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Martin

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(54) **ANIMAL WATER DISPENSER**

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Related U.S. Application Data

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(51) **Int. Cl.**
A01K 7/02 (2006.01)

(52) **U.S. Cl.** **119/74**

(58) **Field of Classification Search** 119/74, 119/78–80, 72; 137/429, 430, 432; 47/79
See application file for complete search history.

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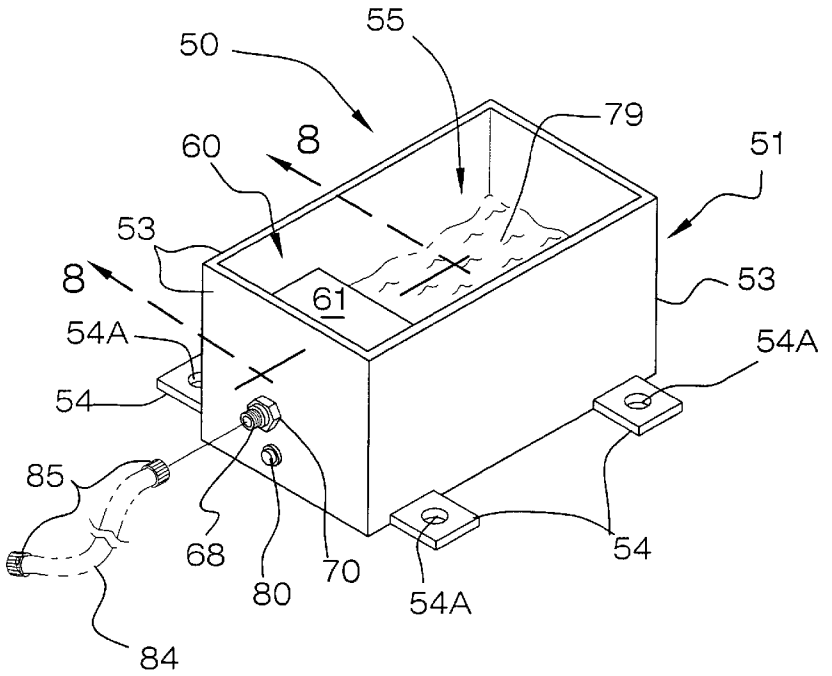
(57) **ABSTRACT**

An animal water dispenser according to the present invention includes a base having a base bottom, base walls extending from said base bottom and a base interior defined by said base bottom and base walls. A water valve cover is provided in said base interior. An inlet nipple is carried by said base. A fill valve is provided in said water valve cover. The fill valve has a water conduit communicating with the inlet nipple, a valve communicating with the water conduit, a float slidably carried by the water conduit and a float rod connecting the float to the valve for opening and closing the valve responsive to displacement of the float on the water conduit. A dispensing spout is provided in fluid communication with the valve of the fill valve, and a drain pipe is provided in fluid communication with the base interior.

