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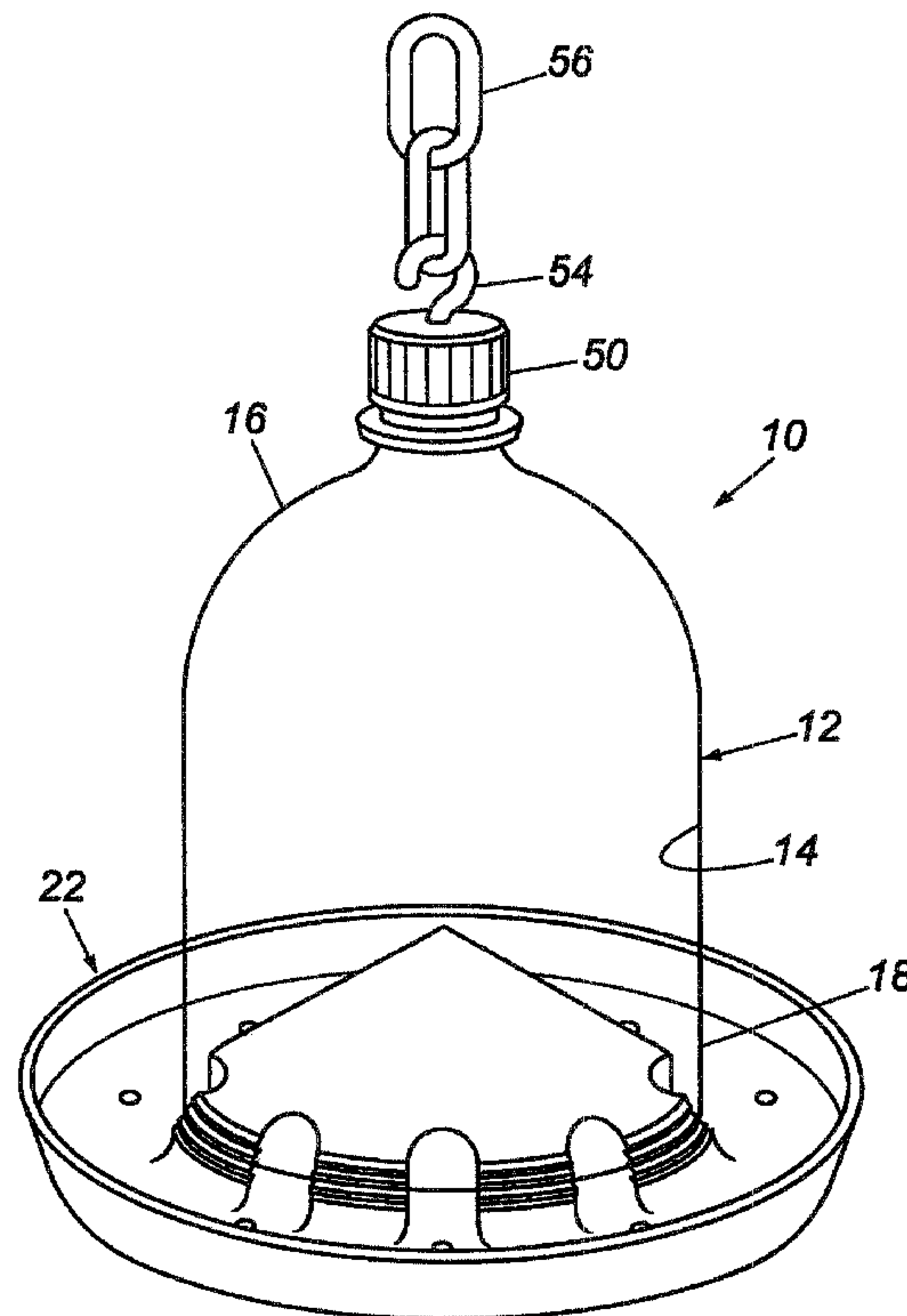
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(54) Title: BIRD FEEDER



(57) **Abrégé/Abstract:**

A bird feeding device comprising a hollow dome-shaped container for holding food, a food dispensing tray for closing the bottom of the dome-shaped container and dispensing and holding food, and a closure with a suspending chain or rope for closing the top of the dome-shaped container.



