Oct. 31, 1944. C. A. STINE 2,361,663

DISPENSING DEVICE

Filed Dec. 28, 1942

Fig. 1.

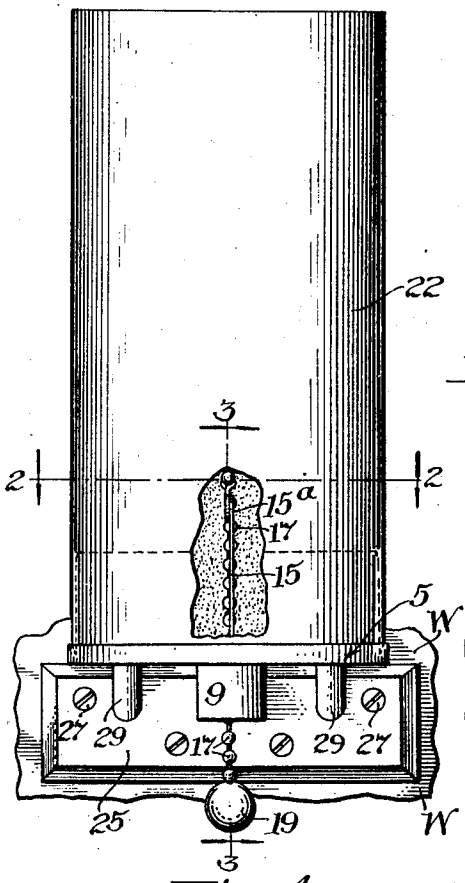



Fig. 2.

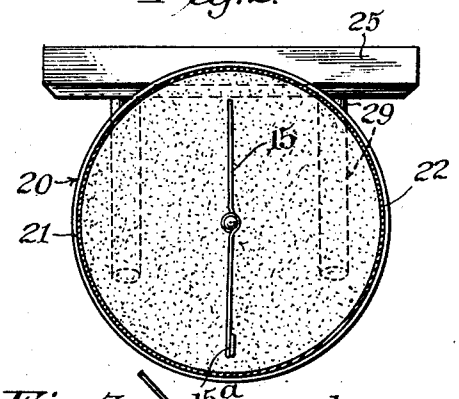



Fig. 3.

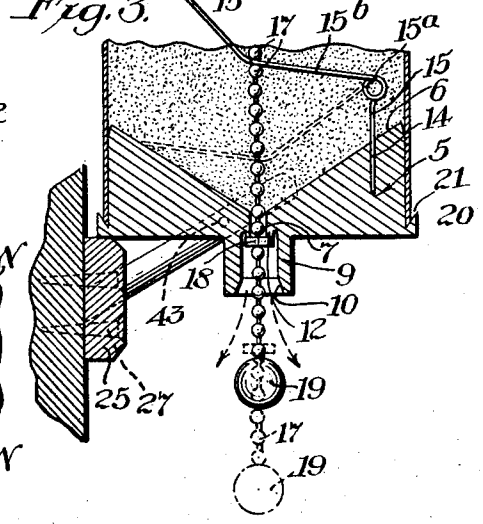



Fig. 4.

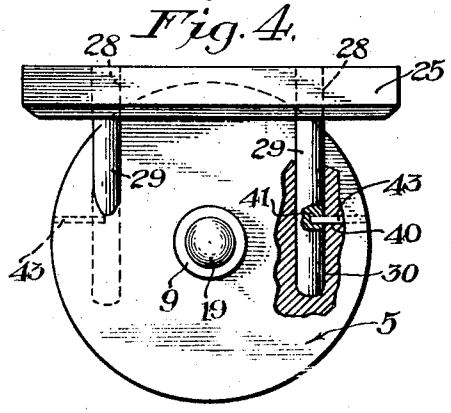
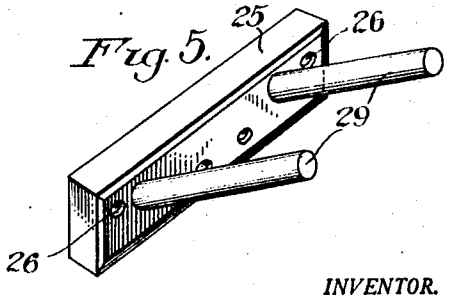



Fig. 5.




INVENTOR.
Carl A. Stine,
BY
Attorney.

Patented Oct. 31, 1944

2,361,663

# UNITED STATES PATENT OFFICE

2,361,663

## DISPENSING DEVICE

Carl A. Stine, Van Nuys, Calif., assignor to Turco Products, Inc., Los Angeles, Calif., a corporation of California

Application December 28, 1942, Serial No. 470,387

2 Claims. (Cl. 222—230)

My invention has to do with dispensers and, in its more particular aspects, relates to devices peculiarly adaptable for dispensing pulverulent material such as powdered soaps and the like, although the invention is by no means limited to such use.

Among its principal objects I aim to produce a dispenser which is extremely economical of manufacture and which at the same time is highly efficient and durable.

It is also among the objects of my invention to provide a dispenser which has a base portion to be stationarily mounted at the place of use while the container in which the product to be dispensed is sold may be used as the container element of the dispensing device and may be readily applied to the base in a manner to seal the container against leakage and exposure of its contents.

Another object is the provision of a dispenser in which the parts in contact with the material are effectively shielded against becoming wetted.

Another object is to provide, in such a device, a simple and effective material agitating means.

Another object is the provision of a dispenser which may be locked in position.

