May 1, 1951 N. DONALD 2,551,424

DISPENSER FOR STRAWS AND THE LIKE

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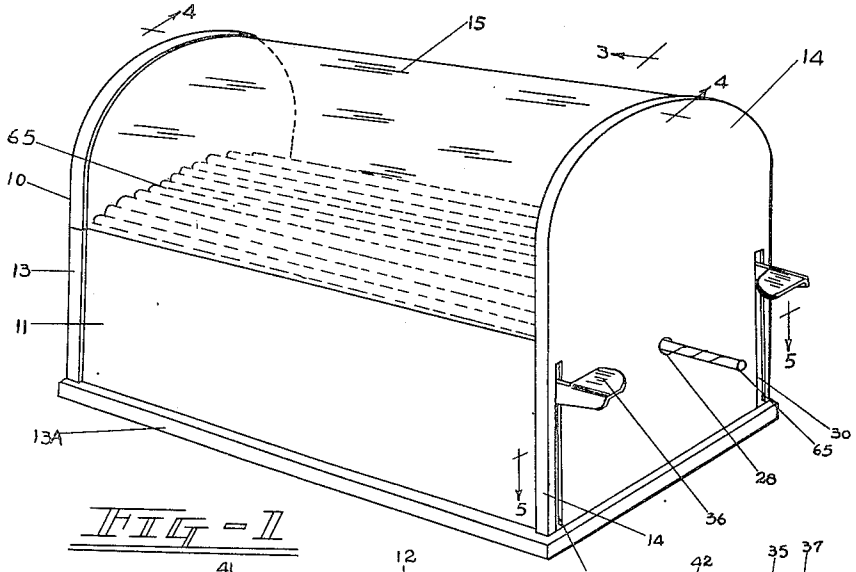


FIG-1

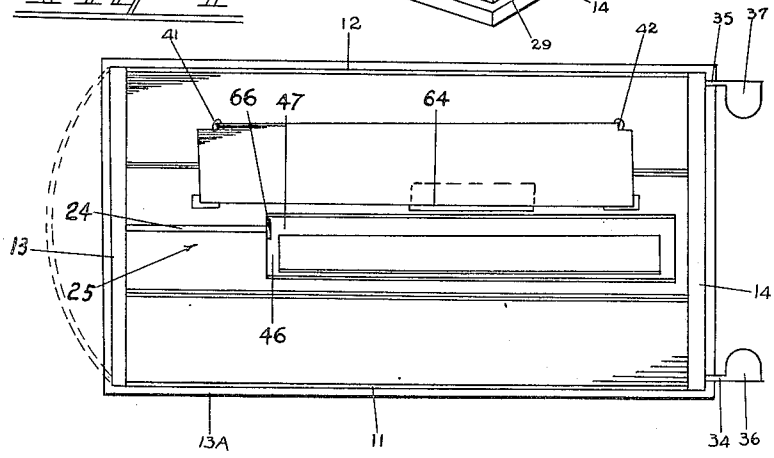


FIG-2

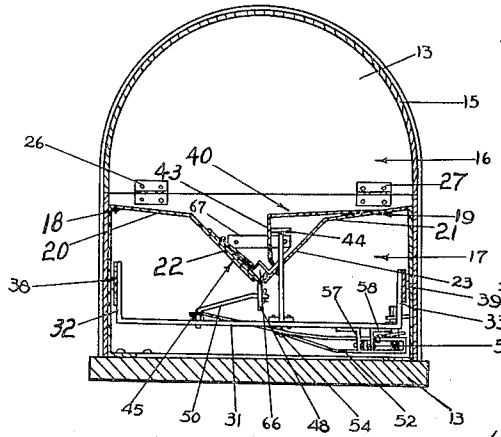


FIG-3

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DISPENSER FOR STRAWS AND THE LIKE

