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M. C. RESEK
DISPENSING DEVICE
Filed Dec. 6, 1920

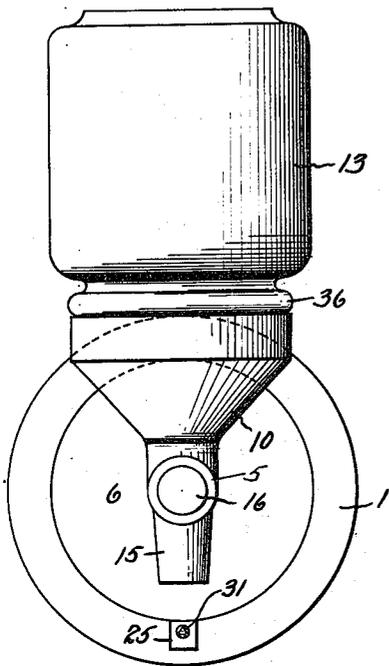


Fig. 1

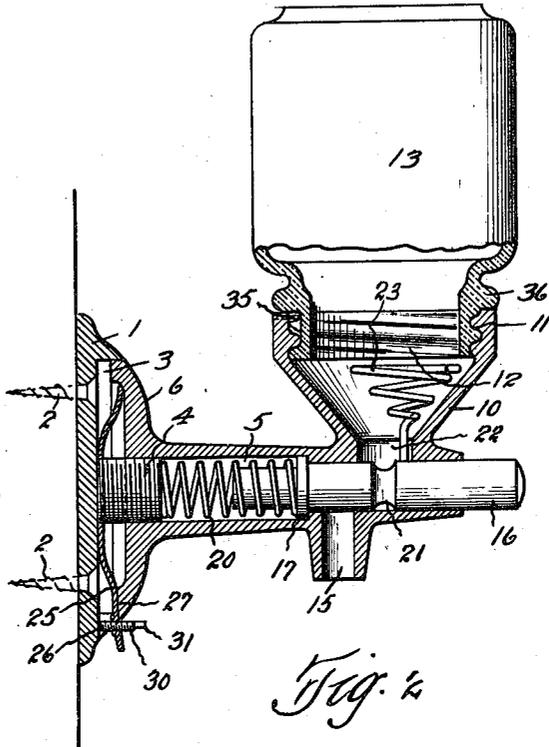


Fig. 2

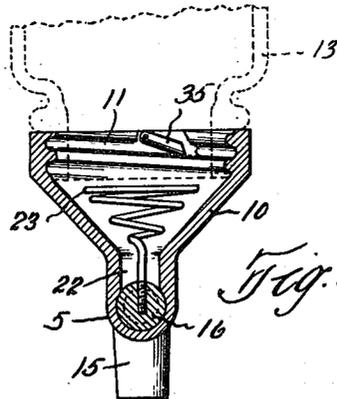


Fig. 3

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UNITED STATES PATENT OFFICE.

MORRIS C. RESEK, OF CLEVELAND, HEIGHTS, OHIO.

DISPENSING DEVICE.

Application filed December 6, 1920. Serial No. 428,470.

To all whom it may concern:

Be it known that I, MORRIS C. RESEK, a citizen of the United States, residing at Cleveland Heights, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Dispensing Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to a device for dispensing toilet compounds in powdered form, such as soap, shaving powder, tooth powder, or other commodities of like nature which it is desired to deliver in limited or given quantities.

The objects of the invention are to provide a neat and compact device that may be readily attached to a wall or other supporting surface and which is particularly convenient of use; which is positive of operation; and into which a fresh supply of material may be easily introduced.

It is my present intention to promote the use of my device for the dispensing of powdered shaving soap particularly, and to place the device in homes and hotels, the soap is to be supplied in containers which fit into and constitute a part of the device and which may be purchased by the user on the open market. When the device is used in public washrooms or hotel bathrooms, it is especially desirable to incorporate means which will prevent the soap container from being removed from the device except by authorized persons.

It is a further object of my invention, therefore, to include in the device means for locking the container against removal.

To facilitate the attachment of the container to the device without danger of spilling the contents, I propose to so construct the device that it may be inverted, the container attached to the device when the container is in upright position, and then the device returned to its former position to invert the container; and to the end of locking the container against withdrawal from the device I preferably employ an automatic means which assumes effective position when the container is inverted. I further provide means for locking the device against inversion so that the receptacle cannot be returned to upright position,

which latter means is under the control of a key or similar instrument.

