O. NYBAK.

SUGAR DISPENSING APPARATUS.

APPLICATION FILED APR. 13, 1917.

1,270,194.

Patented June 18, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

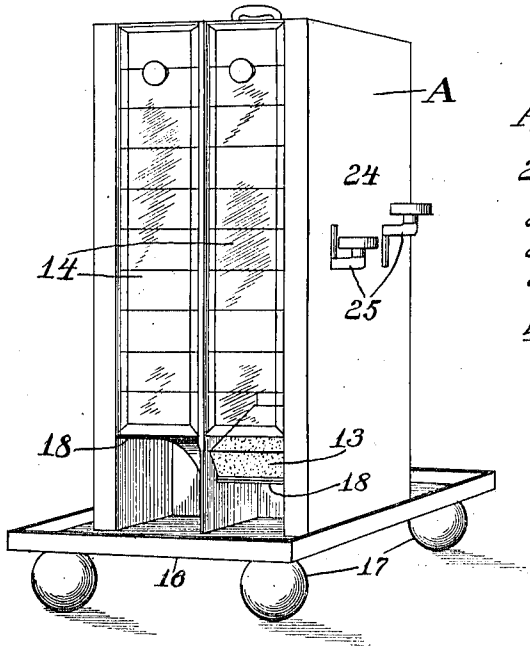


Fig. 2.

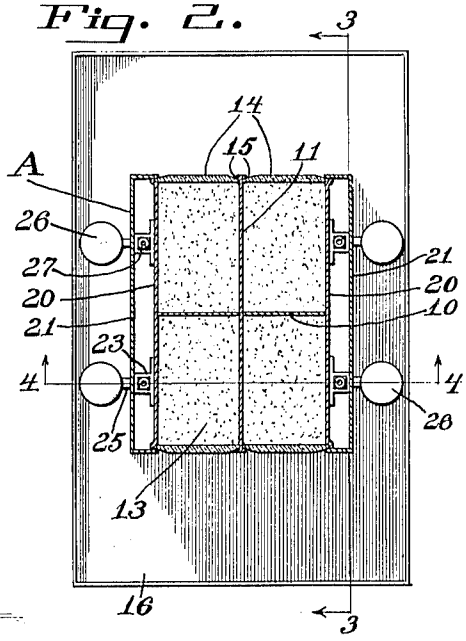


Fig. 3.

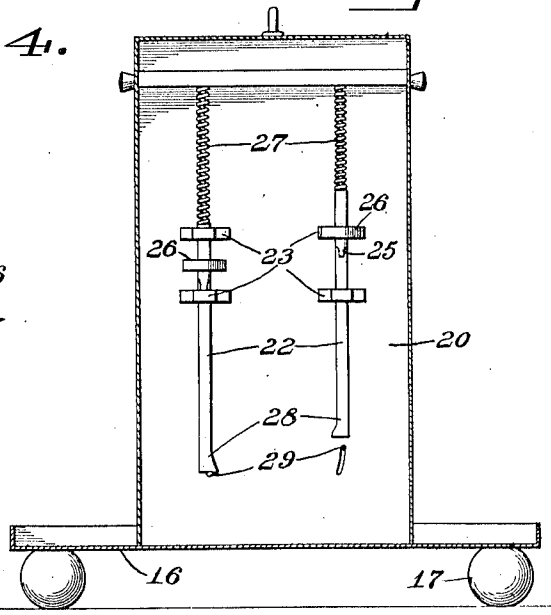
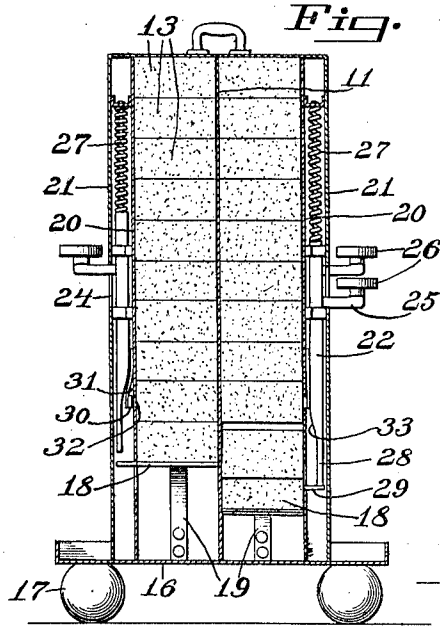


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

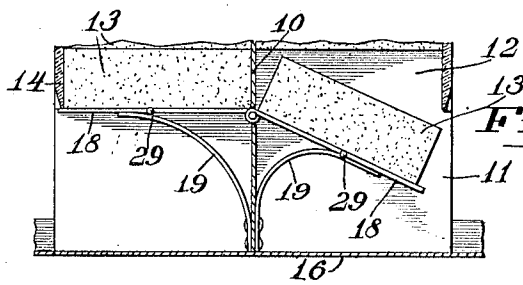


Fig. 5.

