April 2, 1957 V. L. PAIANO 2,787,267

DEVICE FOR ADMINISTERING MEDICINE

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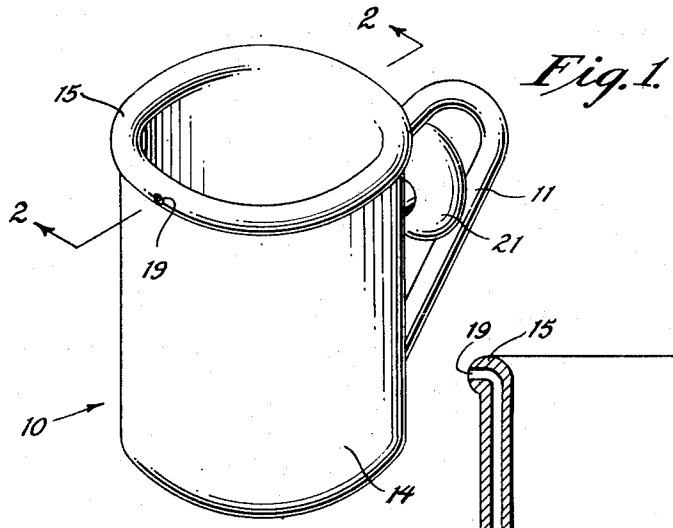


Fig. 1.

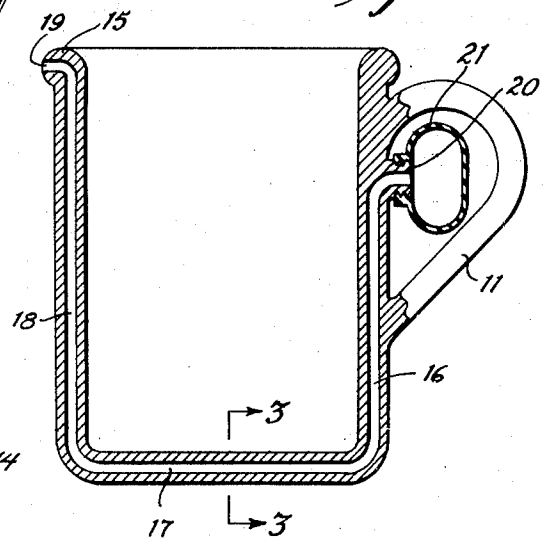


Fig. 2.

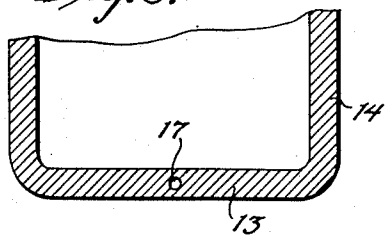


Fig. 3.

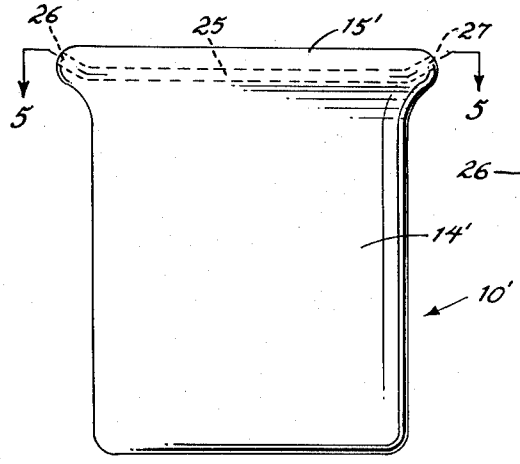


Fig. 4.

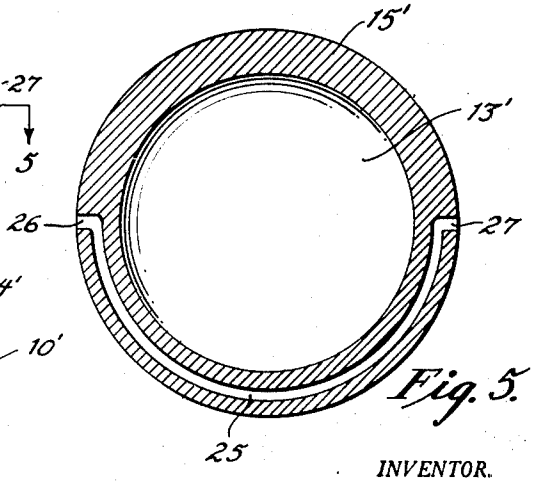


Fig. 5.

