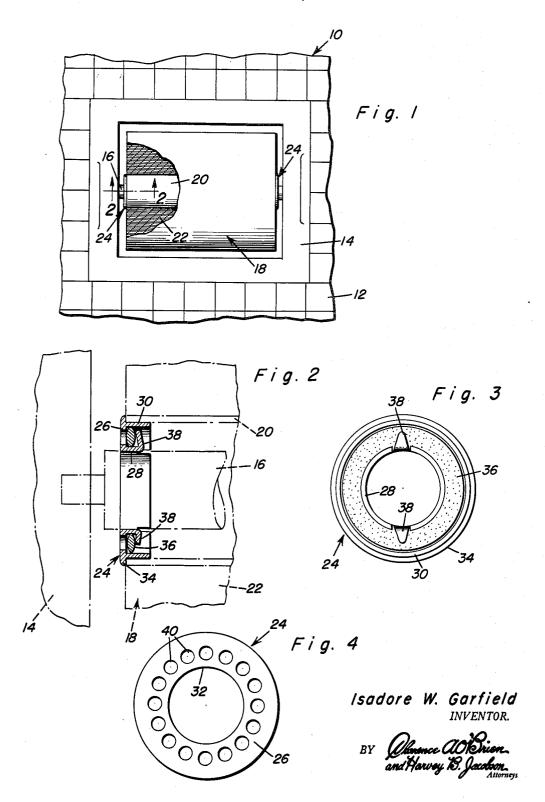
DEODORANT UNIT

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## 2,728,604

## **DEODORANT UNIT**

Isadore W. Garfield, Bridgeton, N. J.

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10 Claims. (Cl. 299—24)

This invention relates in general to deodorant units, 15 and more specifically to a deodorant dispenser for paper rolls and the like.

The primary object of this invention is to provide an improved device for dispensing a deodorizing medium and which is adapted to be employed as spacers on a 20 mandrel for supporting rolls of toilet paper, paper towels and the like.

Another object of this invention is to provide an improved deodorant dispenser which is in the form of a cup like member adapted to be disposed in each end of 25 a roll of toilet paper, paper towels and the like for facilitating the supporting of the same and at the same time dispensing a deodorizing medium contained therein.

Another object of this invention is to provide an improved deodorant dispenser which is of an extremely 30 simple construction and formed of readily obtainable materials so as to be economically feasible, said deodorant dispenser being so designed and constructed whereby the same may be easily mounted in position within an end of a roll of toilet paper or the like.

A further object of this invention is to provide an improved deodorant dispenser which is of a generally cup-shaped configuration and which has mounted therein an annular cake of deodorizing material, said deodorant dispenser being adapted to be mounted in pairs on a mandrel and disposed in opposite ends of a roll of toilet paper and the like for supporting the same concentric of the mandrel and permitting the deodorant dispenser to be conveniently located for the diffusion of a deodorant.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary elevational view of a wall mounting for a roll of toilet paper, the roll of toilet paper being partially broken away and shown in section in order to clearly illustrate the construction of the interior thereof and the general relationship of a deodorant dispenser retained therein;

Figure 2 is an enlarged fragmentary transverse sectional view taken substantially upon the plane indicated by the section line 2—2 of Figure 1 and shows the construction of the deodorant dispenser and its relationship to the roll of toilet paper, the roll of toilet paper and its supports being shown in dotted lines;

Figure 3 is an end elevational view of the deodorant dispenser of Figure 2 as viewed from the inner end thereof; and,

Figure 4 is an end elevational view of the deodorant dispenser of Figure 2 as viewed from the outer end thereof.

Referring now to Figure 1 of the drawings in particular, it is seen that there is illustrated a portion of a

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bathroom wall which is referred to in general by the reference numeral 10. The bathroom wall 10 is formed of a plurality of individual tiles 12 in which is mounted a toilet paper holder 14. The toilet paper holder 14 is of a conventional type and includes a rotatable mandrel 16 on which a roll of toilet paper 18 may be rotatably mounted. It is to be understood that the roll of toilet paper 18 is of the conventional type and includes a tubular center 20 on which is reeled a plurality of 10 convolutions of tissue like paper 22.

