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The title of the invention has been amended (Guidelines for Examination in the EPO, A-III, 7.3).

⑤④ **Device for dosing and diffusing liquid products.**

⑤⑦ Container - feeding device for liquid products formed by a rounded hollow body 1, designed to contain the product and a cover 2 provided with an opening for charging and discharging; both components having means (5, 6) which enable them to be connected and secured, whereby the cover can be provided with a tubular extension (8) towards the bottom of the hollow body, which is fitted with longitudinal grooves (9) for regulating the pouring of the product.

FIG. 1

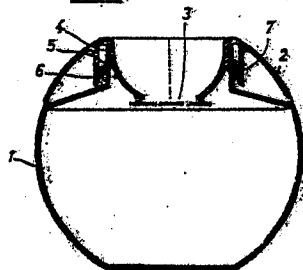
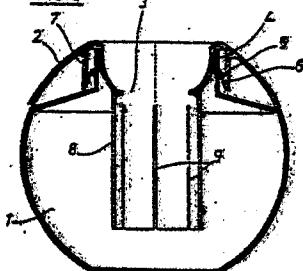


FIG. 2



Description

CONTAINER - FEEDING DEVICE FOR LIQUID PRODUCTS

The present invention relates to a container - feeding device for liquid products.

According to the invention a container has been designed for containing a liquid product consisting either of a detergent for washing clothes or a special additive for the washing process up to the start of the machine's washing cycle.

Although liquid products for washing clothes and products to complement their operation such as softeners, bleaching agents etc. are available on the market, not all machines are equipped for feeding them, so that normally some of the product is lost through the drainage pipes before the washing process begins.

Experience has shown that it is possible to use modern formulations of liquid detergents in a concentrated manner on clothes without their being any danger of their being stained or damaged, whereby these detergents have at the same time an excellent solubility. Consequently it is not necessary to feed them gradually and all that is required is for them to be poured on the clothes thereby soaking them.

However, modern developments in applied chemistry point to the possible appearance on the market of products, which it would be suitable or necessary to feed them gradually onto the clothes and this would apply both to detergents as well as to additives.

The most suitable position, in which to locate this type of container is inside the bundle formed by the clothes before they are washed as in this way you can ensure that the machine will operate without unpleasant noises resulting from the container striking the drum of the machine.

There are devices on the market which are provided with a moveable cover in which small orifices are formed. Although the product is certainly fed gradually through these orifices, it is difficult for the water in the washing machine to reach the inside so that the product contained in it is not fully utilised. This goes against its basic purpose, as if all the detergent required for washing the given quantity of clothes is not used, they are not washed as satisfactorily as required.

The device covered by this register consists of a transparent or translucent hollow body, the external surface of which may contain captions, logotypes or operating instructions which are stamped on or printed in the most suitable form, which is constructed of a suitable material (any type of plastic which can withstand the washing temperature) and which has rounded off shapes so as not to damage the clothes. The said hollow body is equipped with a cover which is integral with it and the object of which is to complete the rounded off shape of the complete unit and which is fitted with a charging and discharging orifice.

If it is required that it should take longer to discharge the contents of the feeding unit, the cover is provided with a cylindrical tubular extension

directed towards the bottom of the body of the feeding device and the length of which varies according to the time it is required that the feeding device should take for discharging its contents. The said extension is also provided with longitudinal grooves which make it possible for the contents to flow slowly towards the outside.

In order to explain the invention two figures are attached to this specification, on which are shown two embodiments which are given as examples.

The drawings show the following:

Fig. 1 shows a diametrical section of a container - feeding device produced in accordance with the principles of the invention.

Fig. 2 shows a similar view to Fig. 1 of a variant of the feeding device.

With reference to Fig. 1 it will be seen that the container - feeding device consists of a hollow body 1, which comprises the container proper and with which a cover 2 is associated, which completes the spherical shape of the body 1 and which is provided with a mouth piece or orifice 3 for charging and discharging.

The body 1 has a neck 4 with an external annular rib 5 which accommodates a rib 6 of suitable section belonging to the wall 7 of the cover 2 and by means of which both components 1 and 2 are held together.

The feeding unit operates as follows:

The user pours the liquid detergent into the inside of the container 1 up to a predetermined indication, the suitable level being indicated thanks to the indicated transparency. The container is placed inside the bundle of clothes and a normal washing operation is then carried out. The product is poured out more or less immediately thus soaking the adjacent items of clothing and when the water level reaches the said clothing, the detergent is dissolved in the normal way.