11 Claims, 6 Drawing Sheets



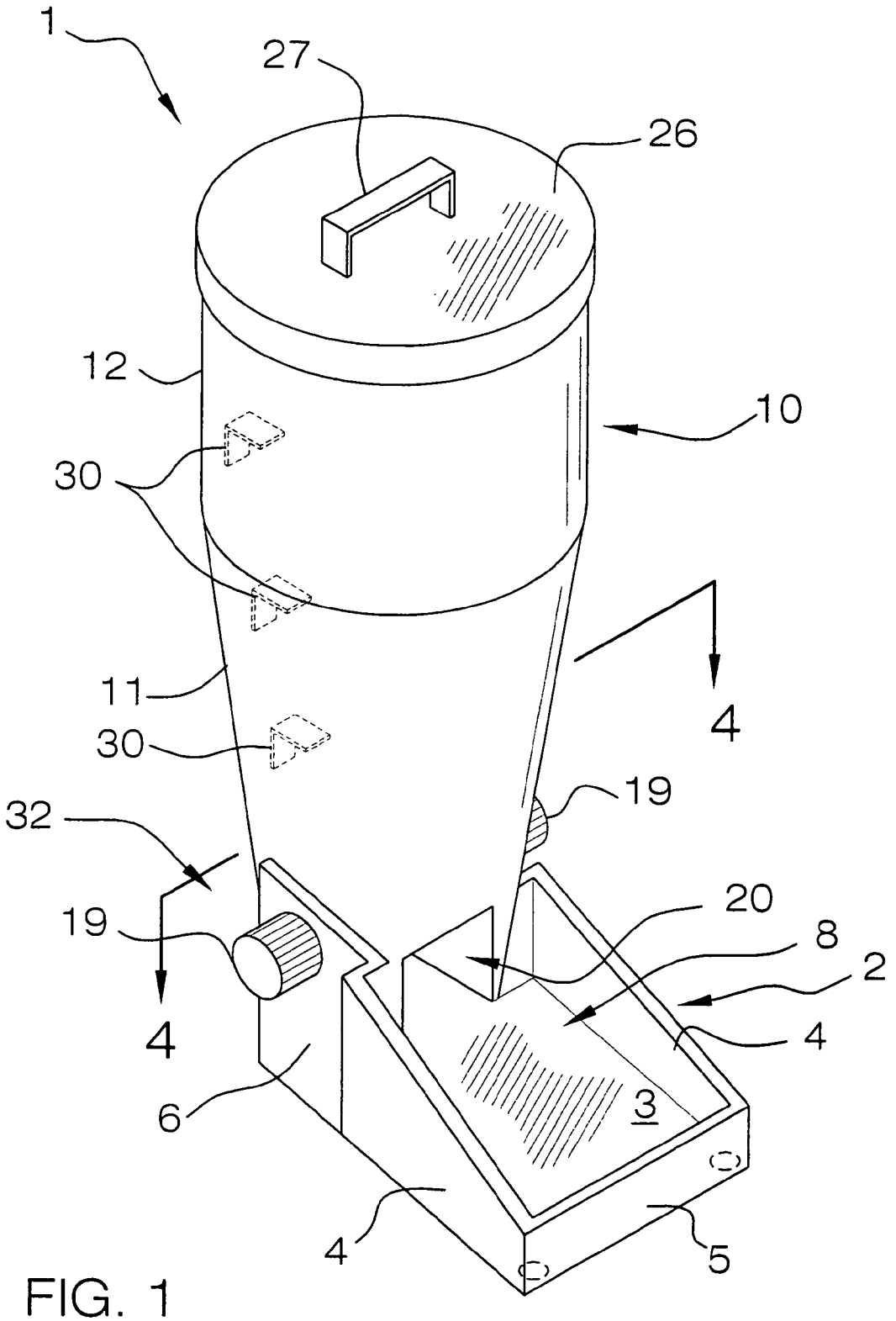


FIG. 1

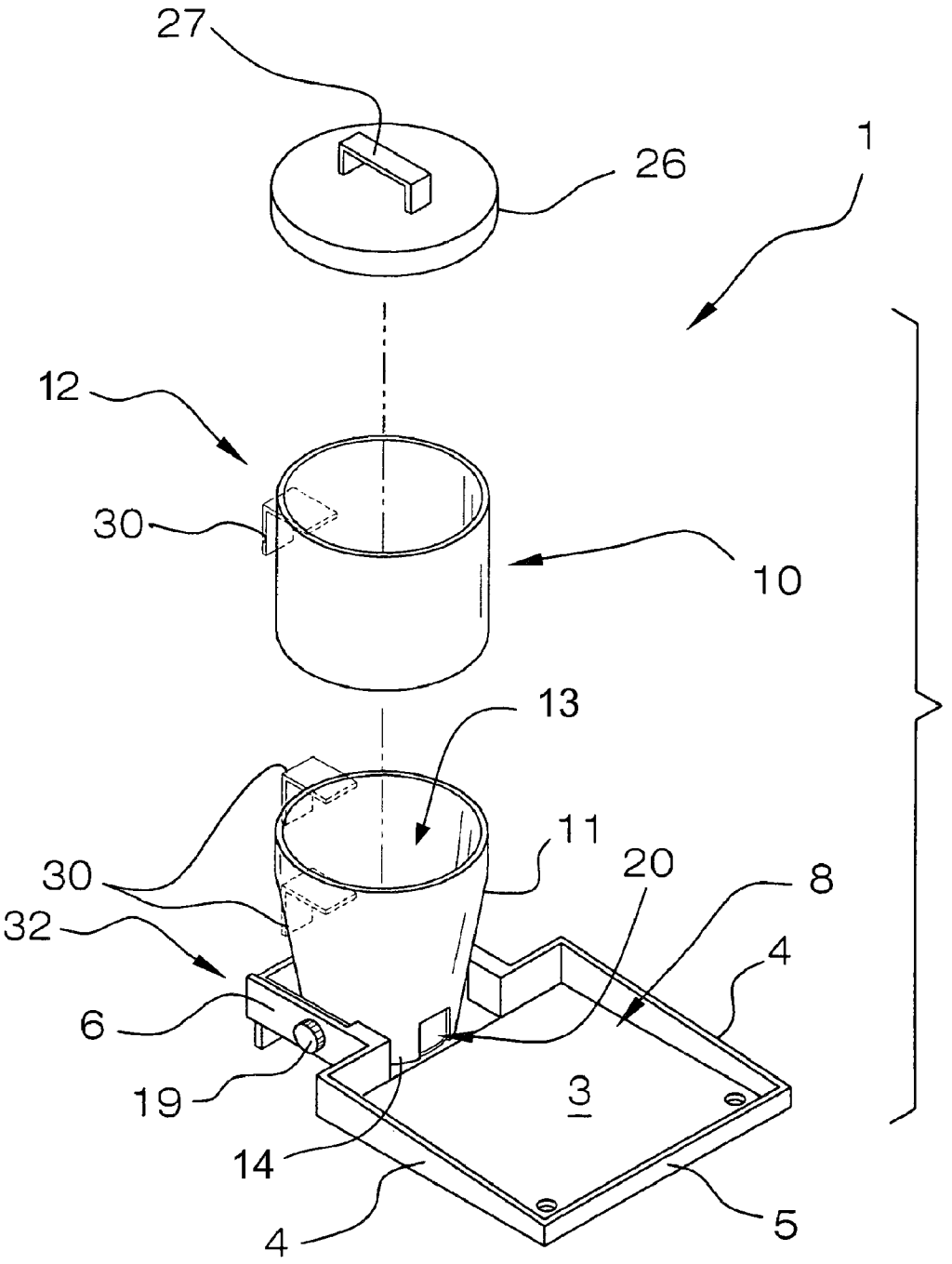


FIG. 2

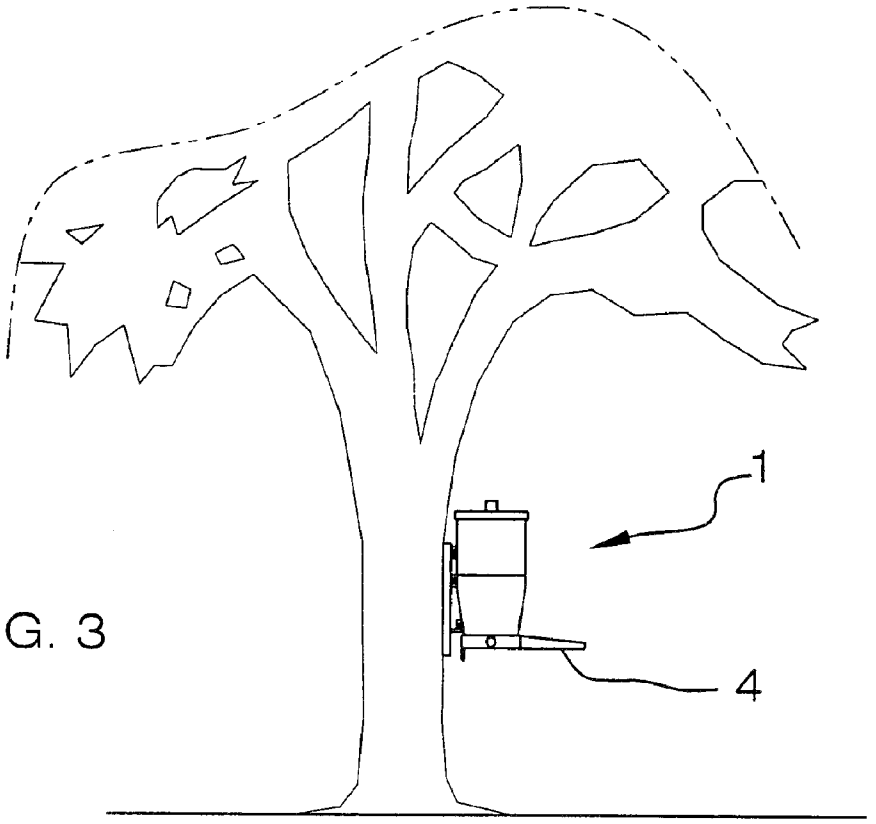


FIG. 3

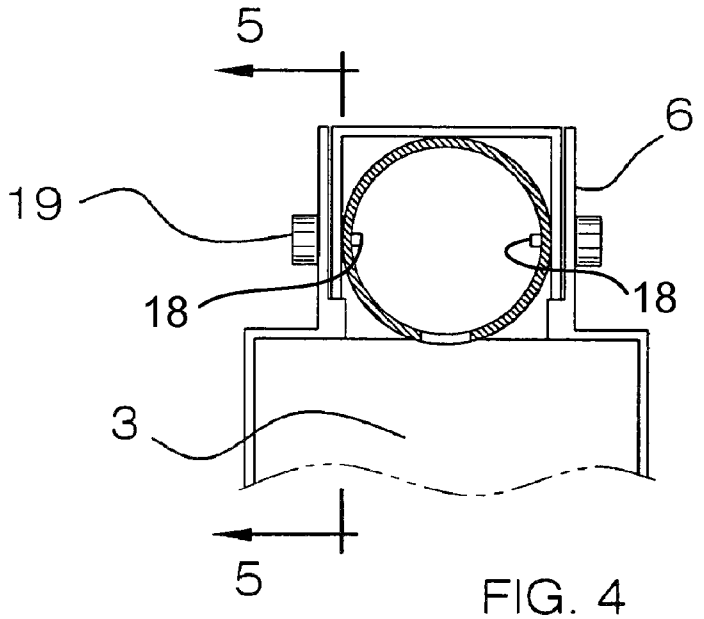


FIG. 4

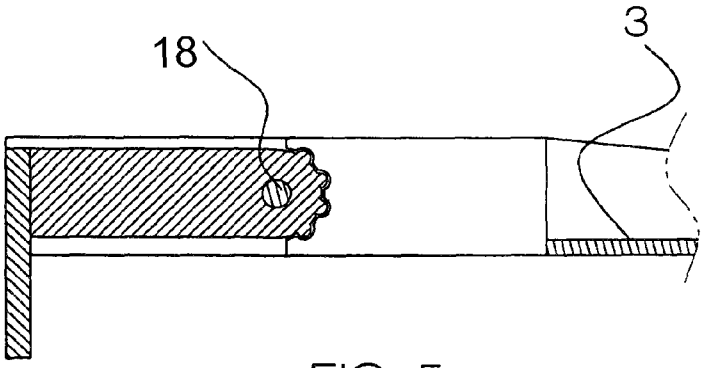


FIG. 5

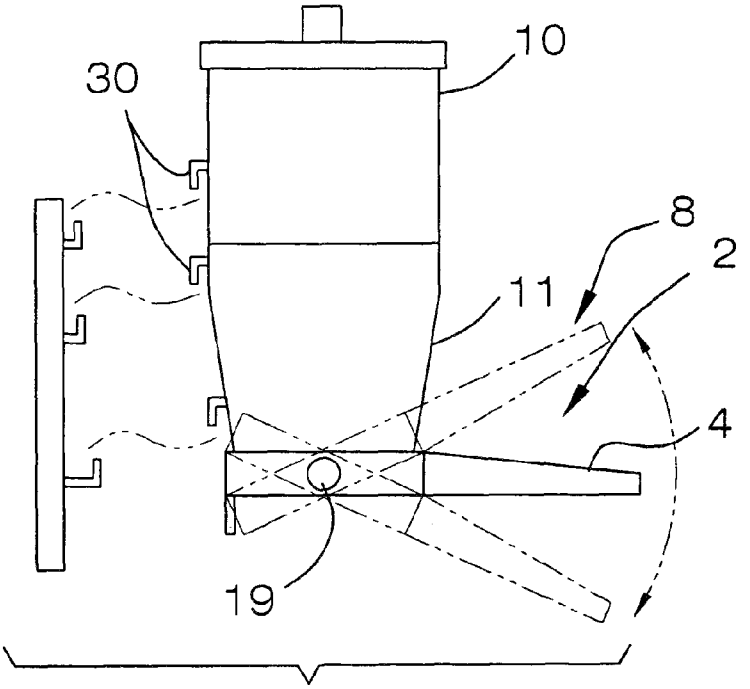


FIG. 6

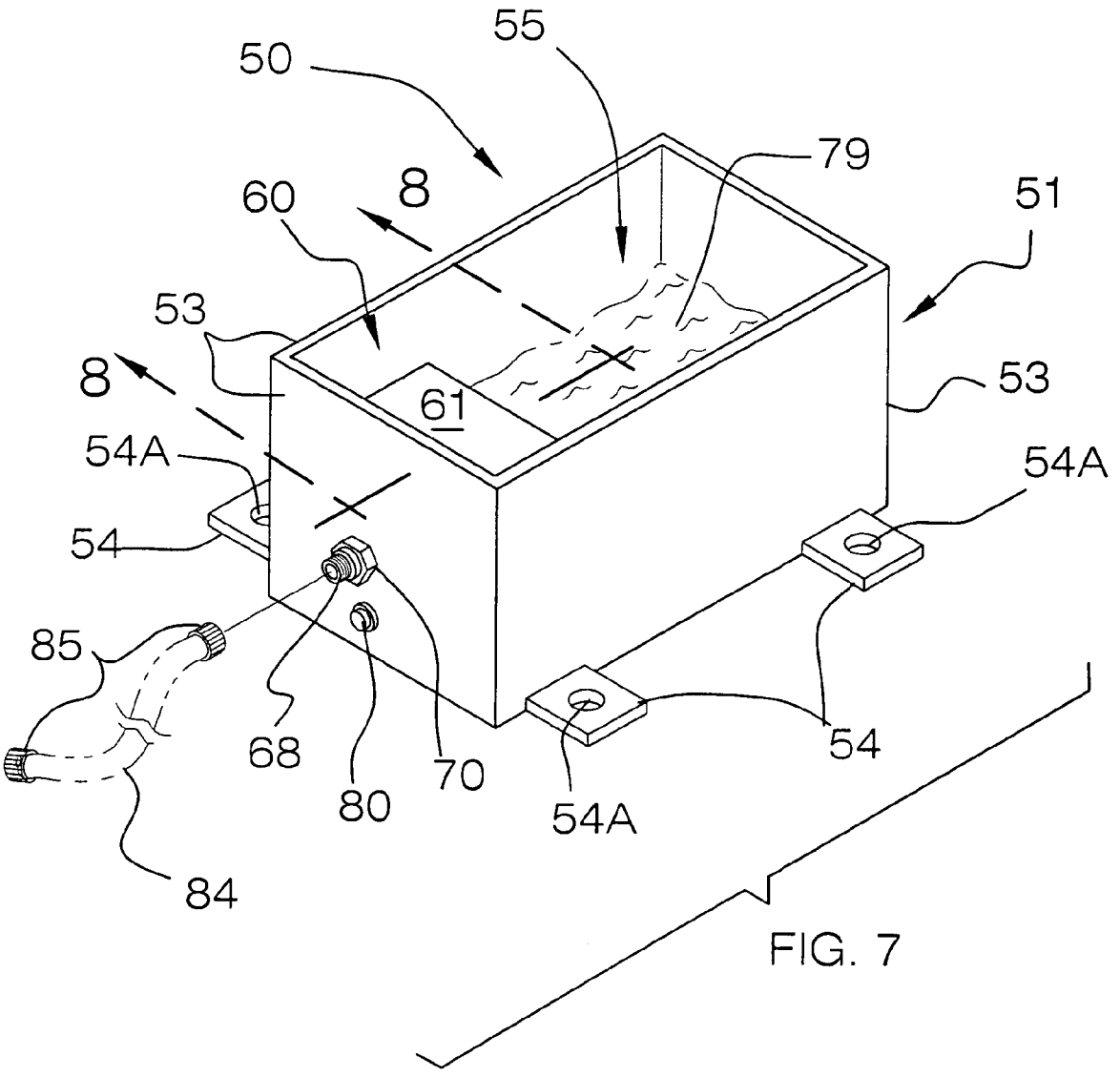


FIG. 7

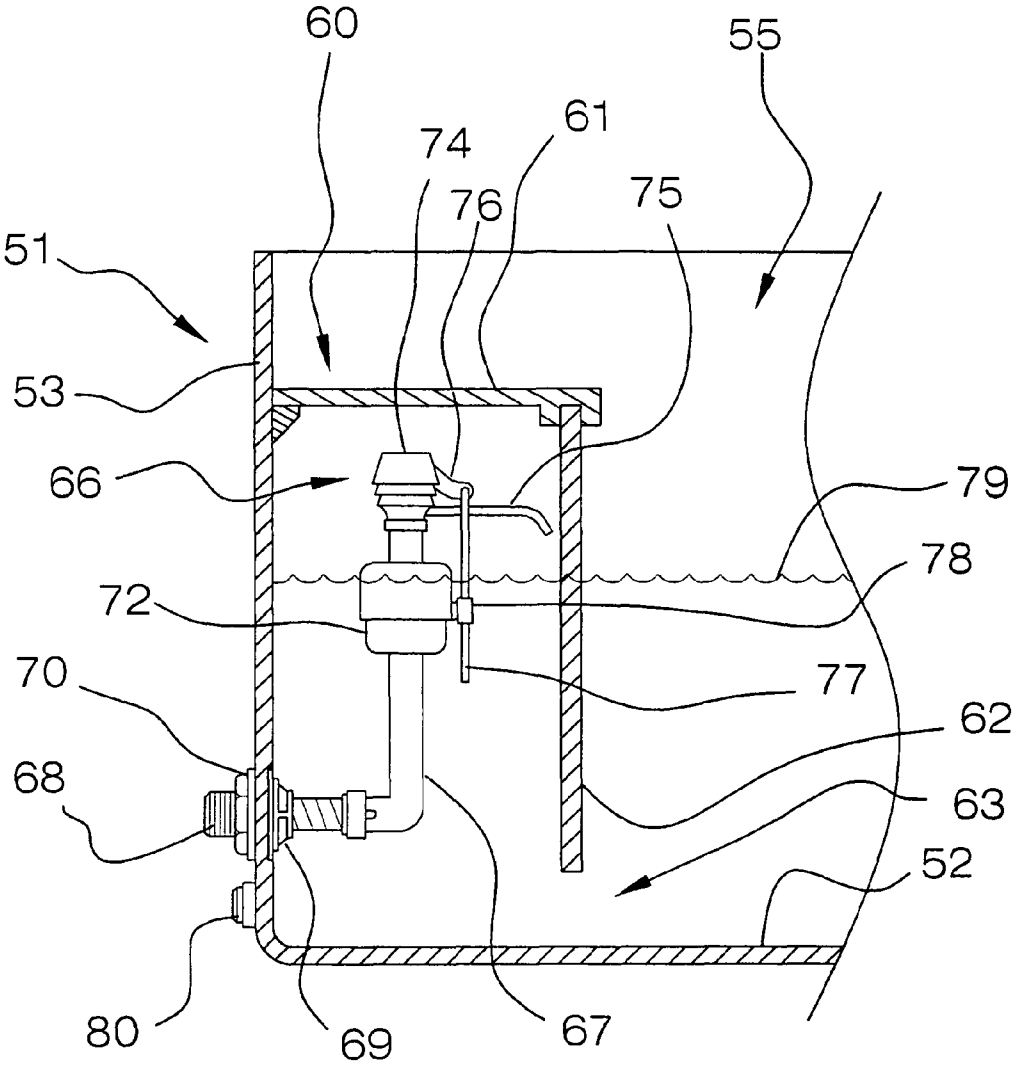


FIG. 8

ANIMAL WATER DISPENSER

CROSS-REFERENCE TO RELATED APPLICATION(S)

This application is a divisional of U.S. patent application Ser. No. 11/497,599, filed Aug. 2, 2006, now U.S. Pat. No. 7,913,647.

FIELD OF THE INVENTION

The present invention relates to animal feeders. More particularly, the present invention relates to an animal food dispenser and a water dispenser which dispense selected quantities of food and water, respectively, to animals.

BACKGROUND OF THE INVENTION

