

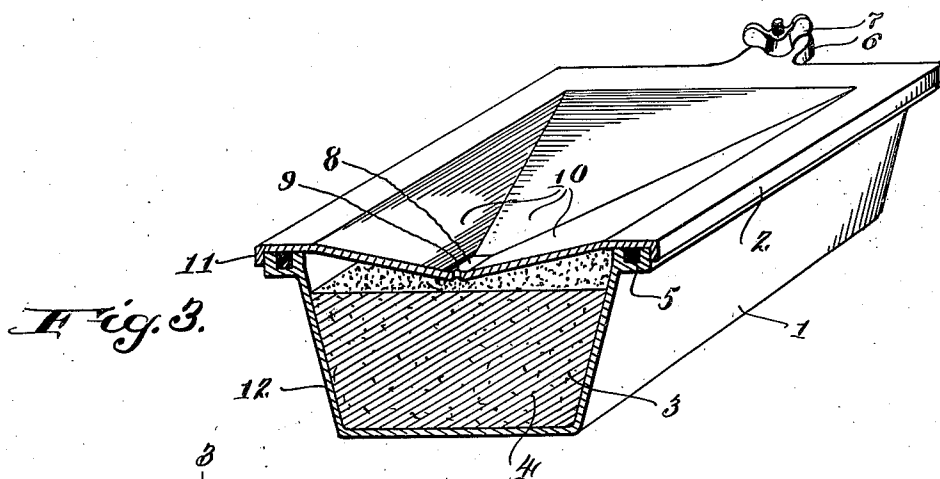
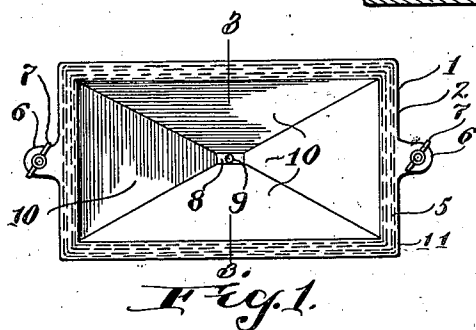
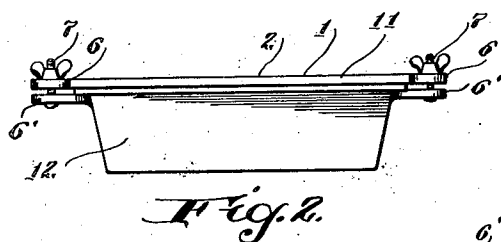
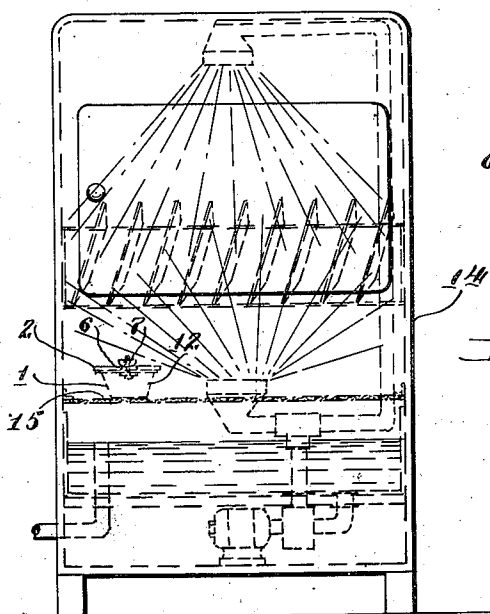
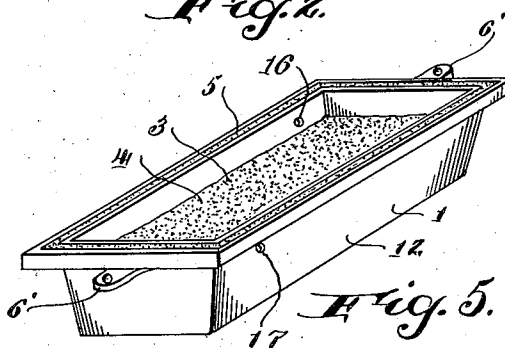
April 16, 1935.