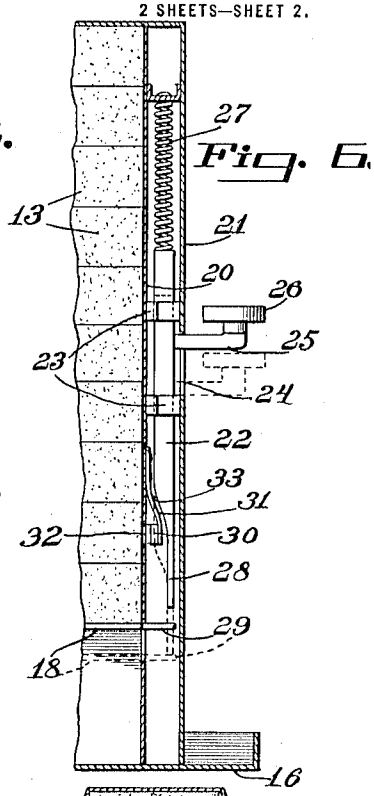
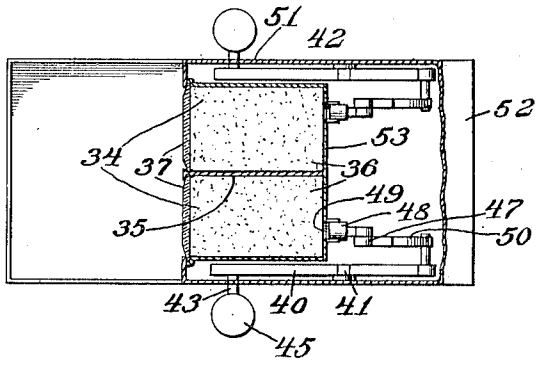


Fig. 6.

Fig. 9.



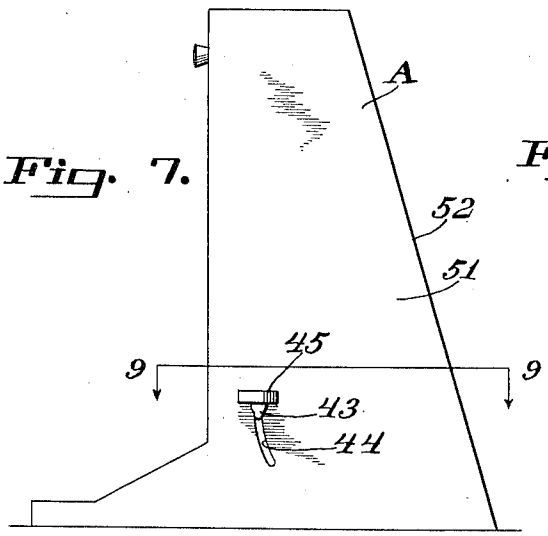
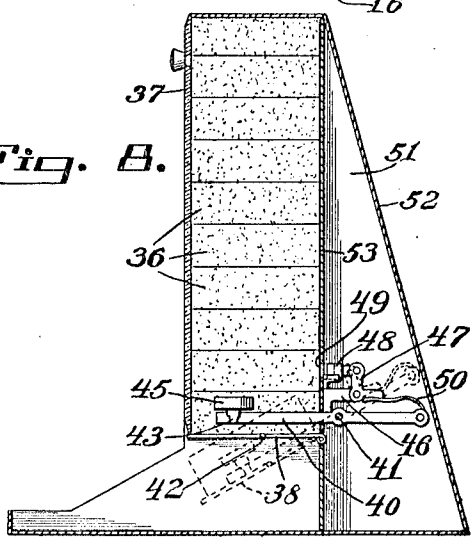


Fig. 7.

Fig. 8.



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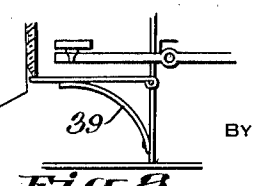


Fig. 8.

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UNITED STATES PATENT OFFICE.