ABSTRACT OF THE DISCLOSURE

A bird feeding device comprising a hollow dome-shaped container for holding food, a food dispensing tray for closing the bottom of the dome-shaped container and dispensing and holding food, and a closure with a suspending chain or rope for closing the top of the dome-shaped container.

BIRD FEEDER

Be it known that I, Hong K. Park, a citizen of the United States, residing at 203 Southcrest Drive, Huntsville, Alabama 35802, has invented a new and useful "BIRD FEEDER."

BACKGROUND OF THE INVENTION

The present invention relates to the field of devices for feeding animals, and more particularly to devices which are hung on a tree or supported on a pole for feeding relatively small birds, such as finches, chickadees, bluebirds, etc., without waste of the feed.

While the prior art encompasses numerous devices for automatically dispensing feed to fowl, such devices have numerous defects and disadvantages which are obviated by the present invention. The following United States patent are exemplary of such prior art devices: 2,464,644 to Kwosh; 2,667,858 to Cussotti; 2,804,844 to Gigliotti; 4,691,665 to Hefner; 4,732,112 to Fenner et al.; 5,062,388 to Kilham; 5,095,847 to Coffey; and 5,775,257 to Park. All prior art devices above involved too many parts, and the process of the assembly and disassembly during cleaning and/or repair is complicated and hard. Some of them also require tools to be assembled and disassembled.

The present invention overcomes these deficiencies and disadvantages in that it provides a new and improved bird feeder that involves less parts and can be easily and quickly assembled and disassembled without any tools.

SUMMARY OF THE INVENTION

The present invention provides an animal feeding device that is particularly usable for feeding birds and which includes a container which defines a food reservoir for holding food to be automatically dispensed therefrom.

The animal feeding device preferably comprises three basic components, namely, a hollow dome-shaped container for holding food; a food dispensing tray for dispensing and holding food comprising a peripheral skirt and a central portion with a plurality of food dispensing channels around that extends upwardly from the tray into the lower extremity of the hollow dome-shaped container so as to close off the bottom of the hollow dome-shaped container and to provide a plurality of food dispensing openings; and a chain or rope for supporting or suspending the feeding device.

It is a primary object of the present invention to provide a bird feeder device wherein less component parts are involved than other general types of bird feeders, and the essential component parts are simplified and are easily and quickly assembled, disassembled, and replaced without using any tool.

It is a further object of the present invention to provide a bird feeder device which dispenses food automatically without undue waste and can be inexpensively constructed mostly from beverage containers which are normally disposed of as solid waste.

These objects as well as other objects of the present invention will become more readily apparent after reading the following description in conjunction with the accompanying drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of the bird feeder of the present invention.

Figure 2 is a front elevational exploded view of the bird feeder of the present invention.

Figure 3 is a front elevational view, partially broken away and in section, showing the mating of the hollow dome-shaped container, the food dispensing tray, and a supporting or suspending device.

Figure 4 is a perspective view of the food dispensing tray.

Figure 5 is a partial cross-sectional, generally side view showing the details of the food dispensing tray including the plurality of grippers for maintaining the tray within the lower portion of the reservoir.

Figure 6 is a close-up, cross-sectional view showing the intersection of the reservoir and the plurality of grippers as depicted in Figure 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, particularly Figures 1 and 2 thereof, reference numeral 10 generally designates the preferred embodiment of the bird feeder of the present invention. Still referring to Figures 1 and 2, bird feeder 10 generally comprises a hollow dome-shaped container 12, a food dispensing tray 22, an internally threaded nut 48, an externally threaded eyebolt 54, a cap 50, and a chain or rope 56.

As still best seen in Figures 1 and 2, hollow dome-shaped container 12 includes an inner wall 14, an upper section 16 having an opening 20 surrounded by external threads (not numbered), and a lower section 18.