With this feeding unit it is no longer necessary to use parts with vents which normally consist of orifices of small diameter, which complicates the injection mould for the part to an extraordinary degree, which increases its manufacturing cost by an unnecessary amount and which may involve obstructions.

As will be seen from Fig. 2 the cover 2 can be provided with a tubular extension 8 directed towards the bottom of the body 1 and provided with longitudinal grooves 9.

The device is used as follows:

The user pours the liquid product into the container 1 to a predetermined indication on its external wall. The container which is made up of the components 1 and 2 is placed for preference inside the bundle of clothes as described above and the normal washing cycle is then carried out. When it is used the container is inverted several times and in that position the product contained in the tube 8 runs off the outside, whilst the remainder remains between the outside walls of the said tube 8 and the internal parts of the container 1 flowing slowly

through the grooves 9 of the tube. In this way a uniform feeding of the product is achieved, which may be desirable as far as abrupt pouring is concerned.

The length of the tube 8 is variable and if it almost reaches the bottom of the container 1, the pouring of the product will be slower, whereas if it is very short pouring will be more immediate. In this way a system is devised of adapting the container to the product. In any case with the charging hole 3 there is always a satisfactory introduction of the water to the inside with complete utilisation of the contents even with slower pouring.

The model, taking into account its essential features can be produced in other embodiments which differ in detail from that given by way of example in the description and which are also covered by the protection which is claimed. It may be constructed therefore, in any form and size using the most suitable materials so that the whole unit still comes within the spirit of the following claims.

Claims

1. Container - feeding device for liquid products such as liquid detergents or other additives for washing purposes, characterised in that it consists of a hollow body 1 with rounded shapes, the external surface of which may contain captions, logotypes or operating instructions which are stamped on or printed in the most suitable form, of a transparent or translucent nature and constructed of a suitable material, for preference any type of plastic which can withstand the washing temperature, the body of which is provided with a cover 2 connected by coupling and retaining means 4 and 5 and 6 and 7 to the body and which completes the rounded shape of the complete unit and the cover of which is provided with a charging and discharging orifice.

2. Container - feeding device according to claim 1, characterised in that the charging orifice 3 is extended towards the inside of the container in the form of a tube 8 with a number of grooves 9 in the direction of the generatrix, which are designed to permit the passage of the product held between the outside of the tube and the container, whereby uniform pouring is obtained in relation to the length of the said tube.

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FIG. 1

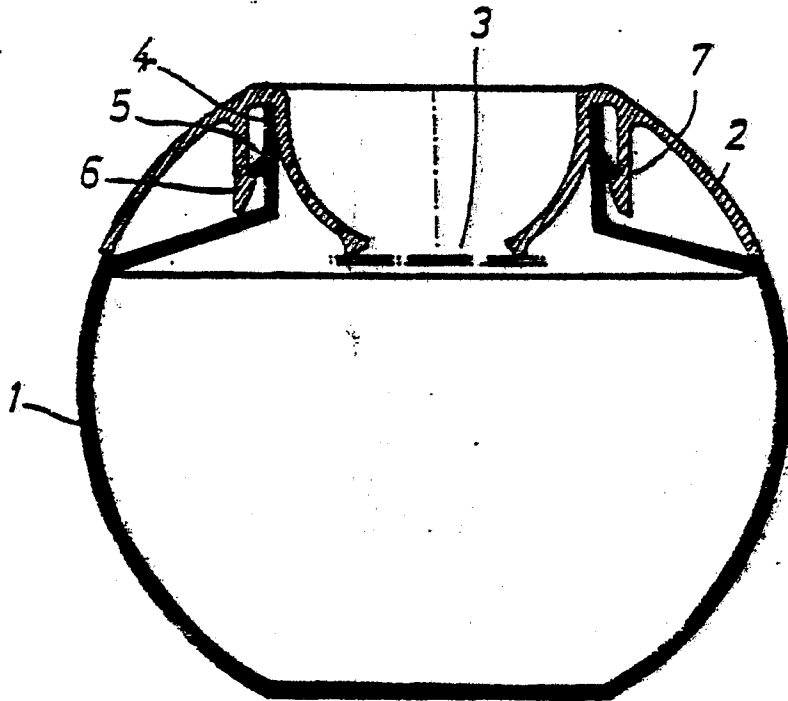


FIG. 2

