Dec. 15, 1931. O. H. LAWRENCE 1,836,537

POWDERED SOAP DISPENSER

Filed Jan. 23, 1930

Fig. 1.

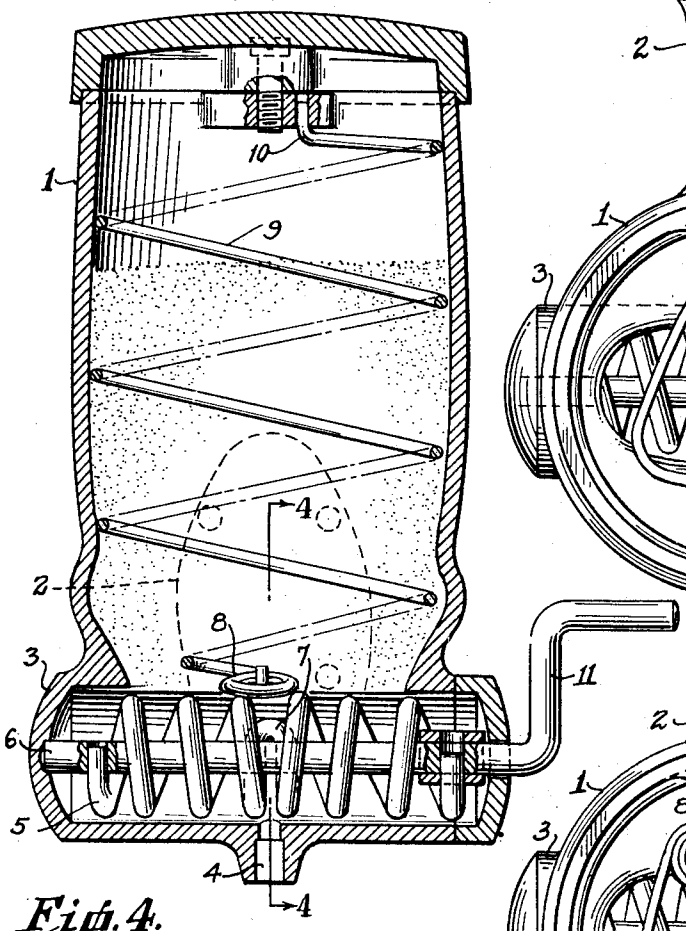


Fig. 2.

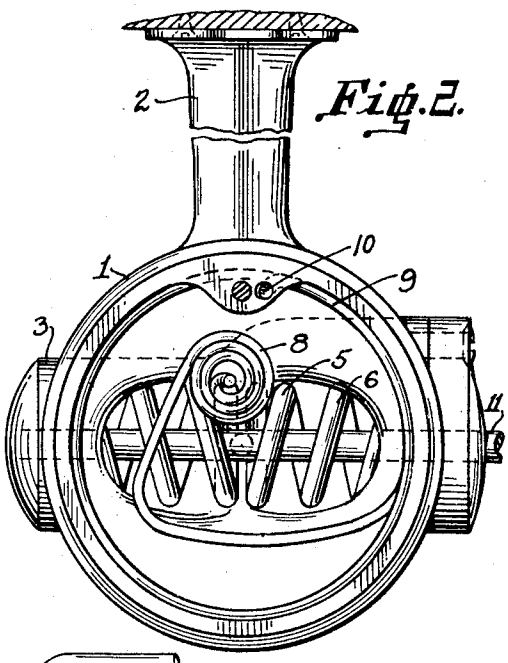


Fig. 3.

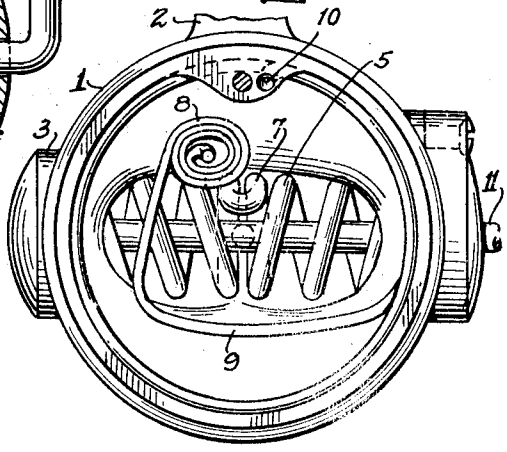
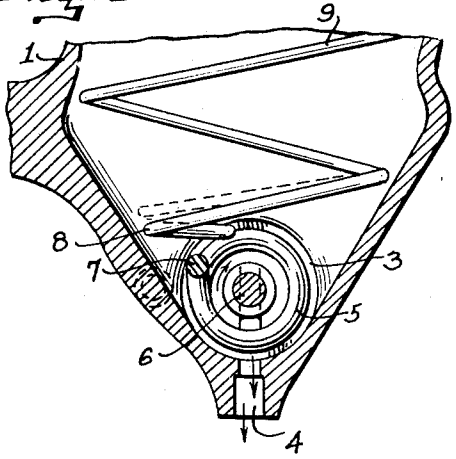


Fig. 4.



