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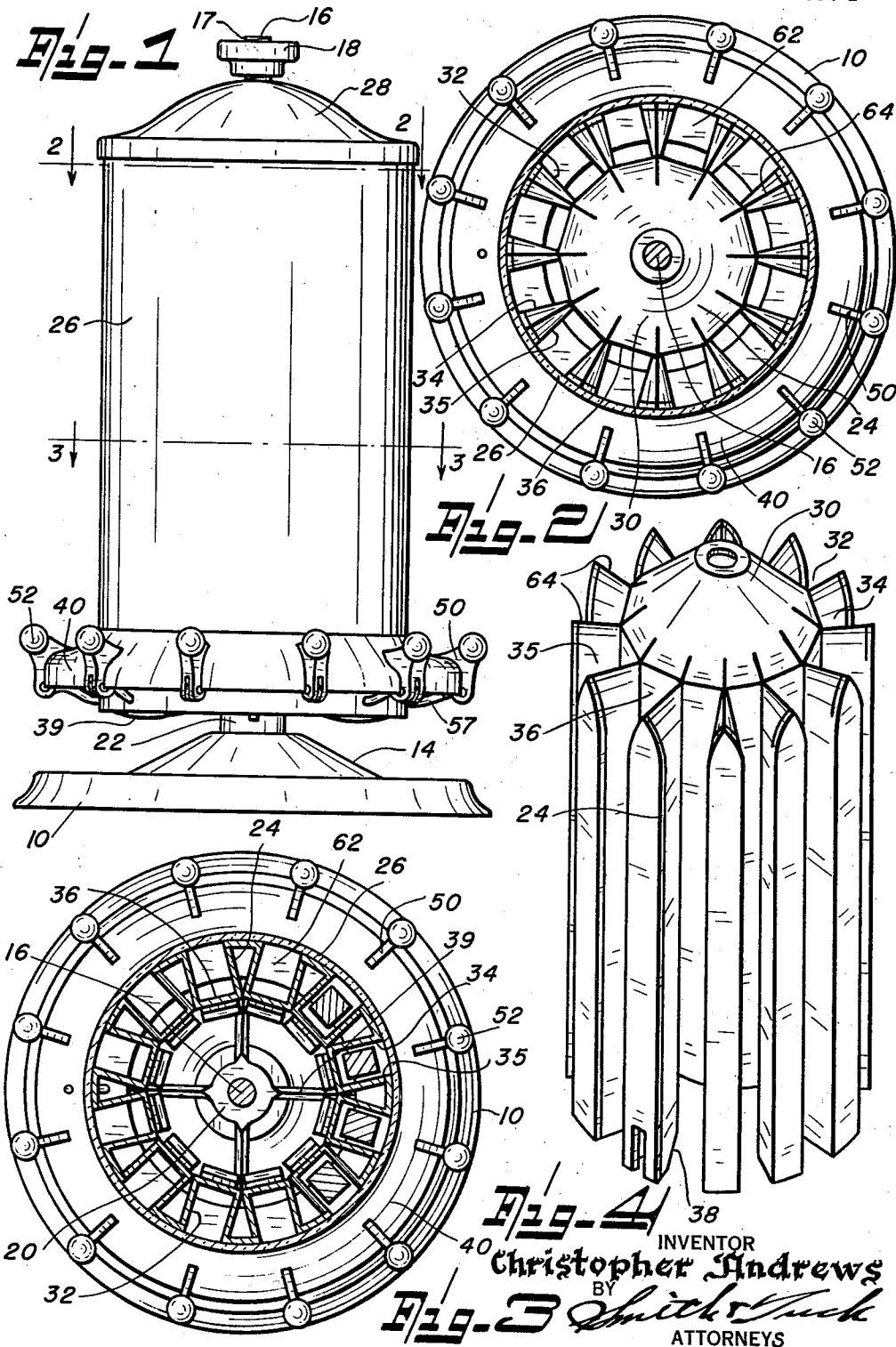
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SANITARY CUBE SUGER DISPENSER