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DEVICE FOR ADMINISTERING MEDICINE

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2 Claims. (Cl. 128—172)

This invention relates generally to devices for the oral administration of medicine, and is particularly directed to such devices as enable the administration of a disguising liquid together with the medicine.

The particular embodiment of the present invention, which is illustrated in the drawings and which will be described hereinafter in greater detail, comprises generally a cup having bottom and side walls and adapted to contain a disguising liquid to be drunk. The cup is provided in a wall thereof with an internal reservoir adapted to contain the medicine, and an outlet opening from the reservoir through the rim of the cup to administer the medicine conjointly with the disguising liquid upon elevation of the cup to a drinking position.

As is well known, children usually resist taking medicine orally, especially disagreeable tasting medicine, so that much time and effort is often expended in attempting the conventional oral administration by spoon, dropper or the like, and frequently without success.

Accordingly, it is a general object of the present invention to provide a device of the type described for the oral administration of medicine, which device presents the appearance of a conventional drinking cup to simulate ordinary drinking conditions, and which enables the medicine to be administered simultaneously with a disguising liquid so that a child will not suspect that medicine is being administered.

It is another object of the present invention to provide a device for the oral administration of medicine together with a disguising liquid, wherein the medicine is administered gradually as the liquid is drunk, and which effectively prevents sepaartion or settling out at different layers of the disguising liquid and medicine, as occurs when medicine and a disguising liquid of different densities are mixed.

It is still another object of the present invention to provide a device of the type described which enables even relatively small children to effect the self-administration of medicine, or which enables the medicine to be emitted into the child's mouth under fluid pressure, without the child knowing that medicine is being consumed.

It is a further object of the present invention to provide a device for the oral administration of medicine having the advantageous characteristics mentioned in the foregoing paragraphs, which is extremely simple in construction and durable in use, easily cleaned, which may be employed as a conventional drinking cup, and can be manufactured and sold at a reasonable cost.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

Figure 1 is a top perspective view showing a medicine administering device constructed in accordance with the present invention;

Figure 2 is a sectional elevational view taken substantially along the line 2—2 of Figure 1;

Figure 3 is a partial elevational view taken substantially along the line 3—3 of Figure 2;

Figure 4 is a side elevational view showing a slightly modified form of medicine administering device constructed in accordance with the present invention; and

Figure 5 is a transverse sectional view taken substantially along the line 5—5 of Figure 4.

Referring now more particularly to the drawings and specifically to Figures 1–3 thereof, the embodiment of the invention illustrated therein comprises a drinking cup, generally designated **10**, having a laterally projecting loop type ear or handle **11**.

The cup **10** may include a generally circular bottom wall **13**, and an upstanding side wall **14** extending upwards from and peripherally about the bottom wall. Thus, the bottom wall **13** and side wall **14** combine to define an open top receptacle adapted to contain a disguising liquid to be drunk.

The upper edge portion or rim of the cup **10** may be defined by an enlarged peripherally extending bead **15**, as illustrated. The handle or loop **11** is located exteriorly of the cup and projects laterally outwards from one portion of the side wall **14**.

Internally of the bottom wall **13** is formed an elongate chamber or reservoir **17** which extends diametrically across the bottom wall, and continues from its opposite ends upwards, defining upwardly extending passageways **18** and **16** in opposed portions of the cup side wall **14**. The internal side wall passage **18** terminates at its upper end in an outlet or port **19** opening through the cup rim **15**. Hence, the passageway **18** communicates from the chamber **17** through the outlet **19** with the exterior of the cup. The passageway **16** is located in the side wall region adjacent to the loop **11** and terminates at its upper end in a laterally outwardly projecting tubular protuberance or nipple **20**. As best seen in Figure 2, the nipple **20** projects into the space within the loop **11** and may be externally threaded for detachably retaining a resiliently depressible hollow member or bulb **21** engaged over the nipple. That is, the hollow member or bulb **21** is located within the loop **11** and detachably secured in embracing engagement with the nipple **20** so that the interior of the bulb communicates through the nipple and passageway **16** with the interior of the reservoir **17**.

