United States Patent

MacLeod et al.

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[54] DISPOSABLE FLOOR DISPENSER FOR BIRD CAGE

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[52] **U.S. Cl.** **119/17**

[51] **Int. Cl.** **A01k 31/00**

[58] **Field of Search** 119/17, 18

[56] **References Cited**

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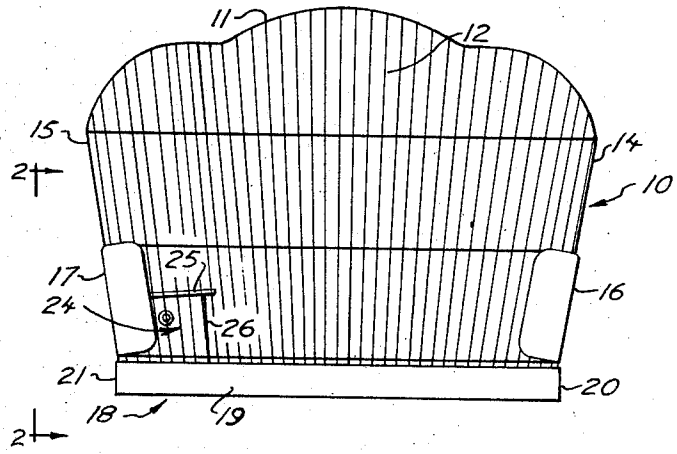
Primary Examiner—Aldrich F. Medbery

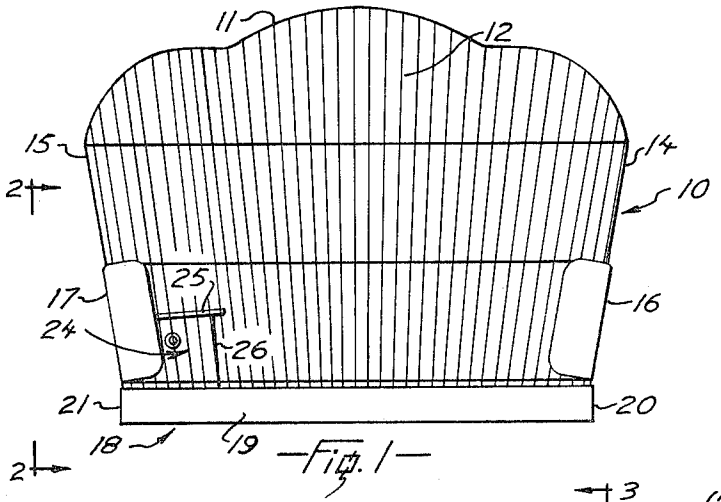
Attorney—Lyle G. Trorey

[57] **ABSTRACT**

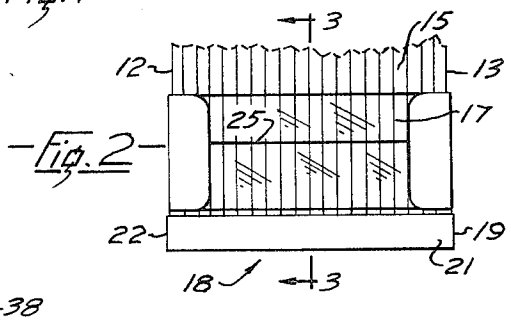
A disposable floor dispenser or accessary for fitting in a bird cage without structural modification to the cage. The dispenser has a spindle jammed between cage sidewalls to rotatably mount a roll of floor material, and a flap extending downwards and urged against the cage floor. Floor material from the roll passes between the flap and the floor, reducing inadvertent unrolling of the roll.