As best seen in Figures 4-6, a food dispensing tray 22 includes a lower tray section 38 having a peripheral skirt 40 with a plurality of small openings 42 and an upwardly extending marginal wall 44, an upwardly extending central section 24 having a plurality of food dispensing channels 34, a lower annular portion 26 with a marginal shoulder 28 therein, a slightly tapered upper annular portion 30 with a plurality of grippers 32 therein, and a conically-shaped top portion 36.

The components of bird feeder 10 are best assembled from its exploded separated condition as shown in Figure 2 to its assembled joined condition as shown in Figures 1 and 3 in the following order:

- a. First, the slightly tapered upper annular portion 30 and the conically-shaped top portion 36 of the food dispensing tray 22 are inserted within the lower section 18 of the dome-shaped container 12 until the plurality of grippers 32 penetrates the inner surface of the lower section 18 to form bumps to secure the dome-shaped container 12 and/or until the edge (not numbered) of the lower section 18 engages the top of the shoulder 28 of the food dispensing tray 22.
- b. The container 12 is filled with seed by pouring the same through the opening 20 of container 12, with the seed being spread outwardly toward the food dispensing channels 34 of the food dispensing tray 22 due to the generally conical shape of the top portion 36 of the food dispensing tray 22.
- c. The threaded eyebolt 54 is inserted through the central opening 52 in the cap 50, and the threaded nut 48 is threadably engaged with the threads of the eyebolt 54 to secure the cap 50 to eyebolt 54.
- d. The eyebolt 54 is then engaged to chain or rope 56 for suspension of the bird feeder 10 from a tree limb or a standard.

When assembled as shown in Figure 1, and with bird feed within the container 12, the combination of gravity and the conically-shaped top 36 of the food dispensing tray 22 forces the feed out toward the food dispensing channel 34 of the food dispensing tray 22 so that the feed goes down through the food dispensing channels 34 to the peripheral skirt 40 of the food dispensing tray 22, and birds standing on the edge 46 of the wall 44 of the tray 22 can peck the feed. The small opening 42 provides the passage for rainwater.

It has been found that the container 12 and the food dispensing tray 22 of the bird feeder 10 can be held together by frictional fit. The slightly tapered annular upper portion 30 accepts the lower section 18 of the container 12 of varying internal dimensions, and the grippers 32 secure the lower section 18 to the upper annular portion 30. It has also been found

that the container 12 can be made of used plastic soft drink bottles of the two- and/or three-liter size.

While a particular embodiment of this invention has been shown in the drawings and is described above, it will be appreciated that the invention is susceptible to modifications, variations, and adaptations without departing from the proper scope and fair meaning of the accompanying claims.

CLAIMS

What is claimed is:

1. A bird feeder comprising:

a reservoir including an upper section with a central opening therein and a closure means for closing said central opening and an open-ended lower section;

an external food dispensing tray capable of maintaining a frictional fit within said open lower section of said reservoir, wherein said food dispensing tray further includes an upwardly extending central section having an annular base portion with a shoulder, a tapered annular mid portion with a plurality of grippers, and a conical-shaped upper portion;

wherein said food dispensing tray includes a generally flat closed bottom having a diameter greater than that of said reservoir and an upwardly extending outer annular wall; and

wherein said plurality of grippers comprise a series of annular ridges and valleys located about said tapered annular mid portion of said upwardly extending central section and wherein said grippers enable said friction fit between said tapered annular mid portion and said open-ended lower section of said reservoir; and

wherein said upwardly extending central section includes a plurality of food dispensing channels about its outer periphery for communicating food from said reservoir to said food dispensing tray.

2. A bird feeder as set forth in claim 1, wherein said generally closed flat bottom of said food dispensing tray further comprises a plurality of openings to allow for the removal of rain water therefrom.
3. A bird feeder as set forth in claim 1, wherein said annular ridges include an upper and lower surface and said upper and lower surfaces intersect to form a sharp edge for gripping the interior surface of the open-ended lower section of the reservoir.
4. A bird feeder as set forth in claim 1, wherein said reservoir is made of a portion of a standard plastic soft drink bottle of a two-or-three litre size.
5. A bird feeder comprising:
 - an open-ended reservoir with a central upper opening therein and a closure means for closing said central upper opening;
 - an external food dispensing tray capable of maintaining a frictional fit within said open-ended reservoir, wherein said food dispensing tray further includes an upwardly extending central section for insertion within said open-ended reservoir, wherein said central section includes a tapered annular portion with a plurality of grippers, said grippers capable of maintaining said friction fit with an internal surface of said reservoir;
 - wherein said food dispensing tray includes a generally flat closed bottom having a diameter greater than that of said reservoir;