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1,997,982

CLEANING AGENT CONTAINER

Filed May 23, 1930



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1,997,982

CLEANING AGENT CONTAINER

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Application May 23, 1930, Serial No. 455,010

4 Claims. (Cl. 141-9)

The present invention relates to an improvement in a cleaning material and its container having means for controlling the soluble effects of water thereon, that is particularly adaptable to use in machines for cleaning dishes in hotels and the like, where large quantities of dishes are constantly being washed, and where the strictest of economy is necessary. Of course it is understood that the present apparatus and invention is readily adaptable to any condition where it is necessary to use a cleaning material under circumstances where there is a certain amount of undulation or agitation of the water used in the cleaning process.

The use of various types of containers with a powdered cleaning agent therein is well known for purposes of being used in cleaning machines of the type described above—however it has been found that these various well known types are not economical to operate and the powdered cleansing agent is short lived. Now it is the purpose of the present invention to provide a suitably designed container having therein a cleansing agent in the form of a solid brick of cleaning material. The principal object is to provide a structure and cleaning agent that will have greater efficiency as a cleaning medium, be more economical to operate, and have longer effective operating life.

Another object of the present invention is to provide a container for a cleaning agent that will have means thereon for controlling the soluble effects of water on the cleaning material therein.

Still another object of the present invention is to provide a container as described above in combination with a cleansing agent therein, in the form of a solid piece of material.

With the above and other objects in view, the invention consists in the combination of parts, so designed, as to cooperate one with the other in creating the desired efficient action required in a structure of the type heretofore described.

In the drawing in which the preferred form has been illustrated,

Figure 1 is a plan view of the invention, disclosing the top structure of the container;

Figure 2 is a side elevation of the same;

Figure 3 is a sectional view, thrown into perspective for illustrative purposes, taken on the line 3-3 of Figure 1;

Figure 4 is a front elevational view of a machine for washing dishes and the like, disclosing the use of the present invention therein, the illustration as shown being somewhat diagrammatic; and,

Figure 5 is a perspective view of the present in-

vention, disclosing the container with the top removed therefrom and also illustrating a slightly modified form of structure.

In the accompanying drawing similar reference numerals indicate similar parts in the various views throughout the drawing.

In the drawing the invention as a whole consists of the container 1, having a concave top 2 thereon, the container having therein a soluble cleaning agent 3 in the form of a solid brick shaped member. This cleaning agent or material 3 may be impregnated throughout with either a substantially nonsoluble, or a very slowly soluble material 4, for purposes of preventing the cleaning agent from being washed away faster than the conditions require, thus giving longer effective operating life to the cleaning material, with the desired economy.

The container 1, is provided with a channel or groove about its upper outside edge as shown in the various figures, in which is carried the sealing gasket 5, for purposes of creating a water tight joint between the container 1 and its top 2, the purpose of which will be hereinafter seen. For purposes of securely holding the top member 2 to the container the same may be provided with extensions or ears 6 and 6', respectively, at each end, and these in turn have mounted thereon the bolt and butterfly nut 7, for purposes of clamping these members together.

The top 2, as shown particularly in Figure 3, is so designed as to have its two ends and two sides all converge in a downwardly direction towards a common center 8, in which is a hole 9, thus forming a concave top by the downwardly disposed surfaces 10, the purpose of which will be hereinafter described.

The top 2 may be provided with a downwardly depending edge 11, for purposes of better positioning the top to the bottom portion 12 of the container.

In Figure 4 the invention is shown in operative position at 15 within a dish washing machine 14.