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UNITED STATES PATENT OFFICE

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POWDERED SOAP DISPENSER

Application filed January 23, 1930. Serial No. 422,885.

My invention relates to improvements in dispensers for powdered soap. Heretofore, considerable difficulty has been experienced in satisfactorily and uniformly dispensing powdered soap for containers, due to the condition of the powder brought about by the nature of the soap itself and atmospheric conditions.

With my invention, I have provided a practical and simple mechanism for uniformly and continuously discharging the powdered soap from the container and avoiding all possibility of clogging.

In the accompanying drawings:

Figure 1 is a vertical section of my improved soap dispenser, showing the conveyor for the soap and the agitating means.

Figure 2 is a top plan view of the dispenser with the cover removed, showing the agitator in one position in connection with the conveyor.

Figure 3 is a top plan view of the dispenser with the cover removed and showing the agitator in a different position with relation to the conveyor.

Figure 4 is a vertical section through the line 4—4 of Figure 1.

1 in the drawings represents the container which is provided with a means 2 for attaching it to any suitable support. The container is provided at its lower end with a horizontally arranged housing 3 and a discharge opening 4 for the powdered soap.

Arranged within the housing 3 is a spiral conveyor 5 which extends practically the full length of the housing and is formed by securing a piece of wire at its ends adjacent the ends of a shaft 6 and so arranged as to feed the powdered soap in opposite directions toward the center of the container and directly over the discharge opening 4. The wire constituting the conveyor terminates in a free loop 7 at the center of the conveyor and projects sufficiently to engage an agitator 8. The agitator 8 is formed preferably from a piece of resilient wire 9, which is secured at one end to the upper end of the container as at 10, in Figure 1, and bent into a coil which engages the inner walls of the container and terminates in the coil 8, which latter is engaged by the projecting striking loop end 7 of the conveyor 5.

The shaft of the conveyor is provided with a suitable crank handle 11 which extends outside of the conveyor, which when turned, operates the spirals of the conveyor toward the center and causes the striking end 7 of the conveyor to engage the enlarged or coil end of the agitator 8 and lift the same and impart a horizontal movement thereto and by reason of the shape of the conveyor and the striking end 7 thereof, the agitator 8 after being carried up and back a short distance, springs back into place and is in a position to be again lifted and carried back by the end 7 of the conveyor when the latter completes its revolution and is about to descend in the start of another circuit. By continuing the revolution of the handle 10, which is connected to or forms a part of the shaft of the conveyor, the powdered soap is continuously fed in opposite directions toward the center of the container and directly over the discharge opening 4 and at the same time the end of the agitator 8 is struck by the projecting end 7 of the conveyor and is lifted up and carried back and then released to give a quick agitating motion so as to always keep the lower body of the soap powder in motion and free to discharge through the opening 4 with no possibility of clogging.

While I have described the feed device as being formed of a coiled wire arranged spirally and secured at opposite ends to the rotating shaft, it may be formed by oppositely arranged blades and while I have shown and described the agitator as being formed of wire, arranged spirally along the inner wall of the container and secured at its upper end to the container and formed at its lower end into a coil designed to be struck by the conveyor for agitating the powder, the agitator might be formed somewhat differently without departing from the spirit of my invention which consists in arranging an agitator within the conveyor so as to be struck by a part of the conveyor and given a movement through the powdered soap above the discharge opening and adjacent thereto, while the soap is being forced from both sides to the center,

permitting the powder to back up through the coils, thereby preventing the possibility of choking.

Having now described my invention, what I claim is new and desire to secure by Letters Patent, is,

A dispenser for powdered soap and the like, comprising a container casing, a vertically reciprocable agitator in the casing, a restricted chamber below and in communication with the container, said lower chamber having a discharge opening disposed centrally of its bottom, a shaft extending horizontally through the lower chamber and having a crank arm disposed externally of the casing, a conveyor member consisting of a member secured by its ends to the shaft and bent intermediate said ends into oppositely disposed spirals surrounding the shaft said spirals joined centrally by a loop adapted to strike and reciprocate the agitator member.

In testimony whereof I affix my signature.

ORVILLE H. LAWRENCE.