W. P. HAMMOND.

DISPENSING DEVICE.

APPLICATION FILED APR. 14, 1915.

1,191,995. Patented July 25, 1916.

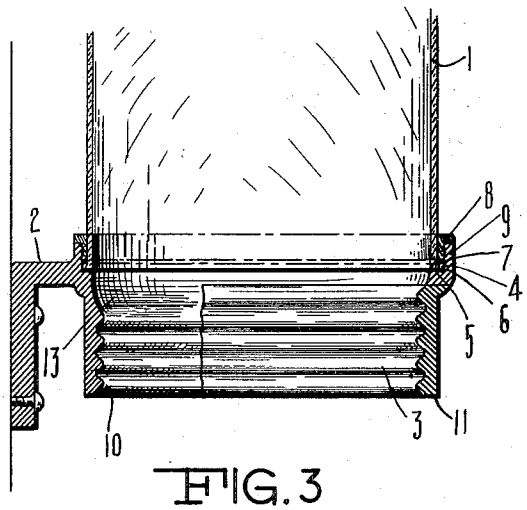


FIG. 3

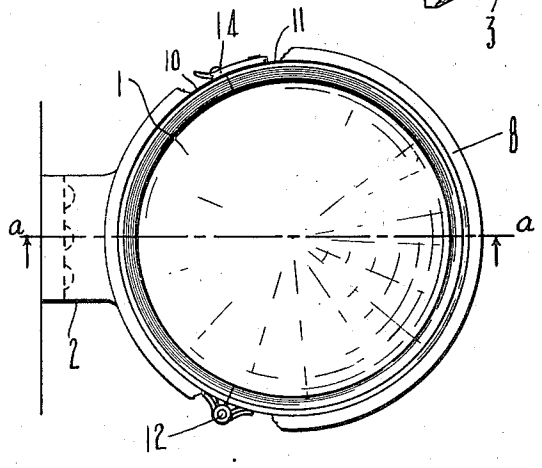


FIG. 2

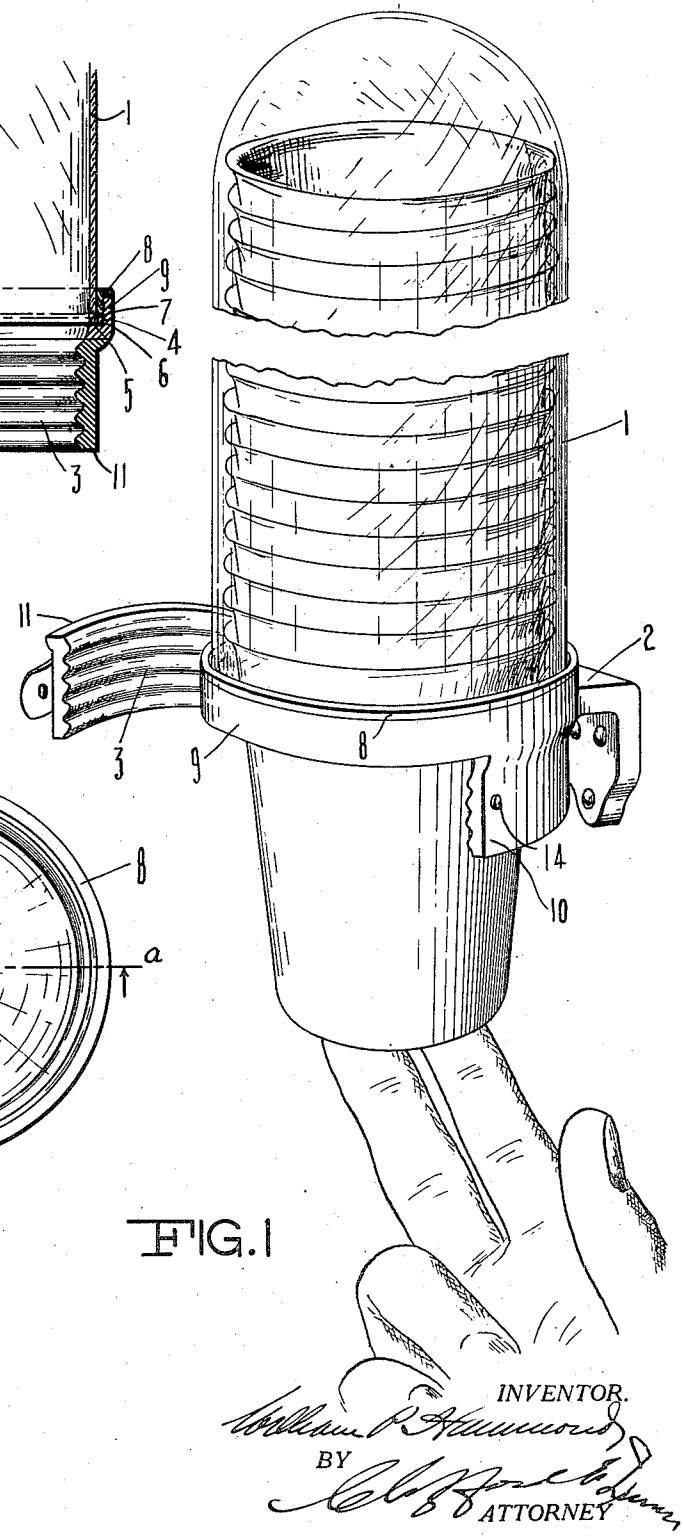


FIG. 1

INVENTOR.

William P. Hammond

BY

Chas. Howard Hopkins

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM P. HAMMOND, OF PASSAIC, NEW JERSEY, ASSIGNOR TO INDIVIDUAL DRINKING CUP COMPANY, OF NEW YORK, N. Y., A CORPORATION OF MAINE.

DISPENSING DEVICE.

1,191,995. Specification of Letters Patent. Patented July 25, 1916.

Application filed April 14, 1915. Serial No. 21,229.

To all whom it may concern:

Be it known that I, WILLIAM P. HAMMOND, a citizen of the United States, residing in Passaic, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Dispensing Devices, of which the following, taken in connection with the accompanying sheet of drawings, is a full, clear, and concise description thereof.

My present invention relates more particularly to dispensing devices that are used in connection with the storing and dispensing of paper drinking cups, and the object of my invention is to provide a device of this character which will house and maintain the cups in a strictly sanitary condition and permit the replenishing of the device with cups expeditiously without separating or removing the glass dome or container from its support, and the provision of cup sustaining means which is adapted to be moved from cup sustaining position to permit of the insertion of the nested stack of cups through the bottom of the device.

In the accompanying drawing, I have illustrated by way of example one preferable embodiment of my invention in which—Figure 1 is a view in perspective of a cup dispensing device made according to my invention, showing the cup sustaining means in inactive position, the device being replenished with a supply of cups. Fig. 2 is a top plan view of the device shown in Fig. 1 with the cup supporting means in supporting position. Fig. 3 is a cross-sectional view of the lower part of the device shown in Fig. 2 taken on line *a*—*a* of the latter figure.