wherein said plurality of grippers comprise a series of annular ridges and valleys located about said tapered annular portion of said upwardly extending central section; and

wherein said upwardly extending central section includes a plurality of food dispensing channels about its outer periphery for communicating food from said reservoir to said food dispensing tray.

6. A bird feeder as set forth in claim 5, wherein said generally closed flat bottom of said food dispensing tray further comprises a plurality of openings to allow for the removal of rain water therefrom.

7. A bird feeder as set forth in claim 5, wherein said upwardly extending central section further comprises:

an annular base portion with a shoulder; and

a conical-shaped upper portion.

8. A bird feeder as set forth in claim 5, wherein said annular ridges include an upper and lower surface and said upper and lower surfaces intersect to form a sharp edge for gripping the interior surface of the open-ended reservoir.

9. A bird feeder comprising:

a reservoir including an upper section with a central opening therein and a closure means for closing said central opening and an open-ended lower section;

an external food dispensing tray capable of maintaining a frictional fit within said open lower section of said reservoir, wherein said food dispensing tray further includes a tapered annular portion with a plurality of grippers and a conical-shaped upper portion;

wherein said food dispensing tray includes a generally flat closed bottom having a diameter greater than that of said reservoir and an upwardly extending outer annular wall;

wherein said plurality of grippers comprise a series of annular ridges and valleys located about said tapered annular portion for maintaining a friction fit between said external food dispensing tray and an interior surface of said open-ended lower section of said reservoir ; and

wherein said tapered annular portion includes a plurality of food dispensing channels about its outer periphery for communicating food from said reservoir to said food dispensing tray.

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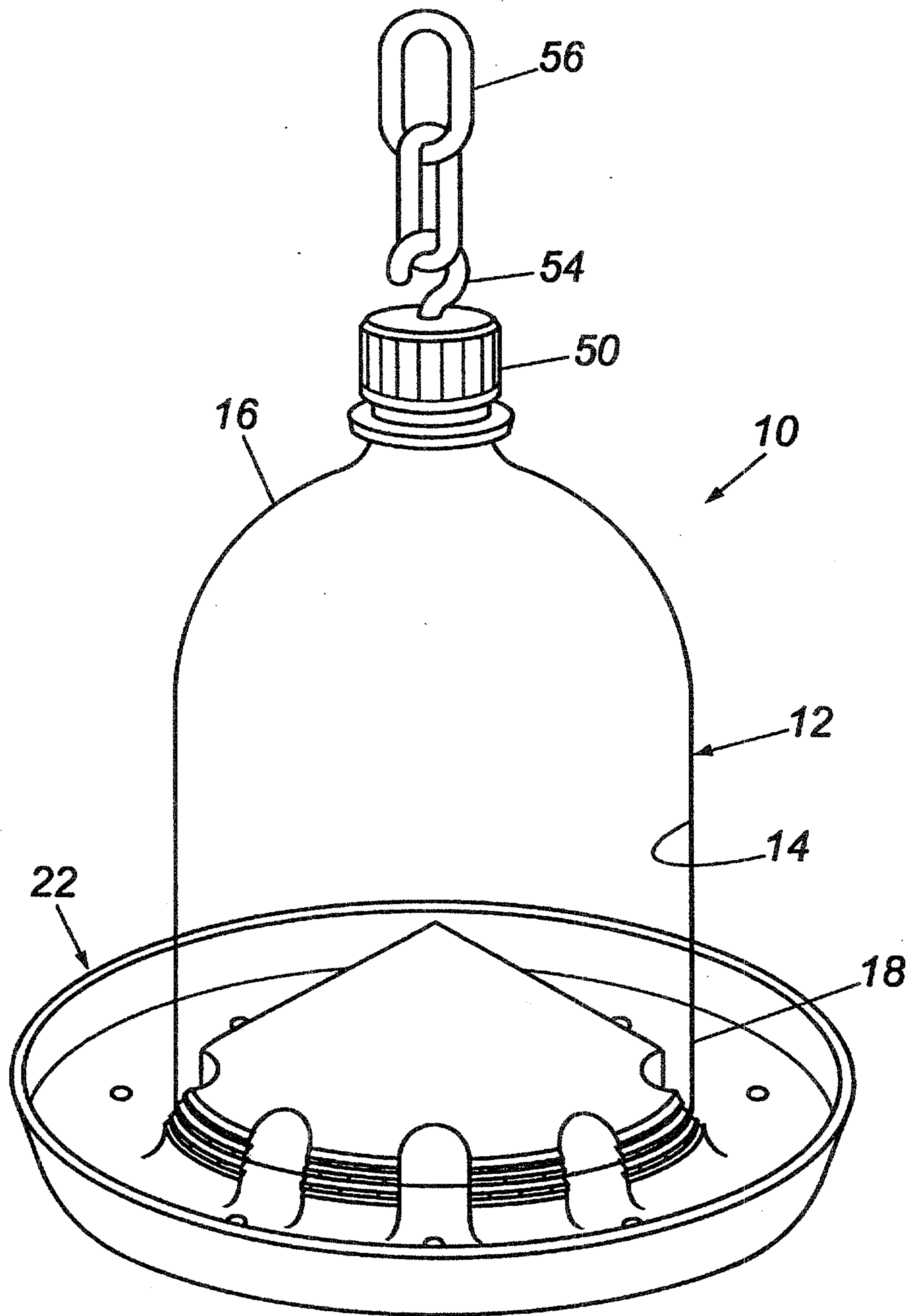


