No. 896,759. PATENTED AUG. 25, 1908.

H. ROBINSON.

MACHINE FOR DISTRIBUTING SOAP.

APPLICATION FILED FEB. 1, 1906. RENEWED JUNE 13, 1908.

Fig. 1.

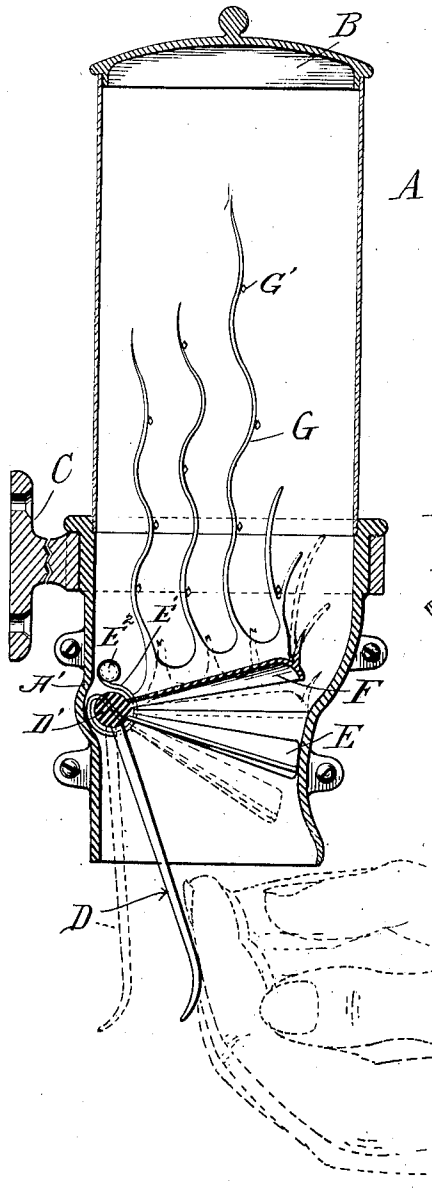


Fig. 3.

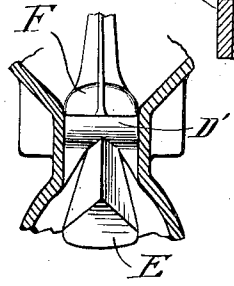
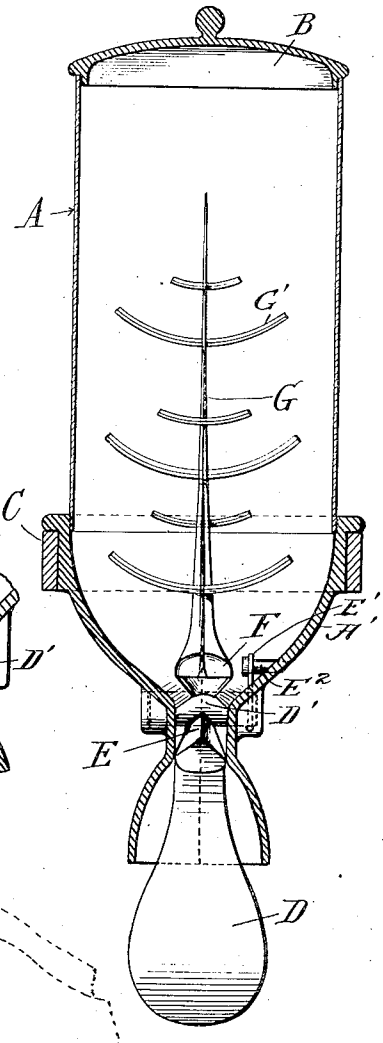


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY ROBINSON, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-THIRD TO HAROLD S. MACKAYE, OF YONKERS, NEW YORK.

MACHINE FOR DISTRIBUTING SOAP.

No. 896,759. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed February 1, 1906, Serial No. 299,057. Renewed June 13, 1908. Serial No. 438,411.

To all whom it may concern:

Be it known that I, HENRY ROBINSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Machines for Distributing Soap, of which the following is a specification.