10 Claims, 5 Drawing Figures

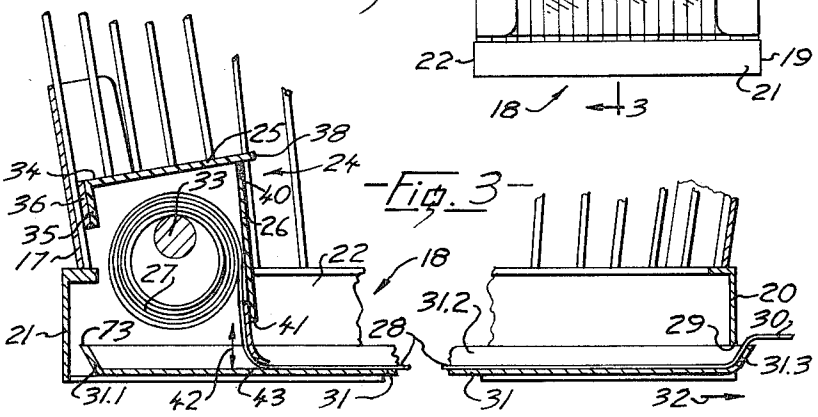




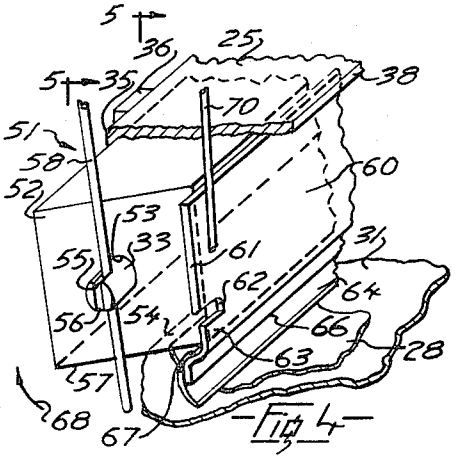
—Fig. 1—



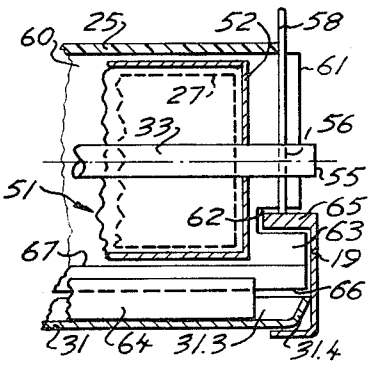
—Fig. 2—



—Fig. 3—



—Fig. 4—



—Fig. 5—

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DISPOSABLE FLOOR DISPENSER FOR BIRD CAGE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to dispenser for a disposable floor for a bird cage, not being restricted thereto.

2. Prior Art

Disposable floor dispensers are known, a disposable floor facilitating cleaning of bird cages. Known dispensers commonly hold a roll of floor material wound on a reel, the reel being mounted in the dispenser which is fitted externally of the cage. A portion of the floor material is unwound from the reel and passes through a wall of the cage, extends across the cage leaving the cage at an opposite wall either to be wound on a further reel, or to be disposed of. Prior art dispensers are commonly relatively large, compared to the cage itself, are fitted externally of the cage, and often they cannot be adapted easily to an existing cage.

SUMMARY OF THE INVENTION

The invention contemplates a floor dispenser that can be fitted within a cage without structural modifications to the cage. The dispenser houses a roll of floor material mounted on a spindle, outer ends of which are secured in walls of the cage. A lower edge of a side member of the dispenser has a resilient flap to increase resistance to unwinding of the roll.

A detailed description following, related to the drawings, gives exemplification of apparatus and method according to the invention which, however, is capable of expression in method and means other than those particularly described and illustrated.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation of a bird cage equipped with a dispenser for a disposable floor,

FIG. 2 is a fragmented end elevation of the cage seen from 2—2 FIG. 1,

FIG. 3 is a simplified fragmented section on 3—3 FIG. 2,

FIG. 4 is a simplified fragmented perspective of an end of a carton containing a roll of disposable floor material shown fitted in the dispenser,

FIG. 5 is a simplified fragmented section on a plane containing line 5—5 FIG. 4, showing a portion of the cage and a portion of the carton, the roll being removed.

DETAILED DISCLOSURE

FIGS. 1 and 2

A common bird cage 10 has a roof 11, front and rear side walls 12 and 13 and right hand and left hand end walls 14 and 15. Flanged end plates 16 and 17 are provided adjacent the end walls 14 and 15 and extend upwards from a base 18 of the cage. The base 18 has short upwardly extending flanges designed 19 through 22, which accept lower edges of the walls 12 through 15, which walls are of ordinary bird cage wire grill construction.