FIG. 1

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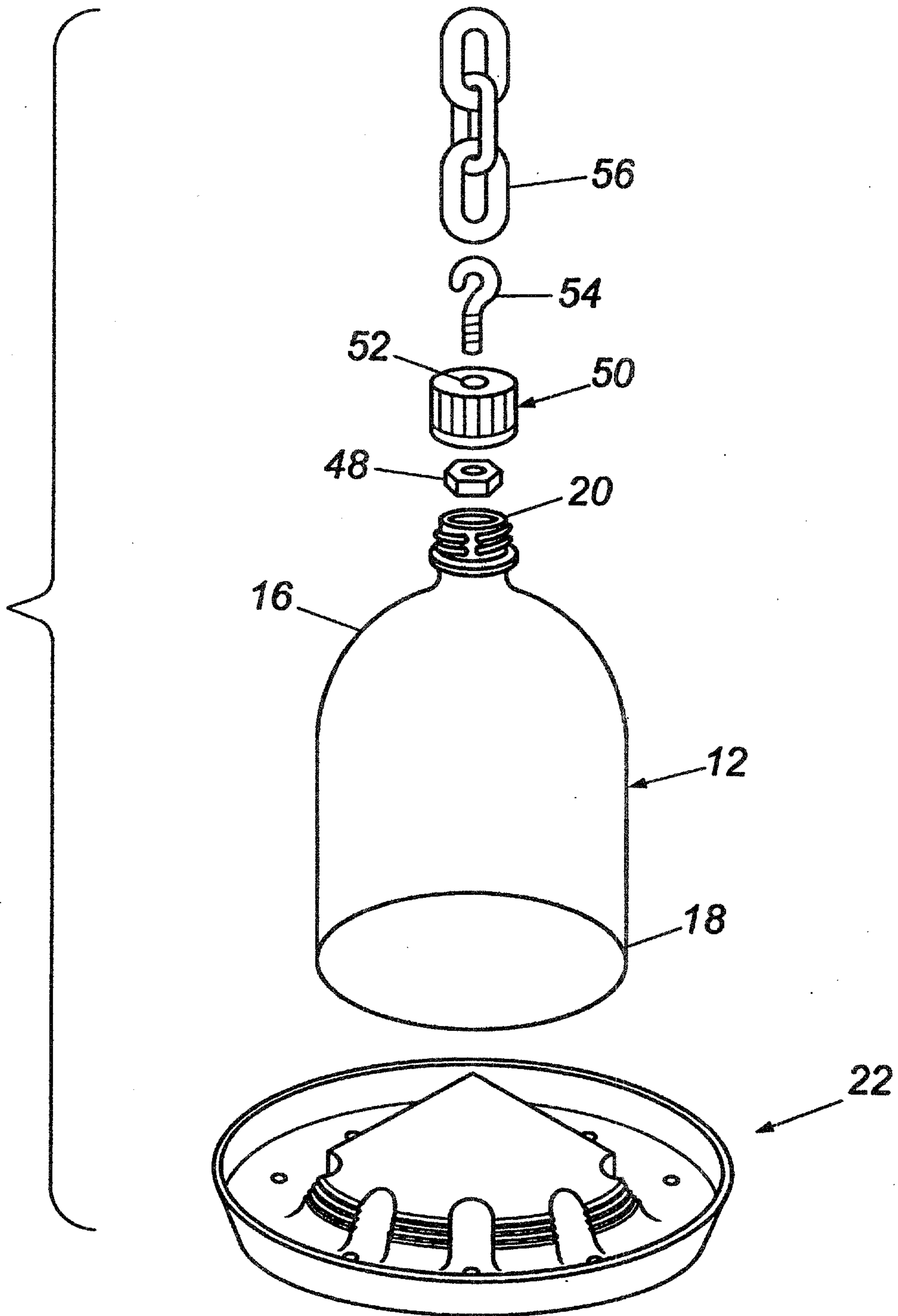