Filed July 13, 1940

2 Sheets-Sheet 1



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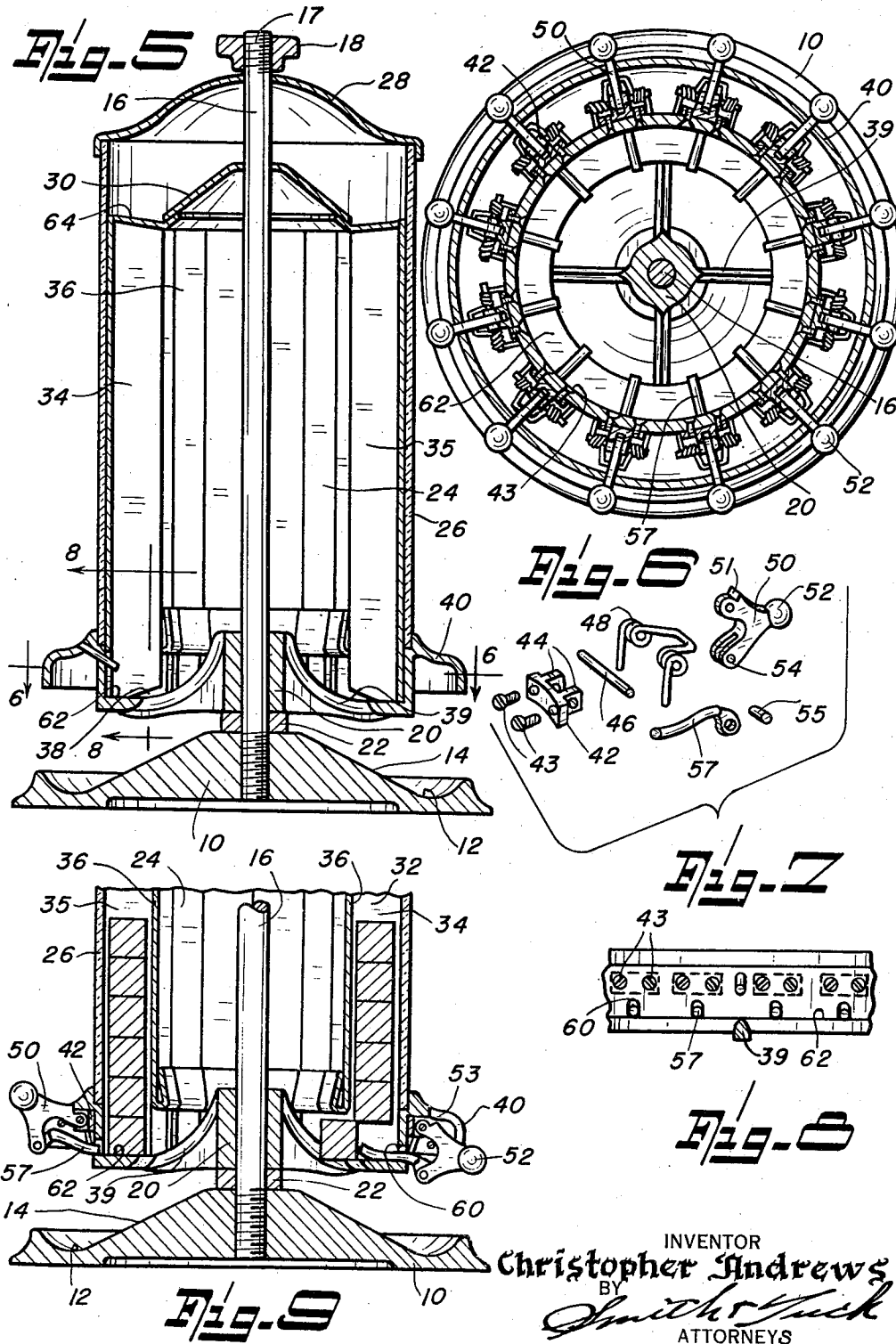
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## UNITED STATES PATENT OFFICE

2,268,688

## SANITARY CUBE SUGAR DISPENSER

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4 Claims. (Cl. 312-63)

My present invention relates to the general art of dispensing devices and more particularly to a sanitary cube sugar dispenser.

My dispenser consists essentially of providing a plurality of vertically disposed guideways into which cubes of sugar are poured. These are visible through a transparent outer covering which protects the entire group of guide, or storage, channels. At the bottom of each guideway is provided a discharging mechanism which when operated, as by the finger, will deposit one cube in an underlying tray for each time the mechanism is pressed. The construction of my dispenser is so arranged that the cubes have ample room in the guideways so that they can turn under the pull of gravity and stack up on each other with no tendency to clog, thereby eliminating the necessity of handling the same. When the device is charged the amount of remaining sugar is immediately visible through an enclosing transparent covering and while any user of the device may obtain from it as many cubes as he desires, he has no opportunity of handling any cube except the ones dispensed as a result of his manual operation.