Referring now to Figure 2 in particular, it will be seen that the mandrel 16 has an external diameter which is less than the internal diameter of the tubular center 20. Disposed between the center 20 and the mandrel 16 is a spacer, the spacer being the deodorant dispenser which is the subject of this invention, the deodorant dispenser being referred to in general by the reference numeral 24. The deodorant dispenser 24 is disposed at one end of the center 20 and preferably has a wedge fit with both the mandrel 16 and the center 20. It is to be understood that an identical second deodorant dispenser 24 will be disposed at the opposite end of the center 20, as is best illustrated in Figure 1.

Referring now to Figures 2, 3 and 4 in particular, it will be seen that the deodorant dispenser 24 has a generally annular configuration and includes an annular web 26 which has extending inwardly from the inner face thereof concentric circular flanges 28 and 39.

The circular flange 28 is the innermost of the flanges and is coextensive with a circle opening 32 in the annular web 26. The circle opening 32 is of a diameter equal to the external diameter of the mandrel 16 so that the flange 28 forms a sleeve through which the mandrel 16 may be passed and which will retain the deodorant dispenser 24 substantially in a plane perpendicular to the longitudinal axis of the mandrel 16.

The circular flange 30 has an outer diameter substantially equal to the inner diameter of the center 20 of the roll of toilet paper 18. It is intended that the circular flange 30 be tightly received within the center 20 so as to prevent relative movement of the roll of toilet paper 18 with respect to both the mandrel 16 and the deodorant dispenser 24 disposed at each end of the center 20

As is best illustrated in Figure 2, the deodorant dispenser 24 also includes a projecting annular flange 34 which extends outwardly of the circular flange 30 and is coplanar with the web 26. The annular flange 34 has an external diameter substantially equal to the external diameter of the center 20 and is intended to abut the end thereof when the deodorant dispenser 24 is properly positioned. By abutting one end of the center 20, the deodorant dispenser 24 is prevented from movement into the center 20 past that illustrated in Figure 2.

Positioned between the concentric flanges 28 and 30 and abutting the inner face of the annular web 26 is an annular cake of suitable deodorizing material, the annular cake being referred to by the reference numeral 36. As is best illustrated in Figures 2 and 3, the circular flange 28 is provided with diametrically opposite, struck out tongues 38 which overlie the inner face of the annular cake 36 and prevents removal of the same. The annular web 26 is provided with a plurality of spaced apertures 40 which are disposed concentric with the opening 32 therethrough. The apertures 40 are provided so that fumes emanated from the deodorizing material of the cake 36 may have desired escape to the atmosphere of the room in which the deodorant dispenser 24 is disposed.

It is to be understood that the deodorant dispenser 24 may be either packaged with rolls of toilet paper, such as the roll of toilet paper 18, and sold therewith. In

such case, the deodorant dispensers would be normally disposed within the ends of the center 20 and ready for the positioning thereof on the mandrel 16. However, it should also be understood that the cake 36 of deodorizing material may be of such size whereby the life of the same would be sufficient to outlast a plurality of rolls of toilet paper. In such case, the same would be dispensed independently of the roll of toilet paper and removed from a center of an exhausted roll of toilet paper and inserted into the ends of the center of a new roll of 10 toilet paper.

It is intended that the deodorant dispenser 24 be formed of any suitable material, such as light metals, paper, plastic, or any suitable combination of materials. It will be understood that due to the tolerances per- 15 mitted in the manufacture of such a device and the tolerances permitted in the manufacture of the center of toilet paper, it will be readily apparent that at times a loose fit between a deodorant dispenser and a center of a roll of toilet paper will exist. In order to overcome 20 such a fit, the annular flange 34 of the deodorant unit may be provided with inturned tabs (not shown) of the type referred to by reference numeral 38 for insertion into the ends of a center of a roll of toilet paper.

From the foregoing, the construction and operation 25 of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, 30 and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. A deodorant dispenser for paper rolls comprising 35 an elongated mandrel, hollow spacers mounted on said mandrel at spaced intervals, said spacers being adapted to be received in a tubular paper roll center for supporting the same, said spacers having retained within their confines deodorizing material.

2. A deodorant dispenser for paper rolls comprising an elongated mandrel, hollow spacers mounted on said mandrel at spaced intervals, said spacers being adapted to be received in a tubular paper roll center for supporting the same, said spacers having retained within their confines deodorizing material, said spacers being annular in outline, said deodorizing material being in the form of an annular cake.

3. A deodorant dispenser for paper rolls comprising an elongated mandrel, hollow spacers mounted on said mandrel at spaced intervals, said spacers being adapted to be received in a tubular paper roll center for supporting the same, said spacers having retained therein deodorizing material, said spacers being annular in outline and including outwardly projecting annular flanges at outer faces thereof for engaging ends of a paper roll

center.