To these ends my invention may be defined generally as consisting of the combination and arrangement of parts set forth in the claims annexed hereto and illustrated in the drawing accompanying and forming a part hereof and wherein similar reference characters designate corresponding parts throughout the views.

In the drawing, Fig. 1 is a front view of the device; Fig. 2 is a central vertical section through the same; and Fig. 3 is a transverse vertical section substantially on the center line of the hopper, the receptacle or container being omitted to reveal the means for locking the container against removal.

A base 1 is adapted to be attached to a wall or other supporting surface by means of screws 2, and the front of the base is provided with a circular cavity 3 in the center of which is situated a threaded stud 4 that is preferably formed integral with the base. A sleeve member 5 is internally threaded at its rear end for application to the stud 4 and has a circular flange 6 that fits within the recess 3 of the base and conceals the screws 2. A conical shaped hopper 10 rises from the forward end of the sleeve member 5 and at its upper end is provided with an internal thread 11 for cooperation with the threads 12 on the neck of a suitable receptacle or container 13. This container is preferably in the form of a bottle, and when not used as a part of the dispensing device may be closed by a suitable screw cap of ordinary form (not shown). Somewhat to the rear of the vertical plane of the hopper 10, a spout 15 depends from the sleeve member 5, and a plunger 16 occupies the reduced forward end of the bore of said member. A collar 17 of the plunger is arranged to engage the shoulder that separates the enlarged portion from the reduced portion of the bore of member 5 to limit the forward movement of the plunger, and a spring 20 that is interposed between the collar 17 and the front face of the stud 4 tends to retain the plunger forwardly. When the plunger is in its forward position, an annular groove 21 thereof registers with the outlet opening 22 of the hopper 10 and receives a quantity of material therefrom; and when the plunger is pushed rearwardly

against the action of spring 20, the groove 21 is brought into register with the spout 15 so that the aforesaid quantity of material may drop through the spout. To prevent
 5 the material from clogging or arching within the converging end of the hopper, I provide an agitator 23 which projects upwardly from the plunger 16 and occupies a position inside the hopper. This agitator is reciprocated upon each actuation of the plunger 16,
 10 and, in the present instance, it consists of an inverted conical spiral spring.

For the purpose of retaining the member 5 in a position to hold the hopper 10 upright, as illustrated in the drawings, I provide a spring latch 25 which is in the nature of a leaf spring that is supported upon the stud 4 and the lower end of which protrudes through a notch 26 in the flange
 20 which surrounds the cavity 3. The flange 6 of the member 5 is also provided with a notch 27 which is occupied by the spring latch 25 when the parts are in operative relation. I have shown a screw 30 threaded
 25 through the lower end of the spring latch and as bearing against the adjacent part of the base 1 so that the latch may be held against retraction from the notch 27 of the flange 6 except when the screw is sufficiently
 30 withdrawn from the latch to admit of such action. The head of the screw is preferably made in some special form, as triangular in cross section as indicated at 31, for the application of a key or the like.

As will be seen upon reference to Fig. 3, a gravity pawl or latch 35 is pivoted within the threaded portion of the hopper 10, and when the member 5 is turned upon the stud 4 and the hopper inverted, the gravity pawl
 40 or latch drops into alignment with a thread of the hopper. When in this position, therefore, a receptacle 13 may be screwed into the hopper, and when it assumes its final position therein the rear end of the
 45 thread on the neck of the container passes beyond the latch 35 so that when the hopper is returned to upright position and the container is inverted above the hopper so as to deliver its contents to the hopper, the
 50 latch 35 drops behind the end of the thread and prevents the receptacle from being unscrewed.

The operation of the device is obvious. When it is desired to substitute a full receptacle or container for an empty one, the
 55 screw 31 is retracted sufficiently to permit the spring latch 25 to be disengaged from the notch of the flange 6 and the member 5 is rotated about the stud 4 through substantially 180° to invert the hopper. In this
 60 position the gravity pawl or latch 35 drops to ineffective position and the empty container may be unscrewed from the hopper. A new container, from which the cover has
 65 been removed, is inserted in the hopper and

the member 5 is returned to its former position when the spring latch 25 will snap into the notch 27 of the flange 6. The spring latch is then locked in this position by "setting down" on the screw 31.