A dispenser or accessary 24, according to the invention, for a disposable floor has a top cover 25 and a side member 26, the dispenser extending between the side walls 12 and 13 and being fitted at one end of the cage, adjacent the end wall 15.

FIG. 3

The dispenser 24 contains a roll 27 of disposable floor material, an unrolled portion of which is designated 28, and extends between the flanges 19 through 22 (FIGS. 2 and 3) with an outer end 30 projecting beyond the flange 20 as shown. The floor material can be paper which will absorb moisture to some extent, or can be a flexible plastic sheet. The floor material lies on a slidable floor tray 31, the end 30 passing through a gap 29 between the floor tray and the flanges 20. The tray 31 has peripheral bent-up edges, 31.1 through 31.4, three only being shown in FIG. 3.

The roll 27 is mounted on a spindle 33 supported at its ends by portions of the wire grill of the side walls, later described with reference to FIG. 4. The spindle serves as a means to mount the roll of disposable floor material permitting unrolling of floor material from the roll.

The cover 25 of the dispenser has a flange 35 projecting downwardly from an edge 34, and is held adjacent the flanged end walls 17 of the cage by a magnet 36. Two magnets can be used to hold the cover 25, one at each outer end. An edge 38 parallel to the edge 34 projects beyond the side member 26 forming an eave which protects the roll 27 from bird droppings and other foreign matter.

The side member 26 has an upper edge 40 adjacent the cover 25, and a lower edge 41 spaced from the floor 31 by a distance 42, of the order of half an inch. A flexible flap 43 extends downwards from the edge 41 bearing against the floor 31. The floor material 28 is unwound from the roll 27 and passes between the flap 43 and the floor 31. The flap is urged against the floor material with sufficient force to prevent inadvertent unrolling of the roll and to produce a drag on the floor material as it is unwound, unwinding being effected by pulling the end 30 in a direction shown by an arrow 32. The side member 26 is held in place by means later described.

FIGS. 4 and 5, with references to FIG. 3

To facilitate fitting of the roll 27 and to reduce soiling, a carton 51 can be used to contain the roll. The carton is generally square in section and encloses the roll, a closed end 52 of the carton being provided with a hole 53 to accept an outer end 55 of the spindle 33. A longitudinal slot 54 (broken outline) in a lower wall 57 of the carton, permits withdrawal of floor material from the carton.

The end 55 of spindle 33 has a diametric slot of sufficient width to accept a cage wire element 58 of the side walls 12, the slot being similar to that of a common perch. An opposite end of the spindle protrudes similarly from the carton, the spindle 33 being jammed between opposite sidewire of the cage.

When using a carton, an alternative side member 60 is used in the dispenser. The member 60 has an upper end edge 61 extending outwards of the walls of the cage and a cut-out portion 62 forming a tongue 63. The member 60 has a lower edge 66 spaced above the tray 31, similar to the edge 41, and a flap 64, similar to the flap 43, both as described in FIG. 3. An end edge 63.1 of the tongue 63 is held adjacent an inner face of the flange 19 as will be explained. An opposite end (not shown) of the side member 60 has a similar end edge, a cut-out portion, and tongue. When the side member 60 is fitted as shown in FIG. 5, the cut-out portion 62 accepts a protruding lip 65 of the flange 19. Spacing between end edges of the tongues of the member 60 is somewhat greater than spacing between inner faces of the inner flanges 19 and 22 so that, when fitted, the side member 60 is bowed slightly, which bowing increases effective stiffness of the member 60.

The tray 31 (FIG. 3 only) has the peripheral bent-up edge 31.1 at an end of the tray external of the cage and the edge 31.3 at an opposite end having an upper edge 73. When the tray 31 is withdrawn from under the member 60 the upper edge 73 clears the lower edge 66 of the member 60, and the flap 64 bends upwards to permit the lip 31.1 to pass. Bending the flap 64 tends to produce an upward force on the flap 64, which upward force is restricted by the tongue 63 being forced against the lip 65.