Animal food dispensers and water dispensers are known in the art for dispensing animal food to pets or other animals. Such animal food dispensers and water dispensers are useful for rationing or conserving food and water, respectively, to prevent wasting of food and water when fed to animals over a prolonged time period. An animal food dispenser and water dispenser are needed which are simple in construction and easy to use.

SUMMARY OF THE INVENTION

The present invention is generally directed to an animal food dispenser. The animal food dispenser includes a base having a base interior and a dispensing slot communicating with the base interior. A food hopper having a hopper interior is provided on the base. A food opening is provided between the hopper interior and the base interior. A food adjustor pivotally mounted in the hopper adjacent to the food opening is pivotal between closed and opened positions. A food gap of variable width is defined between the food adjustor and the food opening when the food adjustor is in the opened position.

The present invention is further directed to a water dispenser. The water dispenser includes a base having a base interior. A water valve cover is provided in the base interior. An inlet nipple is provided on the base, and a fill valve is provided in the water valve cover and communicates with the inlet nipple. A dispensing spout is provided in fluid communication with the fill valve. A drain pipe is provided in fluid communication with the base interior.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIG. **1** is a front perspective view of an illustrative embodiment of an animal food dispenser according to the present invention;

FIG. **2** is a sectional view of an illustrative embodiment of a food dispenser according to the present invention;