The dispensing device consists essentially of a cup container or tube 1, closed at the top and preferably of dome shape, a bracket support 2 and cup supporting means 3. Broadly speaking, these essentials in a cup dispensing device are old, as shown for instance in the Luellen Patents Nos. 1,043,854 and 1,131,255, but in these old devices, so far as I am aware, the cup container has either been provided with a removable top or has itself been removably supported by a bracket in order to provide for the replenishing of the device with cups. As it is an important feature from a sanitary standpoint to have the container closed at the top, a glass container, dome shaped, of the character illustrated has been found to be the most desirable construction for the purpose, but these containing tubes, when made of glass and removably supported by the bracket, have had the drawback that there existed liability of breakage due to handling. In order to minimize the liability of such breakage, I mount the glass container in irremovable position with respect to the bracket support or at least provide means for firmly holding it to its support for the time being. This can be done in various ways, and I have chosen to illustrate the same as being clamped to the bracket. In the example shown I provide the end of the glass container tube 1 with an outwardly-directed flange 4, which is adapted to rest upon an internal circumferential shoulder 5 of the bracket support, having interposed therebetween a cushioning washer 6 as it is desirable to avoid the contact of glass and metal, particularly where a rigid clamping connection is desired as in the present instance. Superposed upon the flange 4 of the container 1, I mount another cushion washer of rubber or fibrous material 7. A clamping nut 8 having screw-threaded engagement with the upwardly-extending screw-threaded sleeve portion 9 of the bracket support 2 is used for clamping the tube to the bracket, as shown. Instead of using the clamping arrangement described, I may cement the tube to the bracket or otherwise fix it in place.

Any suitable cup-supporting means may be employed. I have, however, illustrated for the purpose of disclosure such a means 3 forming part of the bracket support. This means consists of a series of inwardly-directed corrugations or projections, the internal diameter of which is less than the maximum diameter of the contained cups, so that the terminal cup of the stack will be supported by the uppermost corrugation or corrugations and will be resisted in its passage upon the application of applied force by the lower corrugations so that, in this manner, a single cup may be withdrawn at a time.