The member 60 is bent to produce a horizontal step 67 which carries the lower wall 57 of the carton, supporting the carton above the tray 31, to provide clearance for the upper edge 73 of the lip 71, when inserting or withdrawing the tray. The step 67 also prevents rotation of the carton, the carton tending to rotate in a direction of an arrow 68 when floor material is withdrawn from a roll. The tendency above produces a downward force on the side member 60 being resisted by the lip 65.

Thus vertical movement of the member 60 is restricted by the lip 65 in the cut-out portion 62. Horizontal movement of the member 60 is restricted by the carton and a wire element 70 of the cage side wall, which element is held adjacent the side member 60.

The side member **26** (FIG. 3) has similar end edges, cut-out portions and tongues (not shown). However the step **67** of the member **60** is not required on the member **26** as the roll is fitted without a carton, the roll **27** hanging freely and being free to rotate. Any drag occuring during unrolling is reduced, the roll requiring support only from the spindles jammed between the side walls.

OPERATION

To fit the roll of floor material into the dispenser, the roll is threaded onto the spindle and the spindle is jammed between the side walls of the cage at the position as shown. The side member is elastically deformed slightly to fit between the flanges **19** and **22**, and the cut-out portions accept the protruding lips. If a carton is used, the lower wall of the carton rests on the step **67** of the member **60**, otherwise the roll **27** hangs freely as in FIG. 3. The portion **28** of the floor material is unrolled under the flap **43** and spread across the floor tray **31**, the outer end **30** extending through the gap **29** between the floor **31** and the flange **20**. The top cover **25** is placed on top of the side member, the magnets **36** holding it against the end wall **15**. The cage is now ready for use.

When the portion **28** of the floor material is soiled, it is replaced by gripping the end **30** to the edge **31.3** and pulling the tray, and with it the floor material, in the direction of the arrow **32**. Unsoiled floor material is unrolled from the roll, sliding under the flexible flap, which produces a drag on the floor material. The edge **31.1** of the tray passes under the flap, and the tray is withdrawn completely from the cage, relative positions of the tray and soiled floor material being substantially unchanged.

The soiled portion of the floor material is removed and the tray reinserted into the cage, passing underneath the unsoiled portion of floor material. The edge **31.1** bends the flap as it passes underneath, the tray being slid into operative position. Thus, when operative, a length of unsoiled floor material extends from the dispenser to the edge **31.3** of the tray, forming a clean floor.

When the carton is used, it rests on the step **67**, little difficulty being experienced in reinserting the tray under the dispenser. If no carton is used, the roll of floor material hangs freely, being easily displaced by the edge **31.1**, permitting insertion of the tray.

ALTERNATIVES AND EQUIVALENTS

As described, the dispenser **24** has two elements, namely the top cover **25** and the side member **26**. A two-element dispenser is more adaptable than a one-element dispenser if the dispenser is to be used with more than one type of cage where there is likely to be dimensional differences between cages. If the elements are made of a relatively soft plastic, it is generally quite easy for an owner, with a small amount of modification, to fit a dispenser to a particular cage.

However, if the dispenser is to be used in one size of cage only, a one-element dispenser can be used, that is the top cover **25** and the side member **26** are integral, dispensing with the eave as formed by the edge **38**.

Means alternative to the magnets can be used to secure the dispenser to the cage, for instance clips moulded in the top cover and adapted to fit around elements of the walls of the cage. The particular means of securing the housing inside the cage is immaterial to the invention, as is the number of elements from which the dispenser is made.

If the side member is made of a suitable flexible material, the flexible flap can be integral with it: or the flap can be made of a strip of sponge-like material. Any flap similar to the above, which can be urged against the floor to produce a drag on the floor material, and that can be displaced upwards by the edge of the tray, serves as a means to reduce inadvertent unrolling.

