spring means biasing a portion of said drive means outwardly beyond the upstanding side walls of said container.

4. An indication dispenser for pharmaceutical tablets comprising an outer casing having a discharge opening therein, a circular shoulder positioned within said casing, a hollow cylindrical axle centrally disposed in said casing, spring pawl means to prevent reverse rotation, a ratchet wheel having an annular opening therein cooperable with said axle in said casing, said ratchet wheel having a plurality of individual tablet compartments disposed around its upper surface, an actuator pawl depressible into said casing to cause said ratchet wheel to rotate, means extending from said pawl to limit the inward and outward movement thereof, coil spring means biasing said actuator pawl into an outward position, cover means conforming to the shape of said casing to enclose said ratchet wheel, a plurality of numerals positioned clock-wise around said cover corresponding to the number of tablet compartments, and means associated with said cover to releasably attach said cover to said casing.

5. An indicating pill dispenser comprising a casing having upstanding side walls thereon, an unobstructed discharge chute formed integrally with the upstanding walls, guide shoulder means positioned inwardly from the rear wall of said casing, an indicator window in one side wall of said casing, means rotatable within said dispenser to house a plurality of pills, a series of numerals positioned around the rim of said rotatable means visible individually through said window, yieldable stop means within said casing to prevent reverse movement of said rotatable means, manual trigger means within said casing directly engageable with said rotatable means to cause rotation thereof, a transparent cover overlying said casing, and means for attaching said cover to said casing.

6. A dispenser for medicinal capsules comprising a compartmentalized ratchet wheel, a unitary reciprocating trigger directly engageable with said ratchet wheel to rotate the same, a housing to enclose said ratchet wheel and said trigger means, a transparent cover attachable to said housing, and a discharge chute formed integrally with said housing communicable with the compartments of said ratchet wheel.

7. A container adapted to contain a plurality of items comprising an outer housing having an obstructed dis-

charge opening therein, hub and shoulder means within said housing to hold a wheel in a fixed position of rotation, a compartmentalized storage wheel rotatable within said casing, a plurality of upstanding dividers positioned about the outer periphery of said wheel, ratchet means disposed on the reverse side of said ratchet wheel, reciprocable trigger means positioned within said housing directly engageable with said ratchet means to rotate said ratchet wheel, spring means urging said trigger to an outward position, and transparent cover means providing a closure for said housing.

8. A pill dispenser comprising an outer casing, an indicator opening formed in said casing, a discharge chute formed integrally with the walls of said casing, a ratchet wheel rotatable within said casing, a plurality of divider members extending radially on the upper surface of said ratchet wheel at the outer periphery thereof, a one piece reciprocating actuator pawl depressible into said casing to move said ratchet wheel one unit at a time, spring means to prevent reverse rotation of said ratchet wheel, coil spring means biasing said pawl into an outward position, cover means adapted to enclose one surface of said casing, and a bifurcated latch formed integrally with said cover to removably position said cover on said casing.

9. An indicating tablet dispenser comprising an outer casing having an open upper end, an unobstructed discharge chute communicable with the interior of said casing, a transparent cover conformable to the outline of said casing, a rotatable storage wheel having a plurality of individual tablet compartments disposed around the outer periphery of the upper surface thereof, said storage wheel having a downwardly and outwardly inclined loading surface at the center thereof extending radially outward to the individual tablet compartments, interengageable pawl and ratchet means within said casing adapted to move tablets disposed on said storage wheel individually to said discharge chute, and a plurality of numerals disposed on said cover to progressively indicate the number of tablets in said dispenser.

10. A continuous inventory dispenser adapted to contain pills, capsules, tablets or the like comprising an outer casing having a transparent cover removably attached thereto, a discharge chute integrally formed on said casing having a passageway communicable with the interior thereof, a centrally disposed axle attached to said casing, an indicator window positioned in one side of said casing, storage wheel means rotatable within said casing, a plurality of radially extending dividers positioned on the top surface of said storage wall, hub means cooperable with said central axle and rotatable thereabout, a series of numerals disposed on the outer rim of said wall in register with said window in said casing, a reciprocating lever positioned within said casing and cooperable with said storage wheel to rotate the same, coil spring means attached to said casing and said reciprocating lever urging said reciprocating lever to a position of outward extension beyond said casing, and means for attaching said cover to said casing.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 2,943,730

July 5, 1960

Harold R. Tregilgas

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 9, line 28, for "indication" read -- indicating --;
line 71, for "obstructed" read -- unobstructed --.

Signed and sealed this 6th day of December 1960.

(SEAL)

Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents