June 25, 1963 S. A. WESTDAHL 3,095,152

APPARATUS FOR DISPENSING AND MIXING LIQUIDS

Filed April 3, 1962

Fig. 1.

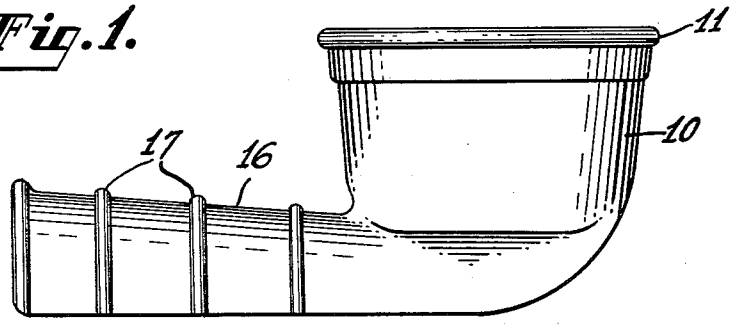
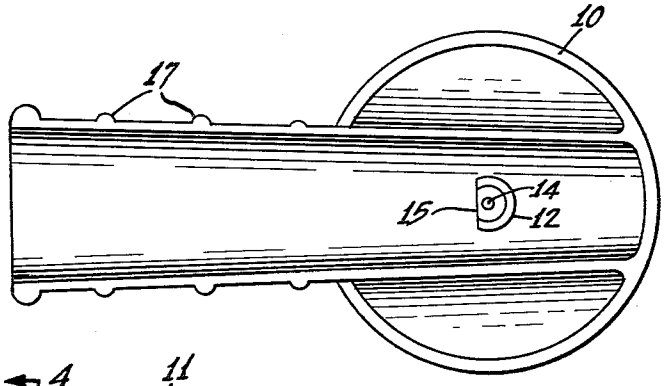


Fig. 2.



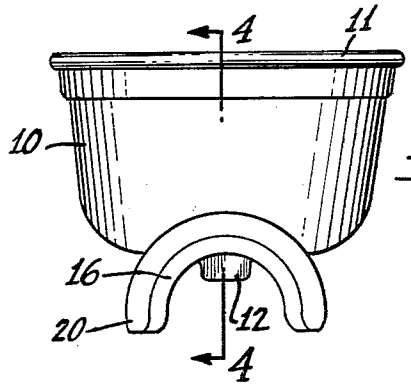


Fig. 3.

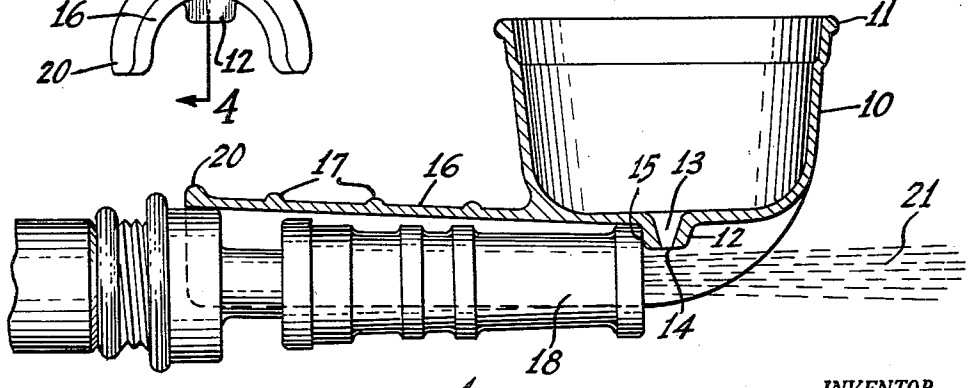


Fig. 4.

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APPARATUS FOR DISPENSING AND MIXING LIQUIDS

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This invention relates to a novel and improved apparatus for dispensing and mixing a liquid with a stream of water directed along a predetermined path, more particularly to a device for slowly dispensing, for example, concentrated liquids into a stream of water from the nozzle of a garden hose.

The liquid may be an insecticide for spraying lawns, bushes, trees, etc.; or for spreading liquid fertilizer on lawns, flower beds, etc.; or detergent for washing cars, trucks, busses, railroad coaches, trolleys, fishing boats, decks or holds of ships, airplanes, walls and windows of houses, awnings, patios, or anything outside to be washed or cleaned.

It is an object of my invention to provide a novel and improved apparatus for dispensing and mixing a concentrated liquid with a stream of water directed along a predetermined path.

More particularly, it is an object of my invention to provide such a device of simple one piece construction which can be readily and firmly attached, and accurately positioned on a conventional garden hose nozzle with which the device can be used.

Briefly, apparatus made according to my invention includes an open bowl-shaped member into which the concentrated liquid may be poured and retained. The bottom of the bowl is provided with an aperture opening into a short tapered dripper. Integral with said bowl is an integral handle and attaching member extending normally of the normally vertical axis of the bowl. It is of a U-shaped transverse section increasing in transverse dimensions toward its outer free end. It extends past the dripper to the other side of the bowl from the free end. The material of the apparatus may comprise any resilient material but is preferably of molded rubber or plastic. It is of such dimensions that when received over the nozzle with the dripper adjacent the end of the nozzle, the device is retained on the nozzle by a gripping action caused by expansion radially of the U-shaped portion when the device is clipped over the nozzle.

In the drawings:

FIG. 1 is a side elevation of apparatus made according to my invention;

FIG. 2 is a bottom view of FIG. 1;

FIG. 3 is a left hand view of FIG. 1;

FIG. 4 is a longitudinal section of apparatus made according to my invention applied to a garden hose nozzle.

Referring to the drawings, a device made according to my invention includes a bowl **10**, which may be provided at its rim with a lip or rib **11**. The bottom of the bowl **10** is provided with a tapered dripper extension **12** having passageway **13**.

Extending normally of the longitudinal or vertical axis of the bowl **10** is the clamping member or handle **16**. This preferably is molded integrally with the bowl although it need not be. This extension is semi-circular or U-shaped throughout its length and is tapered outwardly or increases in transverse dimension moving toward the free end **20** of the clamping member **16**. As best shown in FIG. 2, the dripper extension **12** is provided with a flat surface **15** which abuts the end of a nozzle **18** when the device is clamped to the nozzle. Annular ribs **17** strengthen the device and add stiffness to insure a tight clamping action.

Preferably, the aperture or opening **14** in the dripper **12** is small enough so that with the liquids used, the surface tension of the liquid is great enough that liquid in the bowl will not be dispensed unless there is a flow of water through nozzle **18**. The device is so designed that the suction at the aperture **14** caused by the flow of the discharge of the water **21** from nozzle **18** is sufficient to cause the proper amount of liquid from bowl **10** to provide the proper mixture of the concentrated liquid and water.

What is claimed is:

1. A device for dispensing and mixing a concentrated liquid with water including an open bowl-shaped member having an open extension in the bottom thereof, an elongated clamping member attached to said bowl-shaped member adjacent the bottom thereof, said clamping member being of U-shaped transverse section and increasing in transverse section from said bowl-shaped member to the free end thereof, said clamping member being of resilient material, said open extension having a flat surface, said clamping member being adapted to receive and clamp a nozzle thereon with said flat surface in engagement with the end of said nozzle.

2. A device for dispensing and mixing a concentrated liquid with water including an open bowl-shaped member having an opening in the bottom thereof for receiving said concentrated liquid, an elongated clamping member attached to said bowl-shaped member adjacent the bottom thereof and extending across the bottom of said bowl-shaped member, said clamping member being of U-shaped transverse section and increasing in transverse section from said bowl-shaped member to the free end thereof, said clamping member being of resilient material, said clamping member being adapted to receive and clamp a nozzle thereon with the end of said nozzle adjacent said opening.

3. A device for dispensing and mixing a concentrated liquid with water including a bowl-shaped member for receiving a concentrated liquid and having an extension in the bottom thereof, said extension having an opening therein, an elongated clamping member attached to said bowl member at the bottom thereof, said clamping member being of U-shaped transverse section and extending across the bottom of said bowl, said clamping member being of resilient material, said open extension having a flat surface transverse of the longitudinal axis of said extension, said clamping member being adapted to receive and clamp a nozzle thereon with said flat surface in engagement with the end of said nozzle.

4. A one-piece molded device for dispensing and mixing a concentrated liquid with water including a bowl-shaped member for receiving a concentrated liquid and having a tapered extension in the bottom thereof, said extension having a passageway therethrough, an elongated clamping member attached to said bowl-shaped member at the bottom thereof, said clamping member being of U-shaped transverse section and increasing in transverse section from said bowl-shaped member to the free end thereof, said clamping member extending across the bottom of said bowl-shaped member and being of resilient material, said extension having a flat surface, said clamping member being adapted to receive and clamp a nozzle thereon with said flat surface in engagement with the end of said nozzle.

5. A molded device for dispensing and mixing a concentrated liquid with water including a bowl-shaped member for receiving a concentrated liquid and having an extension in the bottom thereof, said extension having a passageway and providing an aperture at the end thereof, an elongated clamping member attached to said bowl member adjacent the bottom thereof, said clamping member being of U-shaped transverse section, said clamping member being resilient, said extension having a flat surface, said clamping member being adapted to receive and clamp

a nozzle thereon with said flat surface in engagement with the end of said nozzle.

6. A device for dispensing and mixing a concentrated liquid with water including a bowl-shaped member for receiving said concentrated liquid and having an extension in the bottom thereof, said extension having a passageway therethrough and providing an aperture at the end thereof, an elongated clamping member attached to said bowl member at the bottom thereof and extending across the bottom of said bowl-shaped member, said clamping member being of U-shaped transverse section and increasing in transverse section from said bowl-shaped member to the free end thereof, said clamping member being resilient, said extension having a flat surface, said clamping member being adapted to receive and clamp a nozzle thereon with said flat surface in engagement with the end of said nozzle.

7. A unitary device of molded material for dispensing and mixing a concentrated liquid with water including an open bowl shaped member for receiving said concentrated liquid and having an extension in the bottom thereof, said extension having a passageway therethrough and providing an aperture at the end thereof, an integral elongated clamping member attached to said bowl member at the bottom thereof and extending across the bottom of said bowl shaped member, said clamping member being of U-shaped transverse section, said clamping member being resilient, said extension having a flat surface normal to the axis of said clamping member, said clamping member being adapted to receive and clamp a nozzle thereon with said flat surface in engagement with the end of said nozzle, said passageway terminating adjacent the outer end of said nozzle.

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