FIG. **3** is a side view of the food dispenser of FIG. **2**, mounted on a tree;

FIG. **4** is a sectional view, taken along section lines **4-4** in FIG. **1**, of the animal food dispenser;

FIG. **5** is a sectional view, taken along section lines **5-5** in FIG. **4**, illustrating multiple louvers between a food hopper and a base of the animal food dispenser in a closed configuration; and

FIG. **6** is a side view of the food dispenser illustrating multiple food tray positions.

FIG. **7** is a perspective view of the present invention water dispenser.

FIG. **8** is a cross-sectional view of the water dispenser.

DETAILED DESCRIPTION OF THE INVENTION

Referring initially to FIGS. **1-6**, an illustrative embodiment of the animal food dispenser according to the present invention is generally indicated by reference numeral **1**. The animal food dispenser **1** typically includes a base **2**. As shown in FIG. **1**, the base **2** may include a base bottom **3** and base side walls **4** and a base front wall **5** which extend upwardly from the base bottom **3**. The base bottom **3**, base side walls **4** and base front wall **5** together define a base interior **8**. Spaced-apart base flanges **6** may extend from the respective base side walls **4**, opposite the base front wall **5**.

A food hopper **10** is mounted between the base flanges **6** of the base **2**. The food hopper **10** includes a lower hopper portion **11** which is provided on the base **2** and an upper hopper portion **12** which is provided on the lower hopper portion **11**. The lower hopper portion **11** and the upper hopper portion **12** together define a hopper interior **13**, as shown in FIG. **4**. The lower hopper portion **11** includes an hopper opening **20** which communicates with the base **2**.

