

[54] **WATER SPOUT**

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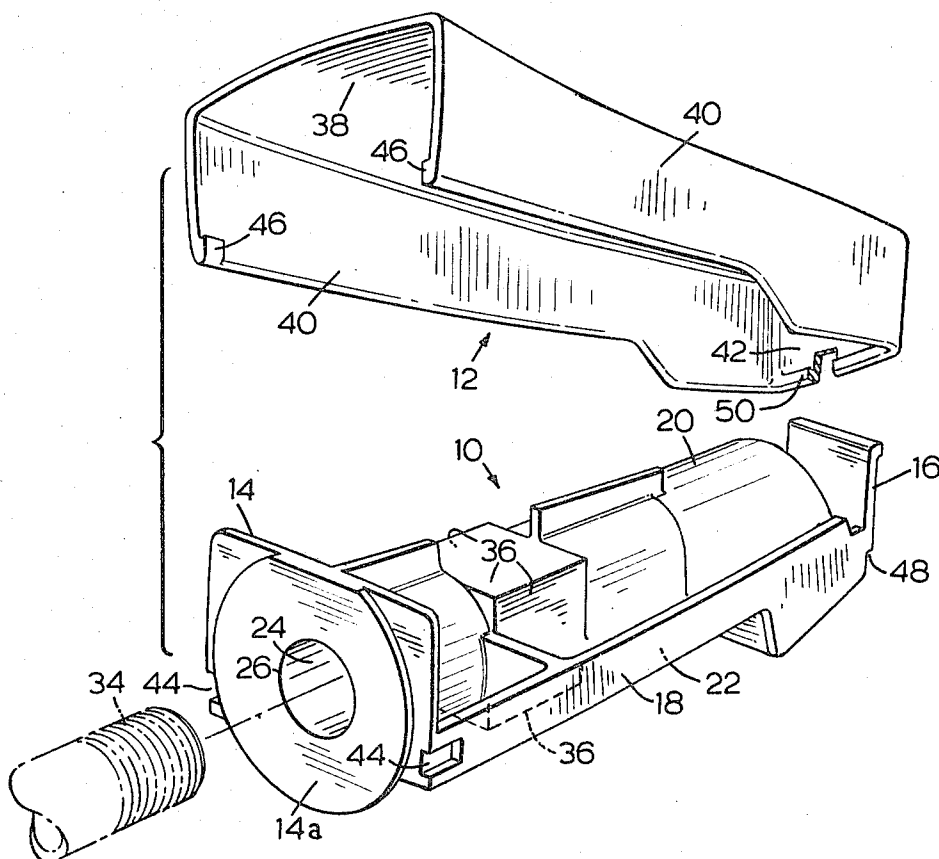
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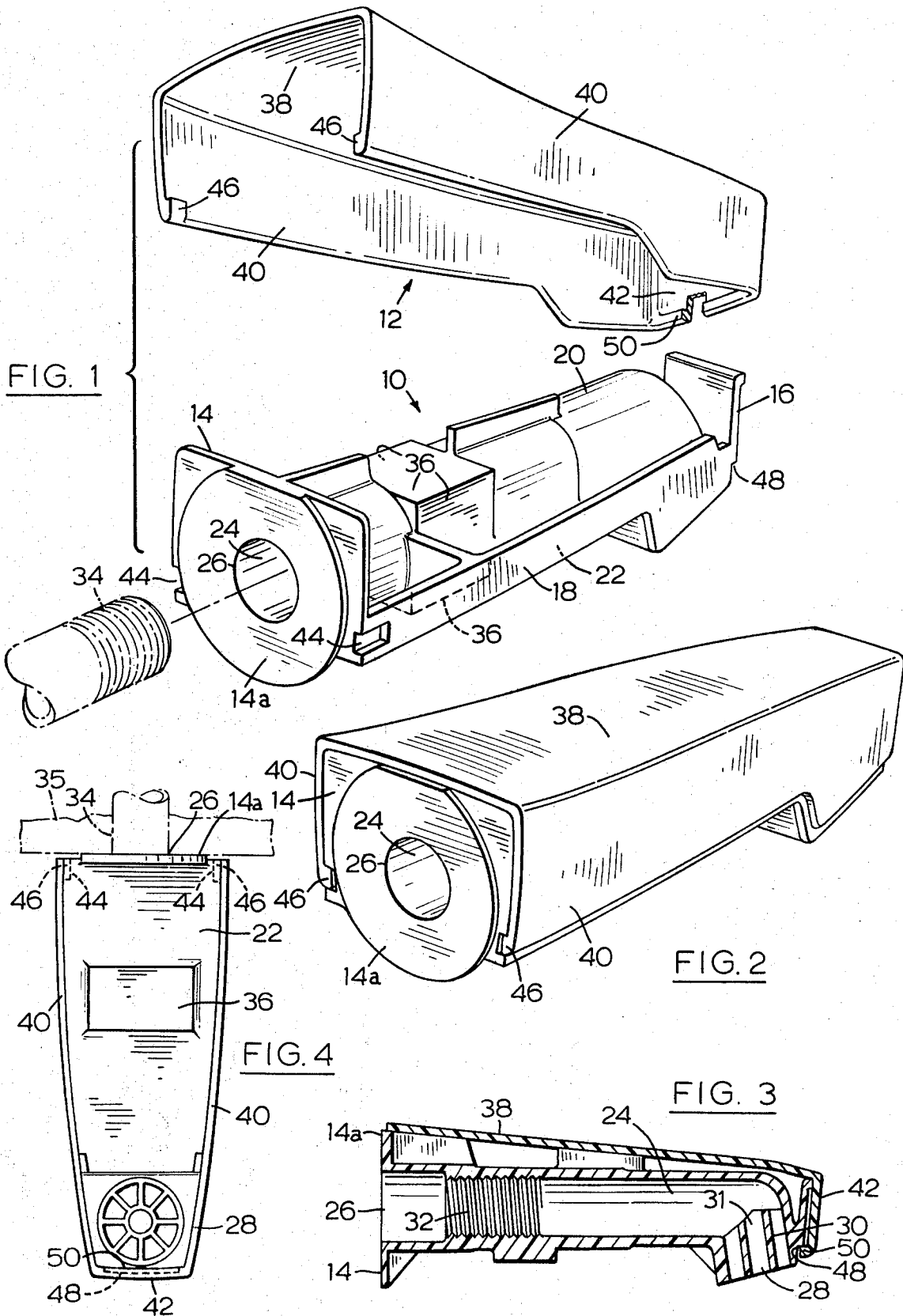
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[57] **ABSTRACT**

This invention relates to a spout comprising a base moulded from a plastics material, said base being elongated and having a back wall, a front wall, side walls, a top and a bottom, said base having a water way therethrough, the input opening of said water way of said base terminating on said back wall, the output end of said water way terminating in said bottom of said base adjacent to said front wall and being a discharge opening, a cover for said base having a top, side walls and a front wall, said front wall and said side walls of said cover being spaced to embrace said front wall and said side walls of said base and, when in embracing relationship therewith, to dispose said top of said cover in overlying relation to said top of said base, said front wall of said base and said front wall of said cover being formed for interlocking relationship with each other, said side walls of said base and said cover each being formed for interlocking relationship with each other, said side walls of said cover being flexible laterally with respect to each other whereby to enter into and out of said interlocking relationship with said base.

12 Claims, 4 Drawing Figures





WATER SPOUT

This invention relates to a water spout of the type commonly used for a bathub. It is moulded from a plastics material.

There is a trend in the manufacture of plumbing fittings in the nature of faucets, spouts and the like to replace metal as a material with a plastics material. Plastics materials have the advantage of lower manufacturing costs in many cases. They also give greater scope from a decorative point of view. One can, for example, plate a plastics product with chrome or other metallic finish. In addition, it is possible to colour the plastics material as required. There is thus greater versatility from an aesthetic viewpoint and this in combination with the reduction in manufacturing costs are the principal reasons why the trade is turning to plastics materials where possible.

The changeover from metal to plastics, however, is not always easy. The moulding techniques in the two materials are different and it is not always possible to mould a shape from a plastics material that has previously been moulded in metal. With spouts, for example, it has been found that in cases where the spout profile is long and low, there is an unacceptable amount of distortion in the moulded product. In cases where spouts have been moulded from a plastics material, they have tended to be short and relatively thick for their length. In other cases where the long, slim profile is required, metal continues to be used.

Many spout designs have a stream straightening column at the outlet that is moulded integrally with the spout. The moulding of a stream straightening construction in metal does not present any unusual problems. However, when the similar design is attempted in plastics, the line of interconnection of the stream straightening construction with the side wall of the spout tends to show on the outside of the product.

