April 25, 1939. F. A. GILFORD 2,156,114

BATH WATER CONDITIONER

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Fig. 1.

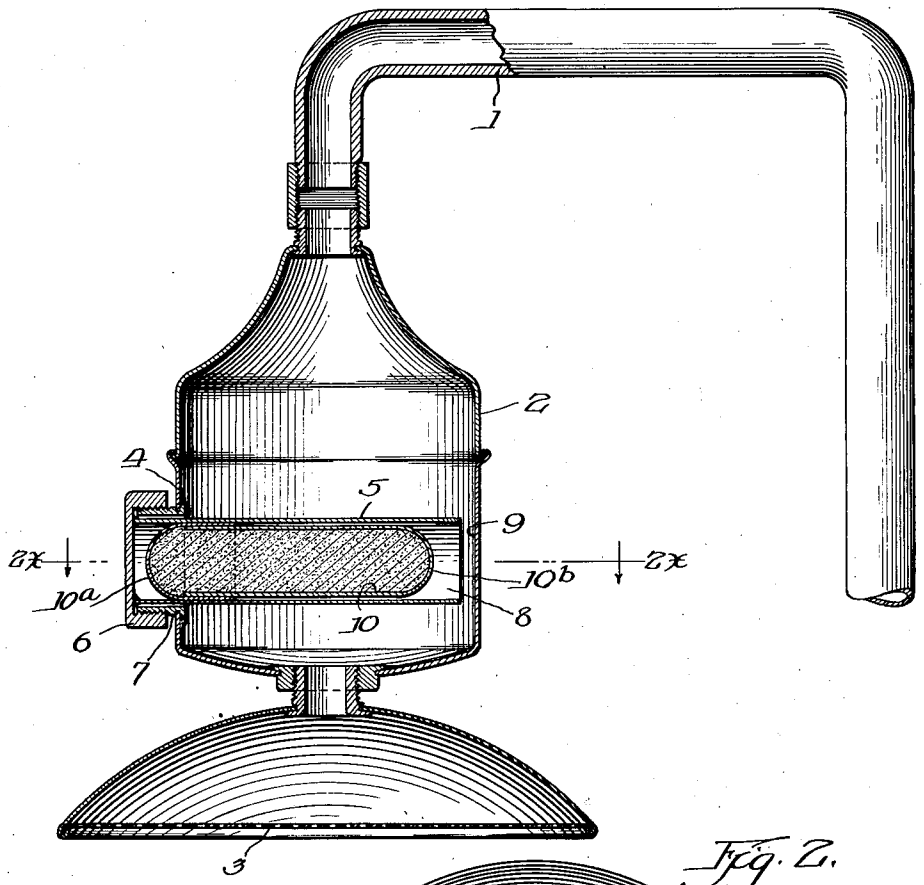
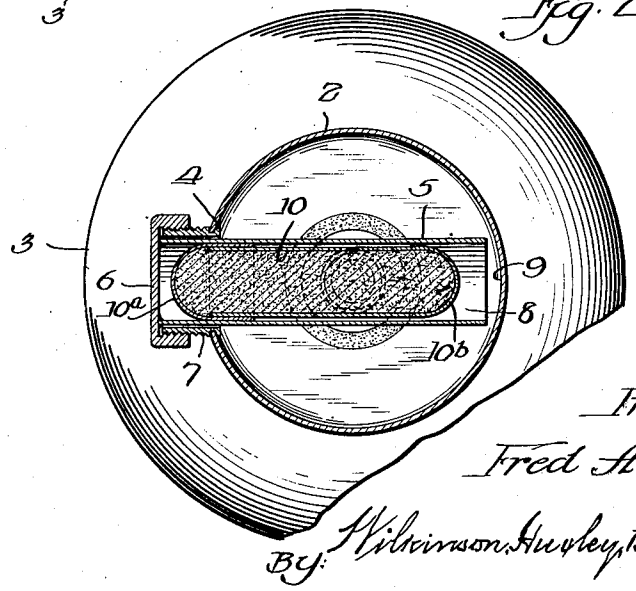


Fig. 2.



Inventor:
Fred A. Gilford:
By: Wilkinson, Huxley, Byron & Knight
Attys.

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BATH WATER CONDITIONER

Fred A. Gilford, Chicago, Ill.

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3 Claims. (Cl. 299—84)

This invention relates to a bath-water conditioner of the type in which a water container constructed for introduction into the line of flow of a water duct is provided with a pocket, for instance, a tubular holder for conditioning material, which pocket is so constructed and so introduced through a wall of the water container that the material which it carries is subjected to and taken up by the water that is to be conditioned as the water flows through the container.