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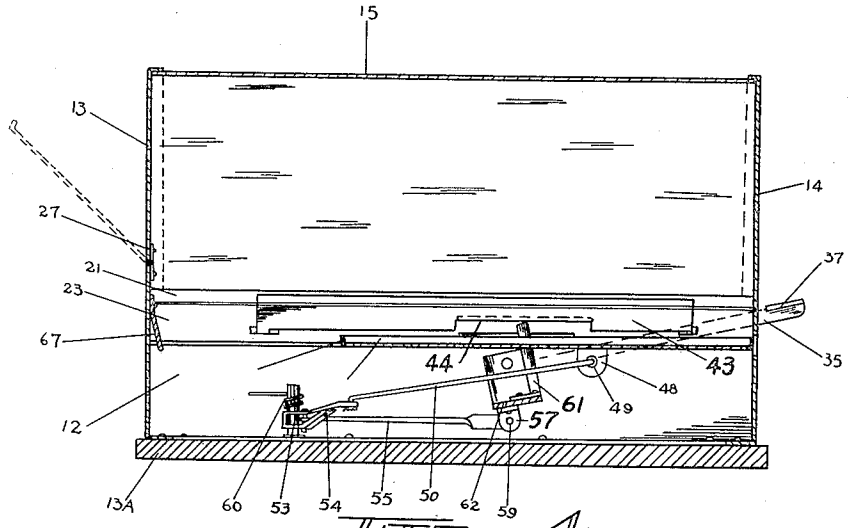


FIG - 4

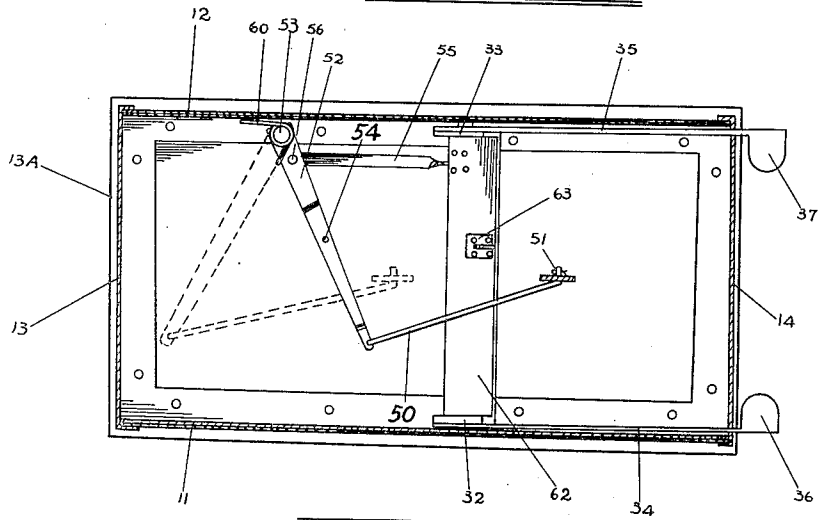


FIG - 5

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Patented May 1, 1951

2,551,424

UNITED STATES PATENT OFFICE

2,551,424

DISPENSER FOR STRAWS AND THE LIKE

Nestor Donald, Windsor, Ontario, Canada

Application July 27, 1948, Serial No. 40,961

3 Claims. (Cl. 312—78)

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The invention relates to improvements in a dispenser for straws and the like, as described in the present specification and illustrated in the accompanying drawings that form a part of the same.

The invention consists essentially of the novel features of construction as pointed out broadly and specifically in the claims for novelty following a description containing an explanation in detail of an acceptable form of the invention.

The objects of the invention are to devise a dispenser for straws and the like in which a quantity of soda straws may be kept in a completely sanitary condition and from which the straws may be ejected singly as required; to make a dispenser for straws from which a single straw is obtained through mechanical operation of the dispenser; to provide a neat and attractive soda straw holder for soda fountains and counters; to permit quantities of drinking straws to be kept under cover in a sanitary condition and displayed ready for use; to construct a dispenser for straws and the like the operating mechanism of which consists of comparatively few and simple parts, easy and economical to manufacture; and generally to provide a dispenser for straws and the like that is efficient in its use.

In the drawings:

Figure 1 is a perspective view of the dispenser.

Figure 2 is a plan view of the dispenser with the transparent top removed.

Figure 3 is a cross-sectional view as taken on the line 3—3 in Figure 1.