In use, the bulb **21** may be removed from the nipple **20**, as by unscrewing and liquid medicine admitted either through the nipple or outlet **10**, as by an eyedropper or other suitable means, into the chamber or reservoir **17** and the passageways **18** and **16**. If desired, the depressible bulb **21** may remain secured on the nipple **20** and be depressed to suck medicine inwards through the outlet **19** and passageway **18** into the chamber **17**. A suitable quantity of disguising liquid, preferably pleasant to the taste, may then be introduced in the conventional manner through the open upper end of the cup or receptacle **10** so as to be contained by the receptacle bottom and side walls **13** and **14**. Upon elevation of the cup to a position for drinking the disguising liquid, the bulb **21** may be gradually depressed to expel medicine from the reservoir **17** outwards through the passageway **18** and outlet **19** into the drinker's mouth together with the disguising liquid. Gradual depression of the bulb **21** may be performed by an adult or, with some training, by the child himself. It will be noted that the handle **11** provides a guard extending about the bulb **21** to prevent inadvertent depression of the latter.

After the disguising liquid has been drunk, and the bulb **21** simultaneously depressed sufficiently to force all of the medicine into the child's mouth, the bulb may be released and the cup removed from its drinking position. The device may then be cleaned by removing or detaching the bulb **21** from the nipple **20** and then passing water inwards through the outlet **19**, passageway **18**, chamber **17**, passageway **16** and out through the nipple **20**.

In Figures 4 and 5 are shown a slightly modified form of the present invention, wherein an upwardly opening receptacle or cup, generally designated **10'** includes a generally circular bottom wall **13'** and an upstanding side wall **14'** extending peripherally about and upwards from the bottom wall.

Provided on the upper edge portion of the side wall **14'** is a peripheral enlargement or bead **15'**. An elongate chamber or reservoir **25** is formed internally of the enlarged rim **15'** and extends arcuately along a substantial portion of the rim, as best seen in Figure 5. In the illustrated embodiment the chamber or reservoir **25** extends approximately 180° internally of the rim **15'** and terminates at its opposite ends in fluid communication with obliquely upwardly extending passageways **26** and **27**. More particularly, the passageways **26** and **27** are substantially spaced from each other, being diametrically opposed in the illustrated embodiment, and each opens generally obliquely upwards from the rim **15'** to the exterior of the device. The outwardly opening passageway **26** may be considered as an outlet, and the outwardly opening passageway **27** may be considered as an inlet and vent.

In operation, liquid medicine may be inserted into the chamber or reservoir **25** through either the outlet **26** or vent **27**, and will be gravitationally retained in the chamber when the cup **10'** is upright, as the chamber is disposed below the exterior opening of the passageways **26** and **27**. A disguising liquid may be introduced into the cup **10'** in the same manner as the first described form. Upon elevation of the cup **10'** to drink the disguising liquid, medicine from the reservoir **25'** will flow by gravity outwards through the outlet passageway **26** into the drinker's mouth together with the disguising liquid. The passageway **27** permits the entry of air into the reservoir **25** to replace the medicine passing outwards through the outlet **26**. Hence, the embodiment of Figtures 4 and 5 is adapted for automatic gravity operation without the aid of an adult.

If it is desired to close or partially close the vent passageway **27**, say during elevation of the device to the drinker's lips or to reduce the rate of flow outwards through the outlet **26**, a person's finger may be placed over the vent, or a suitable stopper inserted in the vent.

Here again, effective cleaning may be accomplished by passing a stream of water through the reservoir **25** into one of the passageways **26** or **27** and out of the other passageway.

From the foregoing, it is seen that the present invention provides a device for administering liquid medicine to children conjointly with a disguising liquid which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A device for the oral administration of liquid medicine, said device comprising a drinking cup having a bottom wall and an upstanding peripheral side wall and adapted to contain a disguising liquid to be drunk, said cup being provided with a chamber formed internally of said bottom wall and a pair of passageways extending upwards from said chamber internally of opposed side wall portions, one of said passageways opening upwards through a rim portion of said cup, and a resiliently depressible hollow member arranged exteriorly of said cup and secured to the latter in fluid communication with the upper end of the other of said passageways, whereby a quantity of liquid medicine is adapted to be sucked inwards through said outlet and into said chamber upon depression and release of said hollow member and subsequently administered to the mouth of a drinker together with said disguising liquid upon elevation of the cup to a drinking position and depression of said hollow member.

2. A device according to claim 1, in combination with a hand grip projecting laterally outwards from said cup side wall and extending about said hollow member to protect the latter from inadvertent depression.

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