Nov. 8, 1938. O. W. HOLDEN 2,136,050

SPRAY HEAD

Filed April 1, 1937

Fig. 1

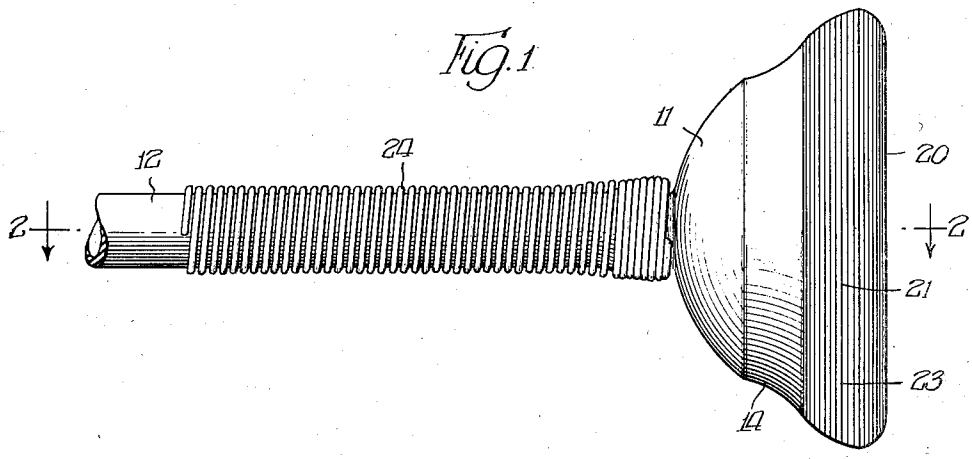


Fig. 2

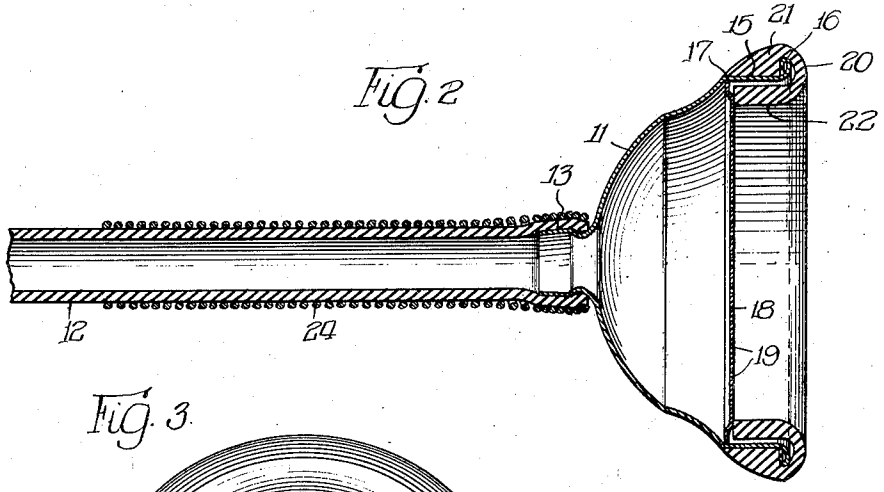
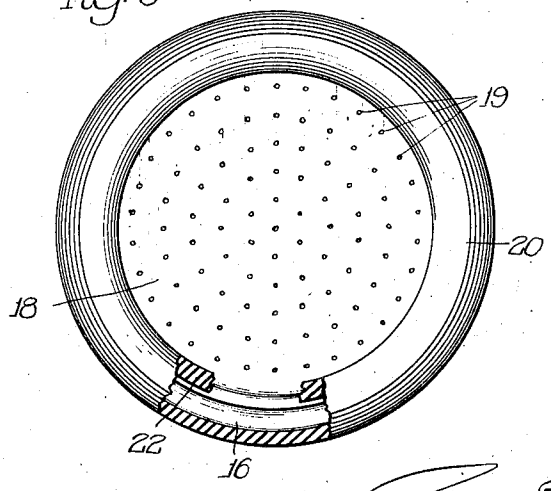


Fig. 3



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SPRAY HEAD

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5 Claims. (Cl. 299—141)

My invention has to do with bath equipment and more especially with spray heads as used in shower baths, by operators in beauty parlors for shampooing, and the like.

Among the advantages of my improved spray head are the directing of the spray axially of the head and the confinement of the spray within a restricted area, its adaptation for secure and comfortable cupping in the hand; insurance against injury to itself or chipping of the bath tub or bowl; and above all the removability of the spray disk from its mounting within the head for cleaning the apertures from mineral deposits and other foreign matter, whereby to maintain a uniformity of flow and distribution in the spray.

In some localities the large content of lime and other minerals in the water speedily form an incrustation in and about the apertures of the spray disk, particularly if small, as in a needle spray. Other foreign matter also tends to clog the openings, obstructing the flow and rendering the spray non-uniform. The ordinary spray under strong pressure is prone also to scatter or splash over a larger area than is desirable. A shower or spray head of this general type, held in the hand of an operator, especially when giving a shampoo, does not afford a secure grip against slipping, and it becomes uncomfortably hot at times and the rubber tubing adjacent the spray head becomes not only hot but is liable to kink and break at the junction with the head, if not provided with an enveloping heat-radiating handle. Moreover, the enamel of bath tubs and bowls is very often chipped by dropping into the same. These disadvantages are avoided and difficulties solved by the characteristic features of the present invention.