Figure 4 is a longitudinal sectional view as taken on the line 4—4 in Figure 1.

Figure 5 is a cross-sectional view as taken on the line 5—5 in Figure 1.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings, the dispenser consists of a casing or container, as indicated by the numeral 10, somewhat rectangular in shape and of a length sufficient to accommodate drinking or soda straws. The casing is provided with the side walls 11 and 12 extending up from the bottom or base 13A a predetermined distance and has closed ends, the end walls 13 and 14 extending above the top level of the side walls for a predetermined distance, the top of each of these end walls 13 and 14 preferably being arcuate in shape. A top or cover 15 is secured to the end walls and to the top portion of the side walls, this cover or top portion of the dispenser preferably being made of a transparent material, such as plastic, and following the curvature of the top portion of the end walls 13 and 14.

The container is divided into an upper compartment 16 and a lower compartment 17 by a partition located adjacent to the top edge of the side walls 11 and 12. This partition consists of a pair of shelf members, 18 and 19 respectively, each of which is suitably secured to the inside face of its respective side wall and extending outwardly therefrom. These shelves or members extend the full length of the side walls, and are flat surfaced, extending out from the inside face of the side walls towards the center of the container at a slight downward angle, 20 and 21 respectively, and continuing downward at a sharper angle, 22 and 23 respectively, for a predetermined distance terminating approximately midway between the top and bottom of the side walls and close together to form a longitudinal slot or space therebetween, 24. The sharply sloping faces 22 and 23 form a V-shaped trough 25.

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The top portion of the end wall 13 is hinged to open outward, providing an entrance to the compartment 16. The hinges 26 and 27 are positioned approximately at the top level of the side walls 11 and 12.

The end wall 14, or front of the dispenser, is provided with an aperture 28 located therein in approximate alignment with the bottom of the trough 25, that is, in alignment with the longitudinal slot 24. This end wall 14 also has vertical slots, 29 and 30, located one adjacent to either side and extending up from the base to approximately the top of the side walls.

The lower compartment 17 forms a housing for the operating mechanism of the dispenser which consists of the mounting bracket 31. This mounting bracket is in the form of a flat strip of metal, or other suitable material, of predetermined width and having upturned ends or flanges, 32 and 33. The bracket is of a length approximately the width of the compartment 17, extending between the side walls about midway therealong. Each of the upturned ends or flanges 32 and 33 has an arm or lever, 34 and 35, suitably secured to the inside face of same and extending outwardly from the bracket 31 and through the slots 29 and 30 on their respective sides, the free end of each of the levers having a thumb or pressure plate, 36 and 37, thereon, these grips being suitably secured to the end of the lever projecting through the vertical slots in the front end wall 17, or being made integral therewith.

The levers are secured to the upturned ends of the mounting bracket adjacent to their top edge, the bracket being pivotally mounted to the side walls through the flanges 32 and 33 at 38 and 39 respectively.

An agitator 40, in the form of a longitudinal and flat surfaced plate, is movably secured on the face 21 of the shelf 19. This agitator or plate is of metal or any other suitable material, of predetermined length and width having a cut-out portion at each end and forming a downwardly

extending lug, 41 and 42 respectively, which fits into an aperture in the face 21 of the shelf 19, movably mounting the agitator on the shelf 19 to extend outwardly therefrom in a horizontal position over the trough 25. The opposite side of the agitator is formed with a downwardly extending flange 43 along its entire length and extending part way into the trough. An offset 44 is formed on the inside face of the flange 43 and extends laterally therefrom for a short distance adjacent to its lower end. While the foregoing is an acceptable manner of securing the agitator to the shelf 19, it could be attached thereto in other suitable manner, such as being hinged.