In order to provide for the filling of the device with paper cups, it of course becomes necessary, as it is obvious from the above description, to movably mount or remove the cup-supporting means from operative position beneath the discharge and filling orifice of the device. To provide for this, in

the construction illustrated, I form a cup sustaining means in two differentially proportioned parts and hinge the two together by means of a spring hinge 12 so as to permit the larger segment of the cup sustaining device to be swung outwardly as shown in Fig. 1, and thus provide an enlarged and substantially unrestricted bottom opening, through which the nested stack of cups may freely pass when inserted in the device. In order to facilitate the entry of the cups, I omit from the stationary part of the supporting means one or more of the uppermost corrugations or projections, thus widening the opening at this zone of the device, as shown at 13 in Fig. 3. In filling the device the door portion 11 of the cup sustaining ring is opened and held open by one hand of the manipulator against the tension of the spring hinge 12, while the cups are inserted by the other hand, as shown in Fig. 1. The movable door part 1 is then released and under the tension of the spring hinge, it automatically assumes its closed or cup sustaining position, the spring catch 14 holding it in locked position. The cups are then permitted to descend until the lowermost cup or cups come into supporting engagement with the topmost corrugations or supporting projections 3 where they will be held in position to be individually dispensed as use requires.

While I have illustrated my device in connection with flanged paper cups, it is obvious that by the use of suitable cup supporting means unflanged paper cups may be dispensed therefrom to equal advantage.

In the above description and appended claims, where I have used the words "irremovable" or "normally irremovably" mounted, with reference to the coöperative arrangement of the cup reservoir and supporting bracket, I mean to convey the thought that these two parts are, during the normal use of the device, in fixed relation as the filling of the device is done from the bottom, and obviously it does not become necessary to separate the parts. The cup reservoir is preferably connected to the bracket by means which will readily permit the separation or removal of the glass reservoir for purpose of replacement in the event of accidental breakage.

I do not wish to be limited to the particular construction herein illustrated and described as a convenient and useful embodiment of my invention, but desire to cover the principle of my invention broadly in whatever form it may be embodied.

Having thus described my invention, what I claim as new herein and desire to secure by Letters Patent is:—

1. In a dispenser of the character described, the combination of a support, a cup container closed at the top and irremovably connected with said support, cup sustaining means operably associated with said support and means whereby said cup supporting means may be moved into non-supporting position to permit the insertion of cups into the container.

2. In a cup dispenser of the character described, the combination with a support provided with circumferentially arranged cup supporting means, said cup-supporting means being adapted to engage the cup to be dispensed at a zone near its greatest diameter and support the same in delivery position, a cup reservoir permanently closed at its top and irremovably supported in substantially vertical position by the cup supporting means, and means for rendering inactive the cup supporting means to permit the filling of the device with cups.

3. In a cup dispensing apparatus, the combination with a support, of a cup reservoir closed at the top and irremovably connected to the support, said support having a movable part adapted to be moved to permit the filling of the reservoir with cups.

4. In a cup dispensing device, the combination of a cup receiving reservoir and a cup supporting means having a delivery opening therethrough and having a plurality of inwardly projecting ribs surrounding said opening, portions of said ribs being movably mounted to permit cups to be received in the cup receiving reservoir, a cup dispensing member having an opening therethrough and having a plurality of inwardly projecting cup supporting ribs surrounding said opening, portions of said ribs being movable to permit the cups to freely pass through said opening.

5. In a cup dispensing device, the combination of cup supporting means comprising a plurality of vertically-spaced inwardly extending ribs, adapted to support a stack of cups, the maximum diameter of which is slightly greater than the inner diameter of said ribs, and means for moving portions of said ribs to permit the cups to pass the same without contact therewith.

6. In a cup dispensing device, the combination of a cup support, provided with vertically-spaced angular ribs projecting inwardly from the inner surface thereof, a cup reservoir normally closed at the upper end and normally irremovably fastened to the cup support and means for rendering said ribs non cup-supporting so that cups may be inserted into the reservoir.

7. In a cup dispensing device, the combination of a supporting device for a stack of nested cups, permitting the withdrawal of the cups individually through an orifice therein through which a portion of the terminal cup is adapted to project, said cup supporting device having a plurality of vertically-spaced cup engaging portions about

said orifice and adapted to engage the terminal cup, and means for moving portions of the cup engaging portions to non-cup-supporting position to permit the cups to pass into the reservoir.

8. In a cup dispensing device, the combination of a cup reservoir, a support therefor and a two-part cup supporting means, one part of said cup supporting means being movable to a non-supporting position to permit the cups to freely pass into the cup reservoir.

9. In a cup dispensing device, a cup reservoir normally closed at the top, a supporting ring therefor surrounding the dispensing orifice, cup sustaining means carried by the ring and means for moving a section of the ring to inoperative position.

10. In a cup dispenser, the combination of a cup reservoir, a support therefor provided with a dispensing orifice, cup gripping means and means for moving the gripping means into inoperative position to permit the unobstructed insertion of cups within the reservoir.

In witness whereof I have hereunto set my hand.

WILLIAM P. HAMMOND.