To facilitate an understanding of the invention, a preferred embodiment of the same is set forth by way of illustration in the accompanying drawing and in the following description predicated thereon.

In the drawing:

Fig. 1 is a side elevation of the spray head and the adjacent water-supplying tube;

Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1; and

Fig. 3 is a front elevation of the spray head partially broken away.

Having particular reference to the drawing, the spray head generally indicated at 11 is attached in the usual manner to a water-supply tube 12, the end of which engages over the nipple 13 of the head. The head itself is of general flaring bell shape, preferably having its contour interrupted by circumferential depressions indicated at 14. Advantageously the head terminates forwardly in a cylindrical portion 15 having a radially extending marginal flange 16. The junction of the cylindrical portion 15 with the flaring portion of the head forms at 17 a forwardly facing inner shoulder which serves as a seat for the metallic spray disk 18 provided with the small apertures 19.

A rubber ring 20 of general U-section embraces the forward portion of the head, the outer leg 21 of the U-shaped ring taking over the flange 16 and closely hugging the outer face of the cylindrical portion 15 of the head, the outer curved surface of the ring forming a continuation of the curvature of the flaring portion of the head and circumferentially corrugated as shown at 23. The inner leg 22 of the ring extends inside and closely hugs the cylindrical portion 15 with its terminal edge bearing rearwardly against the margin of the disk 18 outwardly beyond the perforations 19, whereby the said spray disk is held firmly upon its seat on the shoulder 17.

It will thus be seen that if the apertures of the spray disk become clogged so as to interfere with the uniformity of the spray the rubber ring 20 can be disengaged from the flange 16 and removed, freeing the disk 18 which can then be lifted from its seat for the purpose of brushing and cleaning the rear face.

It will also be seen that the disposition of the inner leg 22 of the ring with its face axially disposed relative to the head serves to direct the spray and to confine the same within a small area.

Corrugations provided upon the outer face of the rubber ring and the depressed zones 14 of the head facilitate secure cupping of the same within the hand. The disposition of the rubber ring about the widest portion of the head prevents any contact of the head with the finish of furniture or the enamel of a bath tub if the spray should be dropped, as is often the case.

Manipulation of the head and the action of hot water tends to cause the water-supply tube 12 to break or kink adjacent the head at the point of its engagement with the nipple 13. The tube also becomes uncomfortably hot at times causing discomfort to the hand of the operator. To meet these conditions, I provide about the tube 13 adjacent and for a considerable distance from the head a handle of spirally wound heat-radiating and kink-preventing wire as indicated at 24.

The term "rubber" is herein used in a generic sense to include equivalent substances such as other elastic deformable material. In the classification of the head as bell-shaped is included any enlarged hollow body serving as a discharge manifold to increase the area of the spray over that of the supply tube or pipe. Neither is the invention to be restricted to a portable or hand spray, as the head may form a part of a permanently installed bath fixture. Moreover, instead of the disk being removably held in place by a rubber or other elastic ring, measureably satisfactory results may be obtained by other means for releasably holding the disk in place within the head. Also, the spray disk may be of other than metallic material such as vulcanized rubber equivalent for the purpose.

Generally speaking, it is to be understood that the detailed description and illustration of a preferred form of the invention are to be taken in an illustrative rather than a limiting sense.

I claim:

1. A bell-shaped spray head providing an interior forwardly facing seat and terminating in a marginal flange, a perforated spray disk removably disposed within the head upon said seat, a rubber ring removably embracing the flanged margin of the head and projecting rearwardly within the head into abutment with the margin of the disk, whereby the disk may be removed for cleansing.

2. A bell-shaped spray head providing an interior forwardly facing seat and terminating in a marginal radially extending flange, a perforated metallic spray disk removably disposed within the head upon said seat, a rubber ring of general U-shape in section embracing the flanged margin with the outer leg taking over the flange and closely hugging the outer face of the head and the inner leg lying closely adjacent the inner face of the head and bearing rearwardly against the margin of the disk, whereby the disk may be removed for cleansing.

3. A bell-shaped spray head providing an interior forwardly facing seat and terminating in a marginal radially extending flange, a perforated metallic spray disk removably disposed within the head upon said seat, a rubber ring of general U-shape in section embracing the flanged margin with the outer leg taking over the flange and closely hugging the outer face of the head and the inner leg lying closely adjacent the inner face of the head and bearing rearwardly against the margin of the disk, the outer leg of the rubber ring circumferentially corrugated and the outer contour of the bell-shaped head having depressed zones, whereby to facilitate cupping of the head in the hand and to permit removal of the spray disk for cleansing.

4. A spray head of flaring bell shape terminating forwardly in a substantially cylindrical portion with a marginal flange or bead, the inner junction of the flaring and cylindrical portions providing a forwardly facing shoulder, a perforated metallic spray disk seated within the head on the shoulder, a rubber ring embracing the flanged margin of the head and extending inwardly of the head to abut with its edge the metallic spray disk, whereby to permit the removal of the disk for cleansing.

5. A spray head of flaring bell shape terminating forwardly in a substantially cylindrical portion with a marginal flange or bead, the inner junction of the flaring and cylindrical portions providing a forwardly facing shoulder, a perforated spray disk seated within the head on the shoulder, an elastic ring embracing under tension the flanged margin of the head and extending inwardly of the head to abut with its edge the spray disk, whereby to permit the removal of the disk for cleansing.

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