The straw ejector 45 is in the form of an angle member or plate freely and movably seated in the trough 25, the face 46 of the plate resting against the face 22 of the shelf 18 or side of the trough, and having the flange or angle piece 47 extending over the longitudinal slot 24 and resting against the face 23 of the shelf 19, or opposite side of the trough. The rear end of the ejector is formed with a closed end, a piece being formed to extend from the flange 47 to the edge of the face 46 of the ejector. A lug 48 having an aperture 49 therein, is fixedly secured to the underside of the ejector, at the angle edge formed by the face 46 and the flange or angle piece 47, and extends downwardly and into the longitudinal slot 24 at the bottom of the trough 25. To this lug 48, one end of a connecting link 50 is movably secured, the end extending through the aperture 49 and being retained therein by means of the cotter pin 51, or any other suitable means. The opposite end of the connecting link is pivotally connected to one end of a pivot lever 52 extending at an angle therefrom, the opposite end of the pivot lever being pivotally connected to a short post 53 securely fastened to the floor of the compartment 17 and extending upwardly therefrom adjacent to one side wall. In this instance, the end of the pivot lever connected to the post, is formed to loop back for a short distance, the two sections being rigidly secured together by a rivet or bolt 54. Apertures in the end pieces mount the looped end to the mounting post 53.

A connecting rod 55 is pivotally connected to the pivot arm at 56 adjacent to the pivot arm's pivotal connection with the post 53. This connecting rod extends over to the mounting bracket 31, having its other end pivotally mounted between a pair of brackets 57 and 58, rigidly secured to the underside of the mounting bracket, by means of the pin 59 through apertures in the brackets and extending through the end of the connecting rod.

The pivot arm, connecting rod and connecting link, as secured together, are positioned at a predetermined angle with respect to one another and to the mounting bracket and the ejector.

A torsion spring 60 is mounted on the post 53, one end of the spring being rigidly secured to the pivot lever, the other end of the spring abutting the inside face of the rear end wall 14.

A rod or finger 61 is secured to the top surface of the cross-piece 62 of the mounting bracket 31 by means of the plate 63, and extends upwardly therefrom and through a longitudinal slot 64 in the face 23 of the shelf 19, terminating under the offset 44 on the flange 43 of the agitator, and forms a stop for the agitator as will hereinafter be explained.

The drinking straws are placed in the upper compartment 16. The straws 65 extend approximately the full length of the compartment, being

piled one on top of the other on the shelves 18 and 19, some of the underneath straws position themselves in the trough 25. The bottom straw in the trough rests on top of the end piece 66 at the rear of the ejector when same is in its inoperative position.

In the operation of the dispenser, a person presses down on one or both of the plates 36 and 37 to cause the levers 34 and 35 to move downward, the mounting bracket 31 pivoting at 38 and 39 to move the connecting rod 55 which actuates or pivots the pivot arm or lever 52 rearward to exert a pull on the connecting link 50 and thus draw the ejector backward toward the rear of the compartment 16. The straw that is resting on the end piece 66 of the ejector is held out from the inside face of the rear end wall 13 by a somewhat triangular shaped plate 67 having a cut out section in its lower end portion. This plate 67 is firmly secured to the inside face of the rear end wall by means of rivets or other fastening members securing its top edge thereto, the plate being positioned on the wall to project downwardly and outwardly therefrom at a predetermined angle. As the ejector is drawn backward, the end of the straw on its end piece is held against the lower portion of the plate 67, the ejector end 67 continuing backward and through the cut out in the plate 67 and terminating at the rear of the plate, the straw falling down into the angle of the ejector, the end now being in front of the end piece 66 instead of on top of the same. The drawing back of the ejector and its action on the pivot lever 52 causes the torsion spring to be tightened. Upon release of pressure on the levers 34 and 35, the torsion spring is released, causing the pivot lever to automatically return the ejector forward to its original position. As the ejector is forced forward the end piece 66 at the rear of same is brought against the end of the straw pushing the straw forward through the aperture 28 in the front end wall 14 sufficiently far to be easily grasped and withdrawn entirely from the dispenser.

The beverage straws in the container are moved or agitated by the action of the agitator 40 which tends to keep them in proper position in the upper compartment, the agitator being actuated by the finger 61 lifting up against the off-set 44 projecting from the flange 43 of the agitator as the mounting bracket moves upon pressure being applied to its levers.