Still further advantages are to be derived from my invention and how those as well as the objects hereinabove enumerated are attained will become clear from the following detailed description of one specific form of device in which the invention may be carried out, for which purpose I shall refer to the accompanying drawing, in which:

Fig. 1 is a front elevation, a part being broken away for illustrative purposes;

Fig. 2 is a section taken on line 2—2 of Fig. 1;

Fig. 3 is a vertical section taken on line 3—3 of Fig. 1;

Fig. 4 is a bottom plan view, a part being shown in section; and

Fig. 5 is a perspective of the bracket element.

In the drawing, the numeral 5 denotes the base having a conical hopper portion 6 with a dispensing orifice 7 through the center, whose outlet end communicates with a surrounding neck 9 whose purpose will be described. The bore of neck 9 flares outwardly at and adjacent its lower end 10, said bore being of larger diameter than orifice 7 whereby to provide a shoulder 12 of somewhat rounded cross-section.

In a hole 14 in the base I mount one leg of a spring member 15, which spring member has a coil 15a and terminates in a relatively long leg 15b. Leg 15b is looped about the inner end of a ball chain 17, whose balls are of a diameter to be passable through but to rather snugly fit the orifice 7 in the manner more particularly described and claimed in the copending application of Vern O. Ring, Serial Number 347,333, filed July 24, 1940, which application matured into Patent No. 2,312,730. A closure disc 18 is mounted on the chain at a point spaced from the outer end of the chain, in position to engage shoulder 12 to effectively seal the outlet end of the orifice 7 when the device is not being used. The outer end of the chain 17 extends through neck 9 and carries at its outer end a ball 19 to be used as a pull element.

Around base 5 I provide an annular flange 20 whose top surface is provided with an annular groove 21 of somewhat V cross-section. A container 22, which may be taken as typical, for instance, of a cardboard container of soap powder or the like in which the product is sold by the manufacturer, is detachably mounted on the base by being inverted and having its open end fitted over the base 5 with its peripheral edge wedged in the V groove 21. Cardboard being a relatively easily compressible material, the peripheral edge of the cardboard container readily becomes compressed between the V-walls of the groove to provide an effective peripheral seal.

For mounting the dispenser on a wall W or the like I provide a wall plate 25 which has holes 26 for securing the plate to the wall, as by means of screws 27. I also provide a pair of diagonal holes 28 in the plate in which I mount a pair of diagonally upwardly and outwardly disposed pins 29 which detachably fit into corresponding diagonally disposed holes 30 in the base 5, said holes opening through the bottom of the base. This bracket mounting structure renders it feasible to employ wooden pins 29 since, in this combination, they are capable of supporting all the necessary weight as well as withstanding all the ordinary stresses to which the dispenser is subjected in use. In fact, it is feasible to make the entire base and bracket structure of wood or the like.

To lock the base on the bracket, I provide a pair of transverse holes 40 in the base and registering holes 41, one in each of the pins 29, and insert in each pair of registering holes a pin 43. These pins prevent the base from being removed from the pins 29 and, inasmuch as the outer ends of the pins 43 are covered by the side wall of the container 22, they are effectively concealed and would be inaccessible unless the container were removed. Thus the container 22 could not be removed from the base without spilling the con-

tents inasmuch as, in order to remove the filled container without spilling its contents, it is necessary to first detach the base from the bracket and then reverse the container end for end until the base is at the top thereof.

Assuming the device to be used as a soap dispenser over a wash basin or the like, the user, with the palm of his hand facing upwardly, grasps the outer end of the chain immediately above the ball 19 between the fingers and pulls downwardly against the pressure of spring 15, during which operation the ball chain 17 drags sufficient of the powdered soap from the container through orifice 7 and neck 9, it dropping onto the hand of the user. Release of the chain permits the spring to return the chain to normal position, with the disc 18 engaging shoulder 12 to seal the outlet. The movement of the spring arm 15b during those operations serves effectively to agitate the powder adjacent the discharge orifice and also, during the dispensing operation, the outer end of the arm 15b will abut the surface 6 of the base (dash line position of Fig. 2) and act as a stop to prevent further outward movement of the chain.

The neck 9 serves the highly useful purpose of preventing any part of the chain which might enter the orifice 7 from being wetted by the hand of the user since the neck is preferably substantially as long as the length of travel of the chain during the dispensing operation so that at no time does the wetted hand of the user contact that portion of the chain which enters the orifice. The flare 10 of the neck 9 is provided to facilitate re-entrance of the disc 18 into the neck.

Within its broader scope as defined by the appended claims, the invention is susceptible of being carried out in other specific forms of device and I therefore do not wish to be limited to the specific details hereinabove described except to the extent that some of the claims may recite those specific details.

I claim:

1. A device for dispensing granular material comprising a container having a base, a dispensing orifice through the base, a dredge chain extending from inside to outside of the container through the orifice and means for resiliently mounting the inner end of the chain, including a spring element having one leg secured to the base and an opposed leg secured to the inner end of the chain, the outer end of the last-mentioned spring leg being of a length and shape to contact the base upon movement of the chain outwardly through the orifice whereby to halt further outward movement of the chain.

2. A device for dispensing granular material comprising, in combination, a base, a container resting on and separable from the base, a dispensing orifice through the base, a dredge member extending through the orifice, and means for resiliently supporting the inner end of the dredge member independently of the container, including a spring having one leg secured to the base and a second leg disposed in position overhanging the orifice, the inner end of the dredge member being secured to the second leg.

CARL A. STINE.