My present invention relates to an improved soap dispensing apparatus for use on toilet basins and sinks particularly in hotels, railway stations and other public places where it is desired to avoid the indiscriminate use of cakes of soap by all sorts of people.

My improved device is adapted for use with either liquid or powdered soap. It acts automatically by merely presenting the hands to the device for reception of the soap and it insures delivery of a certain measured quantity of material at each operation.

In the drawings, Figure 1 is a median vertical section of the device seen from one side, Fig. 2 is a similar section taken at right angles to the view in Fig. 1 and seen from the front and Fig. 3 is an enlarged front elevation of a detail.

I use a casing, A, of any convenient shape, but preferably a sheet metal cylinder, as shown, which has a suitable cover. The casing A fits into a bottom casting A′, preferably made in two symmetrical halves, as indicated by the vertical dotted line in Fig. 2. This bottom piece is supported by any suitable device, as for instance by the bracket, C, adapted to be screwed to a wall or other support.

The depending operating lever D is preferably shaped as shown in the drawings, being fixed at its upper end to a short horizontal shaft D′ located in an appropriate chamber formed in the casting A′. In front of the shaft D′ and about on a level with it, the casting A′ forms a narrow outlet passage, preferably tapering which can be closed from below or above respectively by the two diverging valves E and F. These valves radiate at a suitable angle to each other from the shaft D′ to which they are fixed and with which they move. The lower valve E closes the lower end of the outlet passage normally as shown in Fig. 2, its diverging side edges fitting closely against the lower edges of said passage and being held in said position by tension of the spring E′ fixed at one end to any appropriate abutment E^2 and at the opposite end to the shaft D′. The upper surface of the valve E is preferably formed as shown with a double slope from a median line, so that the material falling from the passage above it shall not lodge on said valve.

When the hands of the user are brought together as shown in Fig. 1 and the backs of the fingers push back the lever D, the valves are depressed and the position shown in Fig. 3 and in dotted lines in Fig. 1 is produced. Here the top valve F descends until its two sharp sides closely fit into the top of the outlet passage, closing communication between said passage and the upper casing. At the same time the lower valve piece drops so as to open the outlet passage and allow its contents to drop into the users hands. While I do not confine myself to this precise construction, I find the use of an upper valve F with cutting edges which enter the outlet passage while tightly fitting the same an advantage. This is a particularly useful feature where powdered soap is used, as this material is apt to form small cakes which would prevent perfect closure if the valve were not adapted to cut through them. This top valve is preferably rounded and hollow underneath as shown, although this is not essential to my invention.

In order to adapt my device for use with powdered soap I prefer to supply an agitator whereby the caking of the soap will be counteracted and the easy falling of the powder will be promoted. This is not essential to my invention, particularly because the very principle of operation of my device involves lifting and consequent breaking up of the powder by the valve F each time the apparatus is used, and this is one of the advantageous novel features of this invention. Where the agitator is used, it preferably takes the form of a number of upwardly extending fingers G which are attached to the valve F. To these are preferably attached cross pieces G′ as shown. This agitator may be made of wire or other appropriate material and acts at once to lift and slice the material contained in the casing each time the valve F is lifted by pushing the lever D.

The preferred agitator above described has the advantage of a double movement within the mass of soap powder contained within

the casing, owing to the location of the said agitator on the top of a tilting valve. This causes the fingers to move longitudinally and transversely with relation to the casing at the same time.

It will be seen that my apparatus is very cheaply made, being constructed of a very few simple parts. These are first—the two half castings A' forming an upper bowl and a narrow outlet passage with two valve seats, there being also formed a side chanber to receive the valve-shaft; second the shaft and two attached valves which can be cast all in one piece, and third—the sheet metal casing preferably having a removable cover.

What I claim is—

1. A soap dispensing apparatus comprising a casing, a valve below the same, a revoluble horizontal shaft to which said valve is fixed and a depending lever also fixed to said shaft extending below the valve for operating the same, substantially as described.