The straw lying in the ejector is prevented from slipping out of position by a lug projecting downwardly from either end of the flange 43 of the agitator, these lugs or strips 68 and 69 form a continuation of the flange at these points extending down and through an aperture in the face 23 of the shelf member 19.

As one straw is ejected from the dispenser and withdrawn therefrom, another straw automatically positions itself on the ejector.

It is of course understood that modifications and ramifications may be made without in any way departing from the spirit of the invention as hereinabove described and illustrated.

What I claim is:

1. In a dispenser for straws and the like, a casing comprising an upper compartment forming a straw reservoir having a closed top and a straw outlet in the front end wall, a lower compartment forming a housing for the dispensing mechanism, a partition located between said straw reservoir and said housing, said partition comprising a pair of shelf members each of which

is secured to the inside face of a side wall of said housing at the top thereof and extending the length of same and projecting outward therefrom at a slight angle and continuing downward at a sharper angle to form a V-shaped trough the bottom of which is open to provide a longitudinal passage, said shelf members adapted to provide a seat for beverage straws placed in said straw reservoir, a mounting bracket extending the width of said housing and pivotally secured therein, a lever connected to each side of said mounting bracket and extending therefrom through a vertical slot in the front end wall of said housing, an ejector in the form of an angle plate adapted to be freely seated in said trough and to be movable therein, a lug fixedly secured to the underside of said ejector and extending downward therefrom through the longitudinal passage at the bottom of said trough, and means pivotally connected to said mounting bracket and said lug of said ejector adapted to slide said ejector in said trough upon pressure being applied to said levers projecting through the front end wall of said housing.

2. In a dispenser for straws and the like, a casing comprising an upper compartment forming a straw reservoir having a glass top and a straw outlet in the front end wall, a lower compartment forming a housing for the dispensing mechanism, a partition located between said straw reservoir and said housing comprising a pair of almost horizontal ledges which lead into a V-shaped trough portion, a mounting bracket extending the width of said housing and pivotally secured therein, a lever connected to each side of said mounting bracket and extending therefrom through a vertical slot in the front end wall of said housing, an ejector comprising an angle plate being freely seated in the V-shaped trough portion in said partition, a connecting rod being operated by the pivotal movement of said mounting bracket, a pivot arm actuated by said connecting rod, and a connecting link adapted to be pulled by the movement of said pivot arm thereby drawing said ejector backward, a triangular plate secured to the rear of said upper compartment and having a cut-out section in its lower end portion, said triangular plate projecting downwardly and outwardly from the aforesaid rear wall, an end piece secured to the rear portion of the angle plate forming said ejector and said triangular plate permitting said end piece on said ejector to extend into the cut-out section thereof thereby permitting the lowermost straw in the V-shaped trough portion

of the partition to drop downward so that it will be engaged by said end piece upon forward movement thereof.

3. In a dispenser for straws and the like, a casing, a partition in said casing forming an upper and lower compartment, said partition comprising a pair of horizontally inclined shelf portions at the outer side thereof, and a V-shaped hopper portion extending downward in the central portion thereof, a mounting bracket pivotally secured within the lower compartment of said casing and extending laterally thereacross, a pair of levers fixedly secured to the upturned end on said mounting bracket and extending forward therefrom through slots in the front wall of said casing, a connecting rod being secured at one end thereof to said mounting bracket, a post suitably mounted in the lower compartment of said casing, a pivot arm rotatably mounted on said post, said connecting rod being pivotally secured to said pivot arm and adapted to hinge said pivot arm rearward upon said levers being depressed, a connecting link pivotally secured to the other end of said pivot arm, an ejector slidably mounted in said hopper portion and being pivotally connected to said connecting link, and said ejector being suitably shaped so that the rear end thereof engages the lowermost straw in said hopper thereby providing a means of carrying the straw forward through a discharge opening in the front wall of the casing, an agitator mounted on one of the horizontally inclined shelf portions of said partition and extending downward into the V-shaped hopper portion, a finger fixedly secured to said mounting bracket and extending upward into said V-shaped hopper portion, a flange formed on the vertical portion of said agitator and engaged by the upper portion of said finger thereby moving said agitator when said levers are manually depressed.

NESTOR DONALD.

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