As shown in FIG. **2**, a hopper bottom **14** is provided in the lower hopper portion **11** of the food hopper **10**. A food adjustor **32** is provided in the food hopper **10**. The food adjustor **32** may include the hopper bottom **14**, the hopper opening **20** and the adjustment knob **19**. A knob rod **18** engages and extends through openings (not labeled) in the wall of the lower hopper portion **11** and the base flanges **6**, respectively, of the base **2**. A knob **19** is provided on at least one, and typically both, ends of the knob rod **18**. Accordingly, responsive to manipulation of the knob **19** on the knob rod **18**, the food tray **4** can be pivoted to open or close the opening **20** as shown in FIG. **6**, in which the food tray **4** is shown in three positions. As shown in FIG. **1**, a removable lid **26**, typically fitted with a handle **27**, may be fitted on the upper hopper portion **12** to selectively close the hopper interior **13**. At least one mount bracket **30** may be provided on the food hopper **10** to facilitate attachment of the food hopper **10** to a wall (not shown), for example.

In typical use of the animal food dispenser **1**, the food tray **4** is adjusted to the closed position shown in FIG. **6** to block the hopper opening **20**, typically by manipulation of the knob **19** attached to the knob rod **18**. The lid **26** is removed from the food hopper **10**, and a selected quantity of a particulate pet food (not shown) is placed in the hopper interior **13**. The lid **26** is typically replaced on the food hopper **10**. The pivot angle of the food tray **4** is adjusted from the closed position shown (FIG. **6**) to the open position (also shown in FIG. **6**) by manipulation of the knob **19**, to establish communication between the hopper interior **13** and the hopper opening **20**. Accordingly, the particulate pet food falls from the hopper interior **13** through the hopper opening **20** and into the base **2**, respectively. The food tray **4** is returned to the closed position when the desired quantity of pet food has fallen into the base **2**, thereby preventing further flow of pet food from the hopper interior **13** and into the base **2**.

Referring next to FIGS. **7** and **8**, an illustrative embodiment of a water dispenser according to the present invention is generally indicated by reference numeral **50**. The water dispenser **50** typically includes a base **51** having a base bottom **52** and upward-standing base walls **53** which define a base interior **55**. Multiple base stabilizers **54**, each typically provided with a fastener opening **54***a*, may be provided on the

base bottom **52** to support the base **51** on a supporting surface (not shown). A base cover (not shown) may be removably fitted on the base **51** to selectively close the base interior **55**.

A water valve cover **60** is provided in the base interior **55**. The water valve cover **60** includes a cover top **61** which extends from the base wall **53**, into the base interior **55**, and a cover wall **62** which extends downwardly from the cover top **61**. A bottom gap **63** is provided between the bottom edge of the cover wall **62** and the base bottom **52** to establish fluid communication between the interior of the water valve cover **60** and the base interior **55**.

A fill valve **66** is provided in the water valve cover **60**. The fill valve **66** includes a water conduit **67** which extends through the base wall **53** and is connected to a threaded inlet nipple **68** which is adapted to receive a threaded fitting **85** on a garden hose **84**, for example, as shown in FIG. **7**. A shank washer **69** and a lock nut **70** may be used to secure the water conduit **67** in the base wall **53**, as shown in FIG. **8**. A float **72** is slidably mounted for vertical displacement on the water conduit **67**. A valve **74** is provided on the upper end of the water conduit **67**, above the float **72**. A dispensing spout **75** extends from the valve **74**. A float rod **77** is attached to the float **72** through a water level adjustment clip **78**, which adjustably engages the float rod **77**. The upper end of the float rod **77** is further connected to the valve head **74** through a connecting arm **76**. Therefore, water can normally be introduced into the base interior **55** by attaching a garden hose (not shown) to the inlet nipple **68** to facilitate the flow of water through the water conduit **67**, valve **74** and dispensing spout **75**, respectively, and into the base interior **55**. Upon upward displacement of the float **72** on the water conduit **67**, responsive to a rising water level **79** in the water valve cover **50**, the float **72** pushes the float rod **77** and connecting arm **76** upwardly. The connecting arm **76**, in turn, closes the valve **74** to prevent the further flow of water from the water conduit **67**, through the dispensing spout **75** and into the base interior **55**. The position of the float rod **77** with respect to the water level adjustment clip **78** can be selected to maintain a selected depth of the water level **79** in the base interior **55**. A drain pipe **80** extends from the base interior **55**, through the base wall **53**, typically beneath the inlet nipple **68**, for the discharge of water from the base interior **55**. A valve (not shown) may be provided on the drain pipe **80** to facilitate the selective discharge of water from the base interior **55**.