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SUGAR-DISPENSING APPARATUS.

1,270,194. Specification of Letters Patent. Patented June 18, 1918.

Application filed April 13, 1917. Serial No. 161,832.

To all whom it may concern:

Be it known that I, OLAF NYBAK, a subject of the King of Norway, residing at Bashaw, in the Province of Alberta and Dominion of Canada, have invented new and useful Improvements in Sugar-Dispensing Apparatus, of which the following is a specification.

This invention aims to eliminate the present unsanitary conditions with regard to the use of sugar in restaurants, cafés and the like, wherein a large quantity of sugar is generally contained in a bowl, and exposed to the dust in the atmosphere, and frequently unduly handled by a large number of people. To this end the invention comprehends the provision of a dispensing cabinet, designed to discharge a sugar unit with each operation of suitable means for controlling the pivotal movement of the bottom of the cabinet.

More specifically stated the invention embodies among other features a cabinet wherein the sugar units are arranged in a column upon a pivotally mounted bottom, whereby said units are singly discharged from the cabinet with each movement of the bottom to an inclined position, means being provided to check the fall of the column of units during the discharge of a single unit, and which means is controlled by the means utilized for operating the pivoted bottom. In this manner the units of the column are successively positioned upon the bottom for use as desired.

The nature and advantages of the invention will be better understood when the following detail description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this specification like numerals of reference indicate similar parts in the several views and wherein:—

Figure 1 is a perspective view of the preferred embodiment of the invention.

Fig. 2 is a horizontal sectional view therethrough.

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a similar sectional view taken on line 4—4 of Fig. 2.

Fig. 5 is a detail view of the pivoted bottom.

Fig. 6 is a similar view of the sliding actuating element.

Fig. 7 is a side elevation of a modified form of the invention.

Fig. 8 is a vertical sectional view therethrough.

Fig. 9 is a horizontal sectional view taken on line 9—9 of Fig. 7.

Referring to the drawings in detail and particularly to Figs. 1 and 2, the preferred form of the invention consists of a double walled cabinet indicated at A. The cabinet is by preference rectangular in cross section, and may be constructed from any suitable material and proportion without departing from the spirit of the invention. The cabinet is divided by the vertical partitions 10 and 11 into four compartments as is clearly shown in Fig. 2, although it is to be understood that the number of compartments into which the cabinet is divided is not an essential feature. The compartments 12 however are preferably of a size to snugly receive a column of sugar units 13, which can be conveniently placed into said compartments, subsequent to the opening or removal of the closure 14 for each compartment. In this particular instance, the closure for each compartment consists of a glass panel mounted for vertical sliding movement in suitable guides 15, and obviously by removing this panel the compartment can be quickly and easily loaded with sugar units of the ordinary well known configuration. The cabinet however can be provided with any other suitable type of closure to permit ready access to be had to the cabinet as the occasion may require. The cabinet A is preferably arranged upon a base 16, which latter is supported from the surface by means of the spherical members 17. The base and members 17 as a unit may be dispensed with if desired.

Each compartment is provided with a pivotally mounted bottom 18 for supporting the column of sugar units 13, and secured to each bottom is a leaf spring 19 which has one extremity freely engaging the partition 10, whereby the bottom 18 under the influence of the spring 19, is normally held in horizontal position. The bottom 18 is arranged an appreciable distance above the base 16, or the bottom of the cabinet A, while the closures 14 rest against the bottoms 18 when the latter are in their normal

horizontal position. Manifestly the space between the bottom 18 of each compartment and the lower end of the cabinet permits the bottom to assume an inclined position for the purpose of singly discharging the sugar units from the cabinet through the space above mentioned. The active position of one of the bottoms 18 for this purpose is clearly illustrated in Fig. 1. It is of course understood that the sugar units are singly discharged from the cabinet as use is desired, one sugar unit being discharged with each tilting movement of the bottom 18.