The handling of cube sugar, particularly in public, or semi-public, eating houses such as restaurants, mess-halls, club-rooms, and the like has always presented a perplexing problem. Because in these places an adequate supply of sugar must be available at all times and the operator of the establishment normally can exercise no restraint over the patrons. Then too, the necessity of having an adequate supply of sugar on hand over reasonably long periods subjects the same to the accumulation of dust, the inroads of insects, particularly flies, in addition to the fact that the hands of the patrons as they select their own sugar from an open bowl may be very virulent germ carriers. It is to provide a satisfactory solution of this perplexing problem that I have provided my sanitary cube sugar dispenser.

The principal object of my present invention, therefore, is to provide a sanitary housing for cube sugar from which the cubes may be individually dispensed through the manual effort of the person desiring the sugar.

A further object of my invention is to provide means for storing the sugar that will insure positive feeding of the cubes to the discharging mechanism and, secondly, to so segregate the cubes and position them in their respective guides without the necessity of the person who fills the dispenser having to touch the sugar by hand to di-

rect it into a position where it can be depended upon to dispense with certainty.

A further object of my present invention is to provide a dispensing coned top for my storage member which will insure the distribution of the sugar to the various storage grooves as the sugar is poured into the device.

Another object of my invention is to provide a dispenser that will protect the sugar from all the agencies that might contaminate it, such as the patrons' hands, flies and other insects, dust, or any other germ carrying media that might ordinarily come in contact with sugar in an open bowl.

Still another object of my invention is to provide a mechanism which can be so designed as to accommodate sugar of any of the standard shapes and sizes.

A further object of my invention is to provide a feeding mechanism wherein the sugar is urged accurately into position for dispensing through gravity alone.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings, wherein

Figure 1 is an elevation of my device;

Figure 2 is a cross-sectional view taken along the line 2-2 of Figure 1.

Figure 3 is a cross-sectional view taken along the line 3-3 of Figure 1.

Figure 4 is a perspective view illustrating the sugar directing and storage unit.

Figure 5 is an elevation in section as though cut along a diameter of my device.

Figure 6 is a cross-sectional view taken along the line 6-6 of Figure 5.

Figure 7 is an exploded, bracketed view showing the parts employed in one form of satisfactory discharging means.

Figure 8 is a vertical, sectional view taken along the line 8-8 of Figure 5.

Figure 9 is a cross-sectional view taken in the same sense as Figure 5, but showing the lower portion only of the same with sugar in position and showing the manner in which the discharging mechanism dispenses individual cubes of sugar.

Referring to the drawings, throughout which like reference characters indicate like parts, 10 designates the base of my dispenser. This should be of sufficient weight and size so as to properly support my dispenser and to provide an annular groove 12 as the final resting place for the dispensed sugar and an inclined portion 14 which

reaches inwardly sufficiently far so that the sugar, as it is dispensed from the storage compartment, will slide, or roll, down this incline and come to rest in groove 12 within easy sight and reach of the person desiring it. Vertically disposed at the center of base 10 is the supporting and pivot rod 16. This rod may be suitably secured in base 10 as by being threaded or cast into the same. It should have sufficient upward extent so that the upper end also can be threaded as at 17 to accommodate a clamping hand nut 18. Pivotaly disposed upon rod 16 is support member 20 which is spaced above base 10 by a suitable bearing or washer 22. Member 20 forms the supporting means for the revolving members of my dispenser. These consist of the inner sugar guide and storage member 24, and the outer protective covering 26, which may be made of glass, plastic, or any other preferably transparent material, which are held in fixed relation to each other by the downward pressure exerted on the cover member 28 by member 18.

The sugar distributing and storage member 24 is formed with a conical upper portion 30 which serves because of its conical shape to distribute the sugar cubes as they are poured into the device into the plurality of storage guideways 32, of which there may be any desirable number. Grooves 32 are provided with parallel sides as 34 and 35 and a back wall member 36 that is disposed at right angles to the two side walls. The front of the groove is open and the sugar is retained in position by the sleeve-like outer covering 26. It is desired to point out that the grooves 32 should be sufficiently larger than the cube of sugar with which it is to be used, thus providing ample freedom so that a lump of sugar can fall free and will not become wedged in the guideway as the usefulness of my device depends in part upon the certainty of feeding the sugar cubes downwardly as the lower ones are dispensed. At the lower end of grooves 32 the side walls 34 and 35 are cut back at 38 so as not to interfere with the webs 39 of the support member 20.