The operation of the invention is as follows:— Prior to placing the receptacle in a machine, it has placed therein a brick of cleaning material and the remaining portion of the receptacle up to the cover is filled with water and due to the opening 9 in the cover, the concave portion, which is below the upper edges of the side wall of the receptacle, permits the water to lie puddled in the top. The receptacle is then placed in the bottom of the washing machine and by being filled with water creates a strong or saturated solution of

the cleaning medium. As fresh water is admitted to replace that which is puddled on the top 2, the water which has been replaced carrying the cleaning fluid is mixed with the water in the machine for cleaning purposes. It can be readily understood that by the constant agitation of water over this concave surface of the top 2, that the ingress and egress of the water from the receptacle carries a given amount of the cleaning medium incident to the dissolving of the brick in the receptacle and constantly discharging the same into the machine carrying the receptacle. This action will be continuous as long as water is supplied to the concave top, or in other words, during the operation of the machine.

It can be readily seen that this makes the structure very economical, as there is no discharge at least from the container when the machine is not in operation.

In Figure 5 a slightly modified form of the invention is disclosed, in that holes 16 and 17 are provided on opposite sides of the bottom 12 and located near opposite ends of the receptacle for the purpose of increasing the activity of the cleaning agent from a soluble standpoint and to increase the output of the same under conditions when an unusual amount of the cleaning agent is desired.

It may be readily understood that the openings 9, 16, and 17 may be varied in size for purposes of controlling the amount of cleaning agent that is thrown off from the block 3.

It is also important to note that the top member 2 is completely sealed to the bottom 12 by a water tight seal, specifically for the purpose of allowing the cleaning agent or block 3 to throw off its cleaning medium only through the respective openings as heretofore described.

I have thus described my invention specifically and in detail in order that its nature and operation may be fully understood; however, the specific terms herein are used descriptively rather than in a limiting sense, and the scope of the invention is defined in the claims.

What I claim and desire to secure by Letters Patent is:

1. In a soap dispensing device adapted to operate in a water spray, the combination with a receptacle having an imperforate soap enclosing portion, of a concave top portion providing a relatively shallow basin, the bottom of said basin being so perforated as to restrict the passage therethrough of the water sprayed onto said basin during the operation of the device, the remaining portion of said receptacle being so constructed that water containing a limited amount of soap

will be accumulated in said receptacle and basin and continue to overflow from said basin just so long as the water spray is in operation.

2. In a soap dispensing device adapted to operate in a water spray, the combination with an imperforate receptacle, of a concave top portion providing a relatively shallow basin, the bottom of said basin being so perforated as to restrict the passage therethrough of the water sprayed onto said basin during the operation of the device, whereby water containing a limited amount of soap will be accumulated in said receptacle and basin and continue to overflow from said basin just so long as the water spray is in operation.

3. In a soap dispensing device adapted to operate in a water spray, the combination with a receptacle for containing soap, the lower portion of the receptacle being imperforate, of a concave top portion for said receptacle providing a relatively shallow basin, the bottom of said basin being so perforated as to restrict the passage therethrough of the water sprayed thereon during the operation of the device, the remaining portion of said receptacle being so constructed that the water will be caused to circulate back and forth through said perforate bottom, and in a restricted manner contact with the said soap, and said water containing a limited amount of soap will be accumulated in said receptacle and basin and overflow from said basin in a continuous manner, just so long as the water spray is in operation.

4. In a soap dispensing device adapted to operate in a water spray, the combination with a receptacle adapted to contain soap, that portion of the receptacle adapted to embrace said soap being imperforate, of a concave top portion for said receptacle providing a relatively shallow basin, perforations in the soap containing receptacle at the upper edge thereof adjacent the top portion, the bottom of said basin being so perforated as to restrict the passage therethrough of the water sprayed thereon during the operation of the device, said spraying action causing the water to circulate back and forth through said perforate bottom and to flow through the perforations at the upper edge of the soap receptacle, and in a restricted manner to contact with said soap, said perforations at the upper edge of the receptacle being so small as to restrict the flow of said water therethrough and to cause water containing a limited amount of soap to be accumulated in said receptacle and basin and overflow from said basin in a continuous manner just so long as the water spray is in operation.

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