As above stated the cabinet A embodies the spaced walls 20 and 21 respectively, and the means for controlling the movement of the bottom 18 to an active or discharge position is disposed within the space between these walls. It might here be stated that the bottom 18 of each compartment is provided with an operating means, whereby the bottoms 18 are independently operable. The means for tilting the bottom to an active or discharge position, preferably consists of an actuating arm 22 mounted in suitable guides 23 for vertical sliding movement in the space between the walls 20 and 21 of the cabinet, while projecting at a right angle from the arm 22 through an elongated slot 24 in the wall 21 is an extension 25 which supports a push button 26 disposed exteriorly of the cabinet, and through the instrumentality of which the arm can be easily pushed downward to tilt the bottom in a manner to be presently described. A retractile spring 27 has one end secured to the cabinet and its opposite end secured to the upper extremity of the arm 22, and functions to normally maintain the arm elevated. The extension 25 by reason of its engagement with the upper end of the slot 24 serves to limit the adjustment of the arm in one direction under the influence of the spring 27. The lower or opposite extremity of the arm 22 is reduced as at 28, and normally occupies a position immediately above a pin 29 projecting laterally from the bottom 18. In other words a pin 29 is disposed in the path of movement of the arm 22, so that when the arm is depressed, the reduced extremity 28 engages the pin 29 for the purpose of tilting the bottom 18 to its discharge position as clearly shown in Fig. 1. In this position of the bottom, the lowermost sugar unit, resting upon the bottom is partly projected from the cabinet and disposed in the space beneath the bottom, in which position it can be readily and easily grasped and extracted from the cabinet for use. If desired the parts can be properly disposed so that when the arm is depressed for the purpose of tilting the bottom, the lowermost sugar unit may slide completely off the bottom 18 upon the base 16 of the cabinet. Subsequent to the extraction of this particular sugar unit, and when pressure is removed from the push button 26, the spring 19 functions to automatically return the bottom 18 to normal position, while the spring 27 acts to return the arm 22 to elevated position.

With a view of preventing the fall of the column of sugar units, while the lowermost unit is being extracted, and which holding of the column is essential to permit the bottom to return to its normal position, I preferably make use of a plug 30 which is supported by the free end of a leaf spring 31, the opposite end of the latter being secured to the inner wall 20 of the cabinet at an appropriate location. The plug 30 coincides with an opening 32 in the inner wall 20, which opening is arranged at a point approximately central of the second lowermost sugar unit when the bottom 18 is in its normal position. The plug 30 is normally out of contact with the adjacent sugar unit, but is provided to enter the opening 32 to engage said unit when the actuating arm is depressed, for the purpose of supporting the column of sugar units immovable during the extraction of the lowermost unit. Manifestly the operation of the plug 30 must be controlled by the arm 22, in view of which fact the said arm is provided with a curved surface 33 where the reduced extremity of said arm merges into the arm proper. The free extremity of the leaf spring 31 is oppositely curved with respect to the curved surface 33, but disposed in close proximity to the latter in an obstructing position. Obviously as the arm 22 is depressed the free extremity of the spring 31 is displaced from its normal position, causing the plug 30 to enter the opening 32 to engage the adjacent sugar unit, and to support the column of units immovable. The curved surface 32 of the arm, and the curvature of the free extremity of the spring 31 prevents binding between these parts as will be readily understood. Now, when the arm 22 is returned to its normal elevated position, subsequent to the extraction of the lowermost sugar unit, from the cabinet, the spring 31 is relieved of the influence of the arm, at which time the spring 31 functions to remove the plug 30 out of engagement with the then lowermost sugar unit, which permits the column of units to fall upon the bottom 18, which by this time has also been returned to normal position under the influence of the spring 19. The apparatus is very simple in construction, capable of being easily manipulated, and is very efficient for the purpose intended.

In Figs. 7 to 9 inclusive I have disclosed a modified form of the invention wherein the cabinet A is by preference divided into two compartments 34 by a vertical partition 35. In this instance the compartments are of a size to snugly receive the sugar

units 36, while each compartment is provided with a sliding glass panel constituting a closure 37. The bottom 38 for each compartment is identical in construction with that disclosed in Fig. 5, and hereinabove described in connection with the preferred embodiment of the invention being mounted for pivotal movement to assume an inclined or discharge position. The bottom 38 of each compartment is normally maintained in a horizontal position to support the column of units 36 by a spring 39 connected with the rear wall 53. In this instance the actuating element for the bottom 38 is in the nature of a horizontally disposed lever 40 fulcrumed at an appropriate point in its length as at 41, the lever being normally disposed spaced above the bottom 38 in parallelism therewith. The lever 40 overlies a pin 42 projecting laterally from the bottom 38, which pin the lever is adapted to engage when the forward end of the lever is lowered, to cause the bottom to assume an inclined or discharge position. The lever 40 adjacent its forward extremity is provided with a laterally disposed extension 43 projecting through a curved slot 44 in the adjacent side wall of the casing, the extension supporting a push button 45 through the instrumentality of which the lever is actuated in one direction to cause the bottom to assume an inclined or discharge position.