The roll **27** is wound anti-clockwise, that is, the portion **28** extends from a right hand side of the roll as seen in FIG. 3; when the roll is unwound, the carton has a tendency to rotate clockwise as above, and to be pulled downwards onto the tray. The step **67** serves as a means to hold the carton clear of the tray **31**, and as a means to prevent rotation of the carton in the direction of the arrow **68** (FIG. 5), when the floor material is pulled from the roll. Other means to hold the carton clear of the tray and to prevent rotation are known, such as pegs (not shown) protruding inwards from the side member **60** in which instance the step **67** can be eliminated. With this alternative, the side member **60** would be similar to the side member **26**, but would have pegs as described.

Many common cages are fitted with a slidable floor tray to facilitate cleaning, the tray having peripheral bent-up edges as described. With this type of tray, if the tray is not withdrawn concurrently with the floor material, particulate matter on the disposable floor would be trapped by the edge **31.3**. With some cages, a flat tray is fitted, peripheral bent-up edges being eliminated, and with this type of tray, the soiled floor material can be withdrawn through the gap **29** whilst the tray remains in the cage, particulate material being fed out of the cage on the soiled floor material.

We claim:

1. A bird cage accessary dispenser (**24**) for being inserted inside the cage (**10**) for dispensing a disposable floor for use in the cage, said cage having opposing wire side walls (**12,13**), opposing end walls (**14,15**), and a floor tray (**31**) extending between the side walls and end walls, the dispenser extending between two opposing side walls at one end of the cage, and including:

a. means (**33**) to mount a roll (**27**) of disposable floor material on opposite cage wall wires for providing for the unrolling of material from the roll across the floor,

b. means (**25, 26,38**) adjacent the roll to protect the roll from being soiled,

c. means (**43,64**) for reducing inadvertent unrolling, constructed and arranged so that, an unsoiled portion (**28**) of the floor material can be unrolled from the roll and extended across the floor tray of the cage so that an outer end of the material projects beyond one end wall of the cage permitting a portion of the floor material to be separated from the roll.

2. Structure as defined in claim **1** in which the means (a) to mount the roll includes a spindle (**33**) held by interference in sidewalls of the cage.

3. Structure as defined in claim **1** in which the means (b) to protect the roll from being soiled includes a dispenser having a top cover (**25**) and a side member (**26,60**) held between opposing side walls of the cage.

4. Structure as defined in claim **1** in which the means (c) to reduce inadvertent unrolling includes a flexible flap (**43,64**) extending from a lower edge (**41,66**) of the side member (**26,60**) of the dispenser, the flap being urged against the floor tray (**31**) of the cage so as to increase drag on the portion (**28**) of the floor material between the flap and the floor, when the floor material is unrolled from the roll.

5. Structure as defined in claim **2** in which the side member (**26,60**) of the dispenser has at opposite ends thereof

d. an upper end edge (**61**) extending outwards of the walls of the cage,

e. a cut-out portion (**62**) forming a tongue (**63**), adapted so that, when the side member is fitted in the cage, each cut-out portion accepts a protruding lip (**65**) of oppositely disposed flanges (**19,22**) of the side walls to restrict vertical movement of the side member.

6. Structure as defined in claim **3** in which the means (b) to protect the roll from being soiled includes:

f. a carton (**51**) to contain the roll, the carton having a longitudinal slot (**54**) in a lower wall (**57**) of the carton, to permit withdrawal of the floor material,

g. means (**67**) to support the carton above the floor tray and to prevent rotation of the carton when the floor material is withdrawn from the dispenser.

7. Structure as defined in claim **6** in which the means (g) to support the carton and to prevent rotation of the carton includes:

h. a step (67) in the side member (60) adapted to carry the lower wall (57) of the carton.

8. Structure as defined in claim 3 in which the top cover (25) has:

i. a flange (35) projecting downwardly magent an edge (34),

j. the flange (35) has a magnet (36) to hold the cover adjacent the end walls of the cage.

9. Structure as defined in claim 35 in which each tongue (63) has an end edge (63.1) spaced apart at a distance somewhat greater than spacing between inner faces of the flanges (19,22) so that, when fitted, the side member (26,60) is bowed slightly to increase effective stiffness.

10. Structure as defined in claim 6 in which the means (g) to support the carton and prevent rotation includes at least one peg projecting inwardly from the side member (60), adapted to support the lower wall (57) of the carton (51).

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