At the lower end of my dispensing chamber I have provided an annular downwardly directed rim 40. This member which supports the outer covering tube 26 may be made as a part of support member 20 or as an independent member supported by member 20. This overhanging flange as is probably best illustrated in Figure 5 serves to protect the lower lumps of sugar from contamination in that it provides a seal for the same. Secured under rim 40 and against the cylindrical portion of member 20, are a plurality of bearing members 42 one for each of the guide grooves 32. Member 42 may be secured to the cylindrical portion in any suitable manner as by a plurality of screws 43. Outstanding from bearing member 42 are preferably spaced lugs 44 which form bearings for pin 46 which in turn serves as the pivot member for spring 48 and the operating lever 50. Lever 50 is provided with a stop member at 51 which normally abuts the end of the groove 53 formed in member 40 so as to provide that all the various levers 50 will come to rest at the same relative position so that as the machine is used all the levers will lie in the same plane. At its lower end lever 50 is provided with a boss which has a bifurcated bearing 54, in which is seated the pivot pin 55 which in turn positions the operating arm 57. Arm 57 passes through an elongated opening 60 in the lower end of the cylindrical portion of member 40 as is probably best illustrated in Figures 8 and 9.

This is the member that actually moves the sugar cube off the annular shelf 62 which normally forms the stop for the column of sugar in each of the grooves 32.

#### Method of operation

In using my dispenser, assuming that it is empty, the first operation is to unscrew nut 18 and remove cover 28. Sugar cubes may then be poured from a scoop or other convenient means into the top of the device; it will be noted that the cone portion 30 of member 24 is disposed downwardly a short distance below the top of the cylindrical cover portion 28. As the sugar is then poured in on cone 30 it will roll or slide down into the various grooves 32 and to assist in this operation the sidewalls 34 and 35 converge to form a rather sharp dividing ridge at 64 so that the sugar cubes are naturally directed into the various grooves 32. When the grooves are filled to the desired extent, and if additional storage is desired the device is filled above the grooves with sugar cubes resting on cone 30, the cover member 28 is put in place so that the downwardly extending flange thereof centers and secures in position the upper margin of tube 26, the nut 18 is then screwed home and the device is ready for dispensing. When a patron desires a cube of sugar it is only necessary to depress lever 50 by pressure on the operating knob 52. This operation causes arm 57 to move inwardly, after the showing of Figure 9, and push the bottom lump of sugar in the selected groove 32 off shelf 62 where it then falls upon cone 14. The sugar cube slides or rolls down cone 14 and comes to rest in the annular groove 12 where it is within easy sight of the patron and can be grasped by him without his being able to in any way contaminate the remainder of the sugar, the same being adequately protected by shelf 62. It will be apparent it is believed that if a person desires a couple of lumps of sugar it is a simple matter to, with a single operation, depress two or even more levers 50 and thus with the same movement of his hand obtain two or more lumps of sugar.

The foregoing description and the accompanying drawings are believed to clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claims.

#### I claim:

1. A dispensing cabinet for stacked articles comprising a base having a receptacle, a vertical supporting rod on said base, a cylinder on said rod, a plurality of vertically disposed lands on the surface thereof forming spaced grooves, the opposite walls of the lands converging to a point at their upper ends forming a flaring entrance to the grooves, and a conical distributing guide on the upper end of the cylinder to direct the articles to be stacked into said flaring entrances, and a transparent sleeve fitted closely about the cylinder and enclosing the grooves.

2. In a dispensing cabinet for stacked articles the combination with a base having an annular groove forming a dispensing tray, an upright supporting pin mounted on the base, and a casing mounted on the pin and spaced above the base and having an inner annular flange and open center bottom above the tray, of an inner housing having exterior guide-grooves within the casing and closed by said flange, a transparent

sleeve fitting closely about said housing, and dispensing means for pushing inwardly the lowermost articles in each stack.

3. In a dispensing cabinet for stacked articles the combination with a base, a casing supported above the base and having a lower, inner, stack-supporting flange forming a central dispensing space, of an inner housing having exterior guide-grooves within the casing and closed by said flange, a transparent sleeve fitting closely about said housing, and dispensing means for pushing inwardly the lowermost articles in each stack.

4. In a dispensing cabinet for stacked articles the combination with a base, a casing supported above the base and having a lower, inner, stack-supporting flange forming a central dispensing space, of an inner housing having exterior guide-grooves within the casing and closed by said flange, a transparent sleeve fitting closely about said housing, a cone-shaped distributing top above said guide grooves, and dispensing means for pushing inwardly the lowermost articles in each stack.

CHRISTOPHER ANDREWS.