Projecting laterally from the rear wall of the cabinet is a bracket arm 46 upon the free extremity of which is pivotally mounted a bell crank lever 47, one end of which lever carries a plug 48 coinciding with an opening 49 in the rear wall of the cabinet. The plug 48 is provided and thus arranged to enter the opening 49, and the lever 40 actuated to tilt the bottom, the plug in such instance being brought into engagement with the adjacent sugar unit to support the column of said units immovable, while the lowermost unit is being extracted from the cabinet. In carrying this idea into effect, I preferably make use of a curved leaf spring 50 which has one end secured to the rear extremity of the lever 40, while the opposite end of the spring bears against the adjacent extremity of the bell crank lever 47. Manifestly when the forward end of the lever is depressed, the opposite end is elevated, and consequently rocks the bell crank lever on its pivot with a resultant disposition of the plug 48 within the opening 49 for the purpose above mentioned. The spring 50 under such circumstances is also placed under tension, so that when the lever 40 is released, subsequent to the extraction of the sugar unit carried by the bottom, the spring 50 functions to automatically return the parts to normal position, except the bottom 38. The bottom is returned to its normal position under the influence of the spring 39, and by reason of the specific disposition of the parts, the spring 39 also assists the spring 50 in returning its related parts to normal position. The cabinet in this instance is provided with relatively wide side walls 51, and a downwardly inclined rear wall 52, which wall together with the rear wall 53 of the cabinet proper defines a compartment in which the operating mechanism is housed. Manifestly, I have devised an apparatus wherein sugar in large quantities may be contained, protected from dust and other foreign matter, and dispensed as its use is required, and thus eliminating objectionable unsanitary conditions in restaurants, cafés and the like, wherein people are forced to use the sugar which has been unduly handled by others.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent, I desire to have it understood that what is herein shown and described is not considered restrictive and that various changes in the construction and arrangement of parts may be resorted to when desired as fall within the scope of what is claimed.

What is claimed is:—

1. A sugar dispensing apparatus including a double-walled compartment, a pivoted bottom therefor, yieldable means normally holding the bottom horizontally for supporting a column of sugar units, a plunger operating in the space between said walls and cooperating with the bottom to tilt the latter when the plunger is depressed, thereby discharging the lowermost unit, one wall of the compartment having an opening, a plug normally disposed within the space between the walls and adapted to be engaged by said plunger at a predetermined interval to move said plug within the opening to support the column of units while one of said units is being discharged, means for operating said plunger and automatically returning the same to normal position subsequent to each operation, and means for removing the plug from said opening on return of the plunger to normal position.

2. A sugar dispensing apparatus embodying a double-walled compartment, a pivoted bottom therefor, a plunger arranged to reciprocate in the space between said walls, yieldable means normally holding the plunger elevated, said plunger coöperating with means on the bottom for tilting the latter to discharge the lowermost unit, when said plunger is depressed, means for depressing the plunger, one wall having an opening, a leaf spring secured to said wall, a plug carried by the spring and normally disposed in the space between said walls, said spring being engaged by the plunger when the latter is depressed, thereby moving said plug into

said opening to engage and support the column of units while the lowermost unit is being discharged, and said spring extracting the plug from said opening with the return of the plunger to normal position.

3. A sugar dispensing apparatus embodying a double-walled compartment, a pivoted bottom therefor, yieldable means normally holding the bottom horizontally for supporting a column of sugar units, a plunger arranged to slide between the walls, a spring normally holding the plunger elevated, a finger engaging element projecting through a slot in the wall whereby said plunger may be depressed, an extension projecting from said bottom in the path of movement of said plunger, and adapted to be engaged by the plunger when the latter is depressed whereby said bottom is tilted to discharge the lowermost unit, and means under the control of said plunger for supporting the said column immovable while the lowermost unit is being discharged.

4. A sugar dispensing apparatus embodying a base, a double walled compartment mounted upon the base, a pivoted bottom for said compartment and spaced from said base, a manually operable member operating in the space between said walls and adapted when depressed to tilt said bottom to discharge the lowermost sugar unit therefrom, an element adapted to support the column of units immovably while the lowermost unit is being discharged, said element being directly engaged by the manually operable member and moved into active position when said member is depressed, and means for automatically separating the element from the said column with the return of said manually operable member to normal position.

In testimony whereof I affix my signature.

OLAF NYBAK.