In typical use of the water dispenser **50**, a water dish (not shown) is initially placed in front of the drain pipe **80**. The base interior **55** is filled with water by connecting a hose (not shown) to the inlet nipple **68**. The water is distributed from the hose, through the water conduit **67** and normally open valve **74**, and is dispensed into the base interior **55** through the dispensing spout **75**. As the water level **79** inside the water valve cover **60** gradually rises, the float **72** also rises on the water conduit **67**. Eventually, the float rod **77**, which rises with the float **72**, causes the connecting arm **76** to close the valve **74**. Consequently, water is incapable of continuing to flow from the water conduit **67**, through the valve **74** and into the base interior **55**.

Water is discharged from the base interior **55** and into the water dish (not shown) through the drain pipe **80**. As the water level **79** in the water valve cover **60** gradually declines, the float **72** descends on the water conduit **72** and pulls the float rod **77** downwardly. Consequently, the connecting the arm **76** again opens the valve **74**, again allowing the flow of water from the water conduit **67**, through the valve **74** and dispensing spout **75**, and into the base interior **55**, respectively. In the foregoing manner, the fill valve **66** maintains the desired water level **79** in the water valve cover **60** and base interior **55**, which water level **79** is selected by the vertical position of the water level adjustment clip **78** on the float rod **77**.

While the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications can be made in the invention and the appended claims are intended to cover all such modifications which may fall within the spirit and scope of the invention.

The invention claimed is:

1. A water dispenser comprising:

a base having a base bottom and vertical base walls defining a base interior:

a water valve cover provided in said base interior;

an inlet nipple carried by one of said base walls;

a fill valve mechanism supported by one of said base walls and positioned under the water valve cover, the fill valve mechanism including a water conduit in fluid communication with said inlet nipple, a valve provided in fluid communication with the said water conduit and a float slidably carried by said water conduit and operably engaging said valve for closing and opening said valve;

a drain pipe provided in fluid communication with said base interior, said drain pipe carried by one of said base walls, and

a dispensing spout provided in fluid communication with said fill valve mechanism, wherein said dispensing spout remains above a water level of the base interior during use.

2. The water dispenser of claim **1** further comprising a plurality of horizontal base stabilizers carried by said base.

3. The water dispenser of claim **1** wherein the fill valve mechanism further comprises a float rod carried by said float and engaging said valve.

4. The water dispenser of claim **3** wherein the fill valve mechanism further comprises a water level adjustment clip carried by said float wherein said float rod adjustably engages said water level adjustment clip.

5. The water dispenser of claim **4** wherein the fill valve mechanism further comprises a connecting arm connecting said float rod to said valve.

6. The water dispenser of claim **1** wherein the dispensing spout is not submerged by water contained within the base interior.

7. An animal water dispenser comprising:

abase having a base having, base walls extending vertically from said base bottom and a base interior defined by said base bottom and base walls;

a water valve cover provided in said base interior attached to one of said vertical base walls;

an inlet nipple carried by one of said vertical base walls;

a fill valve mechanism provided under said water valve cover proximate to the inlet nipple, said fill valve mechanism having a water conduit communicating with said inlet nipple, a valve communicating with said water conduit, a float slidably carried by said water conduit and a float rod connecting said float to said valve for opening and closing said valve responsive to displacement of said float on said water conduit;

a dispensing spout provided in fluid communication with said valve of said fill valve mechanism, said dispensing spout remaining positioned above a water level of the base interior during use; and

a drain pipe provided in fluid communicating with said base interior, said drain pipe carried by one of said vertical base walls.

8. The water dispenser of claim **7** further comprising a plurality of base stabilizers carried by said base.

9. The water dispenser of claim 7 wherein the dispensing spout is not submerged by water contained within the base interior.

10. A water dispenser comprising:

a base having a base bottom and vertical base walls to define a base interior, the base interior for containing a level of water;

a drain pipe provided in fluid communication with said base interior, said drain pipe carried by one of said base walls;

a water valve cover provided within said base interior;

an inlet nipple carried by one of said vertical base walls;

a fill valve mechanism supported by on of said vertical base walls and positioned under the water valve cover, the fill valve mechanism including a water conduit in fluid communication with said inlet nipple, a valve provided in fluid communication with the said water conduit, a float slidably carried by said water conduit and operably engaging said valve for closing and opening said valve, a float rod carried by said float and engaging said valve, a connecting arm connecting said float rod to said valve, and a water level adjustment clip carried by said float, wherein said float rod adjustably engages said water level adjustment clip; and

a dispensing spout provided in fluid communication with said fill valve mechanism, the dispensing spout remaining above the level of water during use.

11. The water dispenser of claim 10 wherein the dispensing spout is not submerged by water contained within the base interior.

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