4. A deodorant dispenser for paper rolls comprising a spacer adapted to be disposed in an end of a paper roll center for supporting the same concentric of a mandrel, said spacer being annular in outline and including an outwardly projecting annular flange engageable with an end of a paper roll center for limiting insertion of the spacer into a paper roll center, said spacer being hollow and having disposed therein deodorizing material, said spacer being channel shaped in cross section, said deodorizing material being in the form of an annular cake, said spacer being adapted to have received therethrough a paper roll supporting mandrel.

5. A deodorant dispenser for paper rolls comprising a 70 spacer adapted to be disposed in an end of a paper roll center for supporting the same concentric of a mandrel, said spacer being annular in outline and including an outwardly projecting annular flange engageable with an end of a paper roll center for limiting insertion of the 75

spacer into a paper roll center, said spacer being hollow and having disposed therein deodorizing material, said spacer being channel shaped in cross section and having spaced flanges connected by a web, said deodorizing material being in the form of an annular cake, portions of one of said flanges being inturned to retain said deodorizing material within the confines of the spacer.

6. A deodorant dipenser for use in combination with a mandrel, said deodorant dispenser comprising an annular cup-like member having a generally channel shaped cross section and including an annular web and concentric flanges, an annular cake of deodorizing material disposed within the confines of the cup-like member, said annular cake being retained within said cup-like member by inturned tabs integral with one of said flanges, an annular flange extending outwardly from said cup-like member, said annular flange being coplanar with said web.

7. A deodorant dispenser for use in combination with a mandrel, said deodorant dispenser comprising an annular cup-like member having a generally channel shaped cross section and including an annular web and concentric flanges, an annular cake of deodorizing material disposed within the confines of the cup-like member, said annular cake being retained within said cup-like member by inturned tabs integral with one of said flanges, said web being provided with a plurality of spaced apertures for permitting escape of fumes emanating from said cake of deodorizing material, an annular flange extending outwardly from said cup-like member, said

annular flange being coplanar with said web.

8. For use in combination with a mandrel and a paper roll, a combination spacer and deodorant dispenser comprising an annular cup-like member having a generally C-shaped cross section and including an annular web and spaced generally concentric inner and outer flanges, an annular cake of deodorizing material disposed within the confines of said cup-like member and retained therein by inturned tabs carried by one of said flanges, and an annular flange extending outwardly from said cuplike member coplanar with said web, said outer flange being snugly receivable within an end of a paper roll with said annular flange in abutting engagement with such end and said inner flange being engageable with a mandrel to retain a paper roll in spaced relation to a mandrel.

9. For use in combination with a mandrel and a paper roll, a combination spacer and deodorant dispenser comprising an annular cup-like member having a generally C-shaped cross section and including an annular web and spaced generally concentric inner and outer flanges, an annular cake of deodorizing material disposed within the confines of said cup-like member and retained therein by inturned tabs carried by one of said flanges, and an annular flange extending outwardly from said cup-like member coplanar with said web, said outer flange being snugly receivable within an end of a paper roll with said annular flange in abutting engagement with such end and said inner flange being engageable with a mandrel to retain a paper roll in spaced relation to a mandrel, said web being provided with a plurality of spaced apertures for permitting escape of fumes emanating from said cake of deodorizing material.

10. For use in combination with a mandrel and a hollow paper roll, a combination spacer and deodorant dispenser comprising an annular member having an outwardly directed annular flange at one end thereof adapted to engage an end of a paper roll, a first circular flange integral with said annular flange and disposed normal thereto, said circular flange being adapted to frictionally engage an inner surface of a paper roll, an annular web portion having an outer periphery integral with said circular flange, a second circular flange integrally connected to said web portion at the inner periphery thereof, said second circular flange being adapted to be fric-

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tionally engaged over a mandrel, an annular cake of	2,293,785	Wintz Aug. 25, 1942
deodorizing material carried by said second circular	2,425,612	Gambler Aug. 12, 1947
flange and in abutment with said web portion, circum- ferentially spaced openings in said web portion permitting		FOREIGN PATENTS
the escape of fumes emanating from said cake of de- 5	279,605	Great Britain Nov. 3, 1927
odorizing material.	432,381	Great Britain July 25, 1935
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