An object of the invention is to so construct and arrange the pocket for the conditioning material that instead of facilitating and promoting the admission of the water to the presence of the material, its admission will be more gradual and the vehicular mingling of the material and water will be less wasteful; to which end, one feature of the invention resides in introducing the pocket in such a manner that its opening through which water gains access to the material will be presented transversely to the line of flow and in such close proximity to a wall of the container that the wall will baffle the flow of the water into the pocket; the preferred embodiment through which these conditions are realized being made to include a tubular form of pocket inserted through and hermetically united to one wall of the container and extending across the interior of the container to the opposite side thereof.

Another object of the invention is to further avoid waste of conditioning material by preventing all access of water to the material during the brief time required for selecting the volume and temperature of bath water; to which end, another feature consists in enveloping the conditioning material in a water soluble capsule having a coefficient of solubility that will retard commencement of dissolution of the material for a predetermined period of time. This capsule also constitutes a rational means of measuring, transporting and manipulating the material with exactness and therefore further guarding against waste.

The two features of the invention just described, while separately available for the realization of the individual objectives which they respectively serve, nevertheless lend themselves to cooperative service for more complete and economical control of the conditioning function; and to best realize that part of the invention having to do with delay action through the soluble envelopment of the material, the soluble capsule, in its broader aspect, is mounted upon and presented within the water container through means of the pocket that is in turn mounted upon a wall of the container; and, more specifically, the pocket and capsule are both of tubular form, fitting one within the other; the capsule for at least a part of its length snugly fits the bore of the pocket; and the pocket, admitting water as it does only through its end (preferably baffled by proximity of the wall of the container) greatly slows down the dissolving of the capsule so that instead of a rapid washing out and dissipation of the conditioning material before the bather has determined the volume and temperature of the shower, the bather will have ample time to realize the full effect of conditioning material, conveniently and accurately selected in advance.

In the accompanying drawing, illustrating the preferred embodiment of the several features of the invention—

Figure 1 is a vertical axial section of a shower bath in which the invention is embodied, the plane of section being that of the replaceably inserted pocket and material capsule.

Figure 2 is a section on the line 2*x*—2*x* of Figure 1.

In the illustrative embodiment, 1 represents the water supply duct, 2 the water container of the present invention inserted in line of flow therewith, and 3 is the spray nozzle of a shower bath.

Container 2 has inserted through its wall 4, a tubular pocket 5 carried by a screw-cap 6 threaded upon the nipple 7 of the container. Pocket 5 extends diametrically across the container 2 and therefore transversely to the line of flow through the container of the water to be conditioned therein, and terminates in an open end 8 also presented transversely to the said line of flow and in such close proximity to the opposite wall 9 that the water entering the said end 8 is baffled; it enters the said end only by indirect or eddy currents; and since opening 8 is at least the main and preferably the sole channel of access of water to the material, the material can not be washed out and wasted by a sudden rush of water; on the contrary, a substantial delay action in its dissolving and mingling with the water is assured.

In order that the step of dissolution and commingling may be still further controlled, and the quantity of material accurately predetermined and conveniently manipulated into position, the charge of material is introduced through the medium of a soluble capsule 10, the complementary parts of which, telescoping together, approximately correspond in external dimensions to the inside bore of pocket 5, the outer capsule member

10*a* preferably fitting the said bore so that at least initial access of water is limited to the capsule member 10*b*, exposed through open end 8. In addition to baffling water flow relatively to the open end 8, wall 9 will prevent the capsule from extruding objectionably beyond the tubular pocket.

With conditioning material prepared in a capsule and introduced into a pocket such as herein shown and described, there will be ample time to select temperature and flow of water before any part of the material can enter into solution, and then when conditioned water begins to flow, the consumption of the material will be slow enough to prolong the flow of conditioned water through a desirably long period. Moreover, by judicious use of hot water at the outset, the dissolving of the end of the capsule to initiate the delivery of conditioning material may be reasonably speeded up and be followed by control of volume and temperature to suit the bather.

I claim:

1. A water conditioning utensil, comprising a container having an inlet and an outlet and constructed for introduction into the line of flow of a water duct, and a tubular conditioning-medium pocket having closed and open ends, said pocket being mounted in one wall of the container through the medium of the closed end of the pocket and extending substantially through the body of water flowing in the container and having its open end positioned in such close proximity to another wall of the container as to cause said other wall to baffle the free flow of water into said open end.

2. A water conditioning utensil as described in claim 1, in which the closed end of the pocket extends through the wall of the container in which it is mounted, and its closure is through the medium of a cap upon its outer end that is removable to give access to the pocket.

3. A water conditioning utensil as described in claim 1, in which the closed end of the pocket extends through the wall of the container in which it is mounted, and its closure is through the medium of a cap upon its outer end that is removable to give access to the pocket; said pocket being equipped with a soluble capsule which so fits the pocket as to materially restrict circulation of water around the capsule, but has one of its ends presented toward the open end of the pocket where it is subject to dissolution by the water gaining access thereto.

FRED A. GILFORD.