Having thus described my invention, what I claim is:

1. In a dispensing device of the character set forth, the combination of an invertible support, a container removably supported
 75 thereby, and a lock for securing the container against removal from the support when the support is in normal position, said lock being rendered ineffective by the inversion of the support.

2. In a dispensing device of the character set forth, the combination of an invertible support, a container removably supported
 80 thereby, and a lock that is automatically rendered effective by the placement of the support in normal position for locking the container against removal from the support.

3. In a dispensing device of the character set forth, the combination of an invertible support, a container removably supported
 85 thereby, a lock that is automatically rendered effective by the placement of the support in normal position for locking the container against removal from the support, and means for locking the support in normal
 90 position.

4. In a dispensing device of the character set forth, the combination of a base, a support rotatably sustained thereby, and involving a hopper, means for locking the
 95 support to the base with the hopper in upright position, a container removably applied to the hopper, and means for locking the container against removal from the hopper, said means being rendered effective by the rotation of the aforesaid support to bring the hopper to upright position.

5. In a dispensing device of the character set forth, the combination of a base, a support rotatably sustained thereby and involving a hopper, means for locking the support
 100 to the base with the hopper in upright position, a container removably applied to the hopper, means for locking the container against removal from the hopper, said means being rendered effective by the rotation of the aforesaid support to bring the hopper to upright position, and valve mechanism incorporated in the support for controlling the dispensation of material from the hopper.
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6. In a dispensing device of the character set forth, the combination of a base, a support rotatably sustained thereby and involving a hopper, an automatic spring latch for
 110 holding the support against angular movement with respect to the base when the hopper is in upright position, a container removably applied to the hopper, and means for locking the container against removal
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from the hopper, said means being effective only when the hopper is in upright position, and valve mechanism incorporated in the support for controlling the dispensation of material from the hopper.

7. In a dispensing device of the character set forth, the combination of a base, a support rotatably sustained thereby and involving a hopper, a spring latch for holding the support against angular movement with respect to the base when the hopper is in upright position, means for locking the latch against being actuated, a container removably applied to the hopper, and means for locking the container against removal from the hopper, said means being effective when the hopper is in upright position, and valve mechanism incorporated in the support for controlling the dispensation of material from the hopper.

8. In a dispensing device of the character set forth, the combination of a sleeve member, a container arranged to be applied to said member in communication with the bore thereof, the member having an outlet which communicates with said bore at a point spaced longitudinally of the member from the point at which the container communicates therewith, a plunger reciprocable within the bore and having a part for transferring material from the container to the outlet opening, and an agitator in the form of an inverted conical shaped spiral spring carried by the plunger in operative relation to the container and capable of vibration upon actuation of the plunger.

9. In a dispensing device of the character set forth, the combination of a base having a circular recess and a threaded stud projecting centrally therefrom, means passing through the base within the area of the recess for securing the base to a supporting surface, a sleeve member internally threaded at one end for application to the aforesaid

stud and having a part closing the recess of the base, said member including a hopper that communicates with the bore of the member in one plane and a spout which communicates with said bore in a plane spaced longitudinally of said member from the former plane, a plunger reciprocable within the bore of the member and having a part for transferring material from the hopper to the spout, a container adapted to be applied to the hopper, and a spring latch interposed between the base and said member, said member having a part wherewith the spring latch engages for holding the member against rotation upon the stud.

10. In a dispensing device of the character set forth, the combination of a base having a circular recess and a threaded stud projecting centrally therefrom, means passing through the base within the area of the recess for securing the base to a supporting surface, a sleeve member internally threaded at one end for application to the aforesaid stud and having a part closing the recess of the base, said member including a hopper that communicates with the bore of the member in one plane and a spout which communicates with said bore in a plane spaced longitudinally of said member from the former plane, a plunger reciprocable within the bore of the member and having a part for transferring material from the hopper to the spout, a container adapted to be applied to the hopper, a spring latch interposed between the base and said member, said member having a part wherewith the spring latch engages for holding the member against rotation upon the stud, and an agitator carried by the plunger and projecting into the hopper.

In testimony whereof, I hereunto affix my signature.

MORRIS C. RESEK.