2. A soap dispensing apparatus comprising a casing, an outlet passage beneath the same, two tilting valves at the top and bottom of said passage respectively and a mechanical connection between said valves outside of said passage for insuring their simultaneous operation, substantially as described.

3. A soap dispensing apparatus comprising a casing, an outlet passage beneath the same, a revoluble shaft at one side of said passage, two valves for said passage radiating from and fixed to said shaft and means for revolving said shaft back and forth, substantially as described.

4. A soap dispensing apparatus comprising a casing, an outlet passage beneath the same, a revoluble shaft at one side of said passage, a spring attached to said shaft tending to turn it in one direction, two valves for said passage radiating from and fixed to said shaft and means for revolving said shaft against the tendency of said spring, substantially as described.

5. A soap dispensing apparatus comprising a casing, an outlet passage, a revoluble shaft at one side of said passage, a tilting valve fixed to said shaft and arranged to command one end of said passage, a spring attached to said shaft and tending to keep said valve closed and means fixed to said shaft for operating said valve, substantially as described.

6. A soap dispensing apparatus comprising a casing an outlet passage below the same, a valve commanding said outlet and arranged to lift a portion of the contents of said casing whenever it is opened and an exterior means mechanically connected to said valve for its operation, substantially as described.

7. A soap dispensing apparatus comprising a casing, an outlet passage, a tilting valve commanding said outlet and arranged to lift a portion of the contents of said casing whenever it is opened and an exterior means mechanically connected to said valve for its operation, substantially as described.

8. A soap dispensing apparatus comprising a casing, a tilting valve therefor, an agitator on said valve extending into the body of said casing and means for tilting said valve upward so as to cause active lifting action of the valve and agitator on the contents of the casing and simultaneous transverse slicing action of the agitator, substantially as described.

9. A soap dispensing apparatus comprising a casing, a tilting valve therefor, a number of fingers fixed to the top of said valve and extending upward into said casing and cross pieces on said fingers, substantially as described.

10. A soap dispensing apparatus comprising a casing, an outlet passage beneath the same, a tilting valve having shearing edges adapted to extend partly into said passage, and a pivoted support for said valve; all so constructed and arranged that, as the valve tilts in closing, the shearing edges pass into the outlet passage first nearer the pivoted support and afterward progressively outward from said support.

11. A soap dispensing apparatus comprising a casing, an outlet passage of long narrow cross section and a tilting valve pivoted at one side of said passage and having shearing edges adapted to extend partly into said passage, substantially as described.

12. A soap dispensing apparatus comprising a casing, an outlet passage beneath the same, and tilting valves for the upper and lower ends of said passage respectively, united for simultaneous action by connection outside of said passage.

13. A soap dispensing apparatus comprising a casing, an outlet passage beneath the same, a revoluble shaft at one side of said passage, a depending operating lever fixed to said shaft and two diverging valves fixed to said shaft, the upper valve having a shearing edge and the lower valve having a sloping top surface, substantially as described.

14. A soap dispensing apparatus comprising a lower casting made in two symmetrical halves forming an upper bowl narrowing to an outlet passage with a chamber near one side of said passage and a second piece comprising a shaft fitting in said chamber and two valves attached thereto, substantially as described.

15. A soap dispensing apparatus comprising a lower casting made in two symmetrical halves forming an upper bowl narrowing to an outlet passage with two valve seats and with a chamber near one side of said passage, a second piece comprising a shaft fitting in said chamber and two valves attached there-

to, a spring in said chamber attached to said shaft and a sheet metal casing fitting said upper bowl, substantially as described.

16. In a soap dispensing apparatus, means for controlling discharge of the soap comprising a shaft, an operating lever and two valve members said lever and valve members projecting at right angles from said shaft and making angles with each other, substantially as described.

17. In a soap dispensing apparatus a casing, a valve seat beneath it, a valve therefor and an agitator within the casing mechanically connected to said valve so as to have simultaneous longitudinal and transverse movement within the casing when said valve is operated, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY ROBINSON.

Witnesses:
T. F. KEHOE,
JAMES EDIAM.