These difficulties that have been encountered with spouts made from plastics material are especially apparent when the product is chromium plated.

A further difficulty with any plastic spout is that it tends to be easily defaced or marked by tool contact during installation.

This invention overcomes the foregoing difficulties in the manufacture of plastics spouts. With this invention, one can manufacture a spout having a long, slim profile and with an integral stream straightener without distortion or undesirable markings that are apparent in use. It further overcomes the difficulty of tool damage and marking that was especially prevalent with any plastic spout.

With these and other objects in view, a spout according to this invention comprises a base moulded from a plastic material, said base being elongated and having a back wall, a front wall, side walls, a top and a bottom, said base having a water way therethrough, the input opening of said waterway of said base terminating on said back wall, the output end of said water way terminating in said bottom of said base adjacent to the front wall and being a discharge opening, a cover for said base having a top, side walls and a front wall, said front wall and said walls of said cover being spaced to embrace said front and said side walls of said base and, when in embracing relationship therewith, to dispose said top of said cover in overlying relation to said top of said base, said front wall of said base and said front wall of said cover being formed for interlocking rela-

tionship with each other, said side walls of said base and said cover each being formed for interlocking relationship with each other, and said side walls of said cover being flexible laterally with respect to each other whereby to enter into and out of said interlocking relationship with said base.

In the drawings:

FIG. 1 is a perspective illustration of the component part of a spout according to this invention;

FIG. 2 is an illustration of a spout according to this invention as it would appear when assembled;

FIG. 3 is a sectional view of the spout of FIG. 2 showing the cover and base interlocked; and

FIG. 4 is an illustration of the spout from the bottom illustrating its mounting on a wall.

Referring to the drawings, the spout has a base generally indicated by the numeral 10 and a cover generally indicated by the numeral 12. The base is elongated in nature and has a back wall 14 and riser pad 14a, front wall 16, side walls 18 and an irregularly shaped top 20 between the side walls 18 and a bottom 22 between the side walls 18. A water way 24, extends through the base, the input 26 of which is on the back wall 14 and the output 28 of which is on the bottom wall 22. The base is moulded from a suitable plastic material such as acetal copolymer, polyamides, and acrylonitrile-butadiene-styrene and it preferably has a stream straightener tube 30 at its outlet portion which consists essentially of a tubular passage 31 supported by radially extending fins that extend from the tubular passage to the outer wall of the water passage. Stream straightener 30 is moulded integrally with the spout.

The water way 24 is formed with a threaded portion 32 for the purpose of threading the base to the nipple 34 of a water outlet from a wall 35.

Wrench flats 36 are preferably provided for the purpose of tightening the base of the water spout onto the nipple 34 and against a wall 35 in use.

The side walls 18 of the base 10 are formed for cooperative relationship with lower marginal part of the side walls 40 of the cover 12 but the shape of the top 20 of the base is not critical. In use it underlies the top wall 38 of the cover.

It will be noted that the thickness of the plastic material of the base is not constant and for this reason it is not easy to mould the base from a plastic material with a blemish free and accurately dimensioned surface. This is not particularly important with the present invention because these imperfections are designed to be covered in use by the accurately shaped and formed cover 12 for the base.

The cover 12 has a top wall 38, opposed side walls 40 and a front wall 42. The front wall 42 and the opposed side walls 40 are spaced apart to embrace the front and side walls of the base 10 and, when in embracing relationship therewith, to dispose the top 38 of the cover 12 in overlying relation to the top of the base.

The front wall of the base and the front wall of the cover are formed for interlocking relationship and the side walls of the base and the side walls of the cover are formed for interlocking relationship. Thus when the cover is in position on the base it constitutes an effective shroud therefore, and is locked against displacement.

The locking relationship is secured by the flexibility of the side walls 40 of the cover. The side walls of the cover are flexible laterally with respect to each other

and interlock with the side walls of the base. In this connection it will be noted that each of the side walls 18 of the base 10 is formed with a detent 44 and each of the side walls 40 of the cover 12 is formed with a co-operating lug 46 at its lower marginal portion near its back and the lower marginal portions of the side walls 18 of the base. In use the cover is slid onto the base from the front with the lugs 46 sliding along the side walls 18. The side walls are flexed outwardly as the lugs 46 are slid over the side walls of the base until the lugs 46 reach the depressions 44 at this location. The resilient sides of the cover reassert themselves to assume their normal position as the lugs 46 interlock with the detents 44. This provides a securement of the cover to the base adjacent the rear end of the side walls.

The cover is also interlocked with the base at the front walls and in this connection it will be noted that the front wall 16 of the base is formed with a rebate 48 along its lower edge and the inside front wall of the cover is formed with a bead 50 at its lower edge. In use the bead 50 cooperates in locked relationship with the rebate 48 as illustrated in FIG. 3 of the drawings to secure the front end of the cover to the base when the lugs 46 engage in detents 44.

In use one first mounts the base on a nipple 34 of a water outlet. In this connection the wrench flats 36 are useful for securely connecting the base to the water outlet nipple. Once the base is mounted in position one slides the cover onto the base from the front. It will be noted that the base has a slight taper from front to back that tends to spread the flexible sides of the cover as it is projected onto the base. The cover is projected onto the base until the lugs 46 reach the detents 44 at which time they will snap into position as explained above. At the same time the bead 50 is in underlying relation to the rebate 48 to securely attach it to the base. The upper marginal portion of front wall 16 is flexible rearwardly to keep the cover in tension between the detents and the front wall and take up any slackness caused by dimensional variations.

In order to remove the cover it is only necessary to take a screwdriver or some other sharp tool and pry the cover from the base adjacent the lugs 44 to move the side walls outwardly and then lift the cover in an upward direction. Once the lugs 46 have been disengaged from the detents 44 in this way, the cover can be removed with a forward and an upward motion.

The advantage of the invention from a plastics manufacturing point of view is that the base of the spout can be manufactured without regard to finish. It can be made strong and at the same time be provided with integral stream straightener formations such as the one 30. It can be provided with wrench flats such as the wrench flats 36 without regard to appearance.

The cover can be of a coloured plastics material or it can be of a plastics material electroplated with a metallic finish.

What I claim as my invention is:

1. A spout comprising a base and a removable cover both moulded from a plastics material, said base being elongated and having integrally formed therewith a back wall, a front wall, side walls, a top and a bottom, and said cover for said base having a top, side walls and a front wall, said base having a water way therethrough; the input

opening of said water way of said base terminating on said back wall, the output end of said water way terminating in said bottom of said base adjacent to said front wall and being a discharge opening, said front wall and said side walls of said cover being spaced to embrace said front wall and said side walls of said base and, when in embracing relationship therewith, to dispose said top of said cover in overlying relation resting on the top of said back wall and said front wall of said base, and said front walls of said cover and base being formed for interlocking relationship with each other, the lower marginal portions of said side walls of said base and said cover including detent and lug means formed for interlocking relationship with each other, said side walls of said cover being flexible laterally with respect to each other whereby to enter into and out of said interlocking relationship with said base.

2. A spout as claimed in claim 1 in which said side walls of said base and said cover are formed for interlocking relationship as aforesaid at the lower marginal portions of said side walls of said cover.

3. A spout as claimed in claim 2 in which said front wall of said base and said front wall of said cover are formed for interlocking relationship with each other as aforesaid adjacent their lower marginal portions.

4. A spout as claimed in claim 1 in which said side walls of said base and said cover are formed for interlocking relationship as aforesaid at the lower marginal portions and adjacent the back end of said side walls of said cover.

5. A spout as claimed in claim 4 in which said front wall of said base and said front wall of said cover are formed for interlocking relationship with each other as aforesaid adjacent their lower marginal portions.

6. A spout as claimed in claim 1 in which said side walls of said base and said cover are formed for interlocking relationship as aforesaid adjacent the back end of said side walls.

7. A spout as claimed in claim 6 in which said front wall of said base and said front wall of said cover are formed for interlocking relationship with each other as aforesaid adjacent their lower marginal portions.

8. A spout as claimed in claim 6 in which a portion of said body which is beneath said cover is formed with flats for receiving wrench for turning said body into communication with a water outlet nipple.

9. A spout as claimed in claim 1 in which said front wall of said base and said front wall of said cover are formed for interlocking relationship with each other as aforesaid adjacent their lower marginal portions.

10. A spout as claimed in claim 9 in which said front wall of said body is flexible in the longitudinal direction of said body.

11. A spout as claimed in claim 1 in which a portion of said body which is beneath said cover is formed with flats for receiving a wrench for turning said body into communication with a water outlet nipple.

12. A spout as claimed in claim 1 in which said front wall of said body is flexible in the longitudinal direction of said body.

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