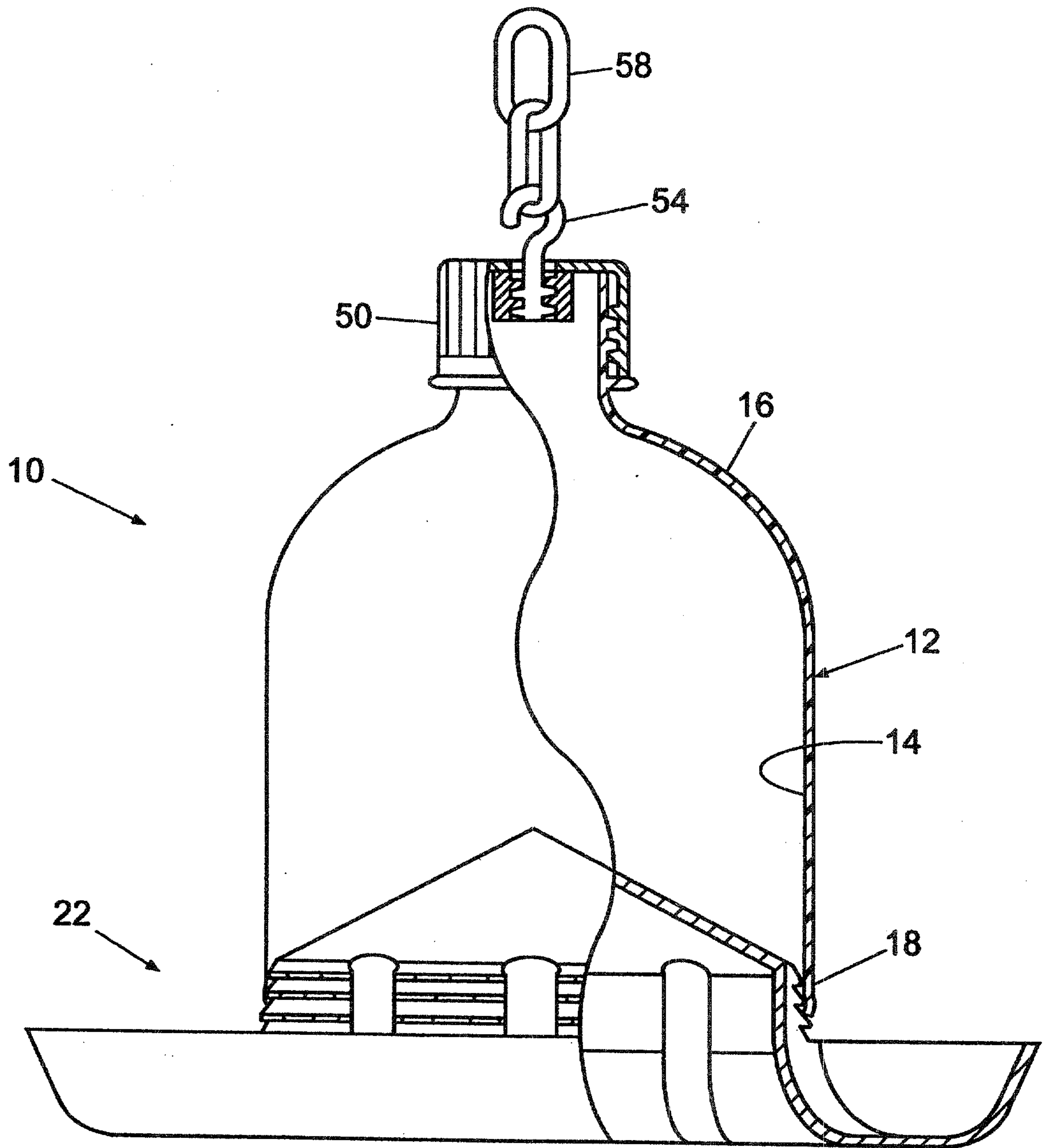
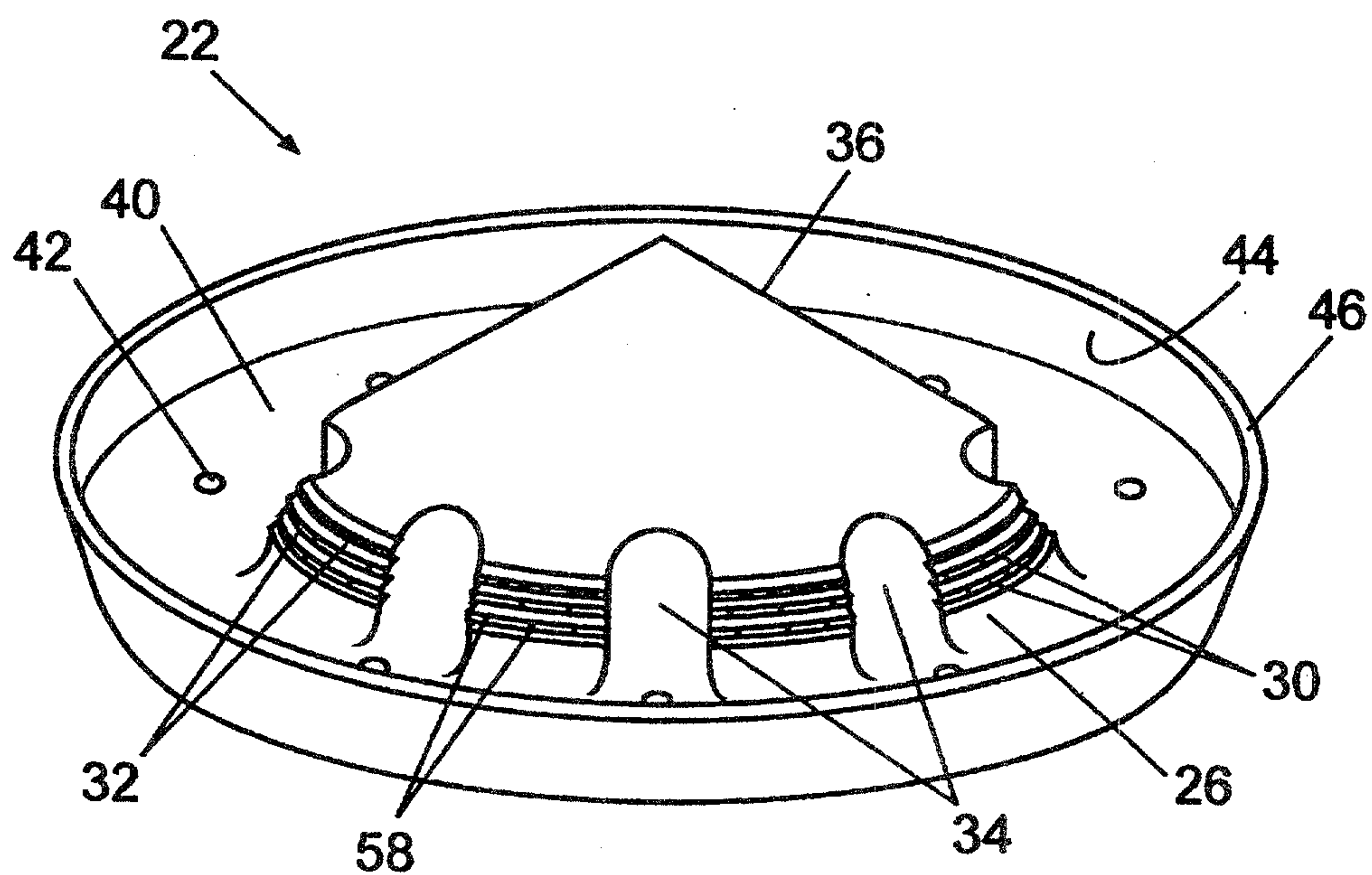
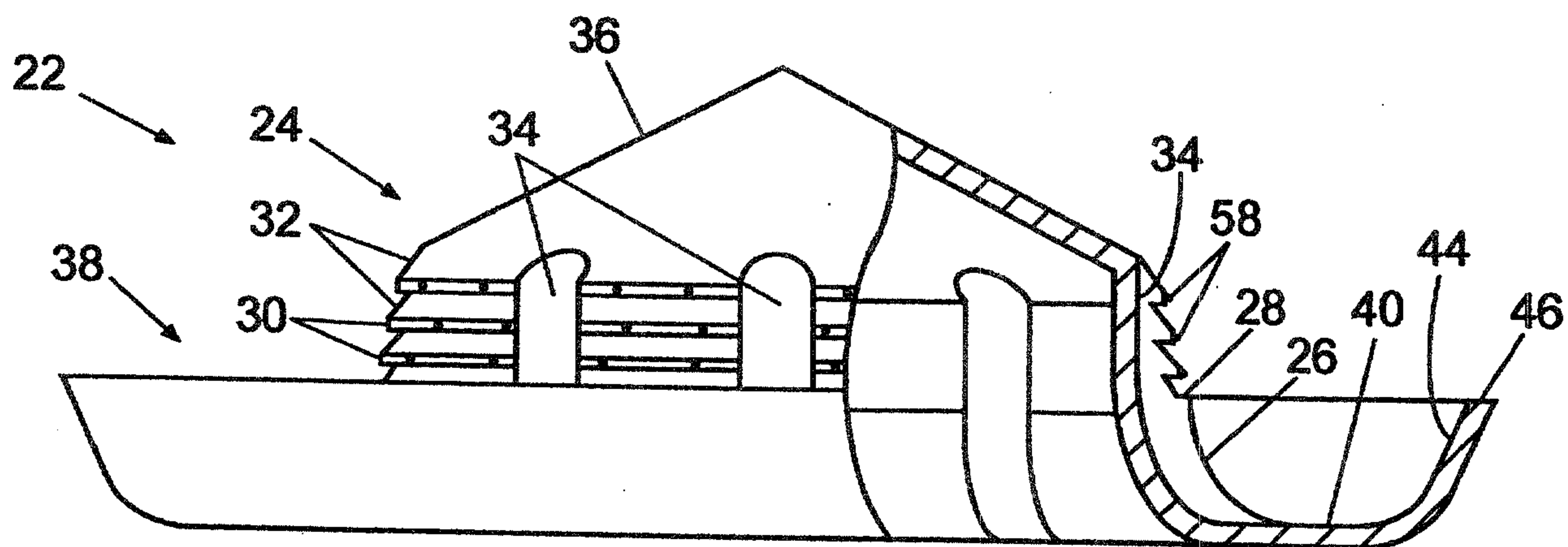


FIG. 2

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**FIG. 3**

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**FIG. 4****FIG. 5**

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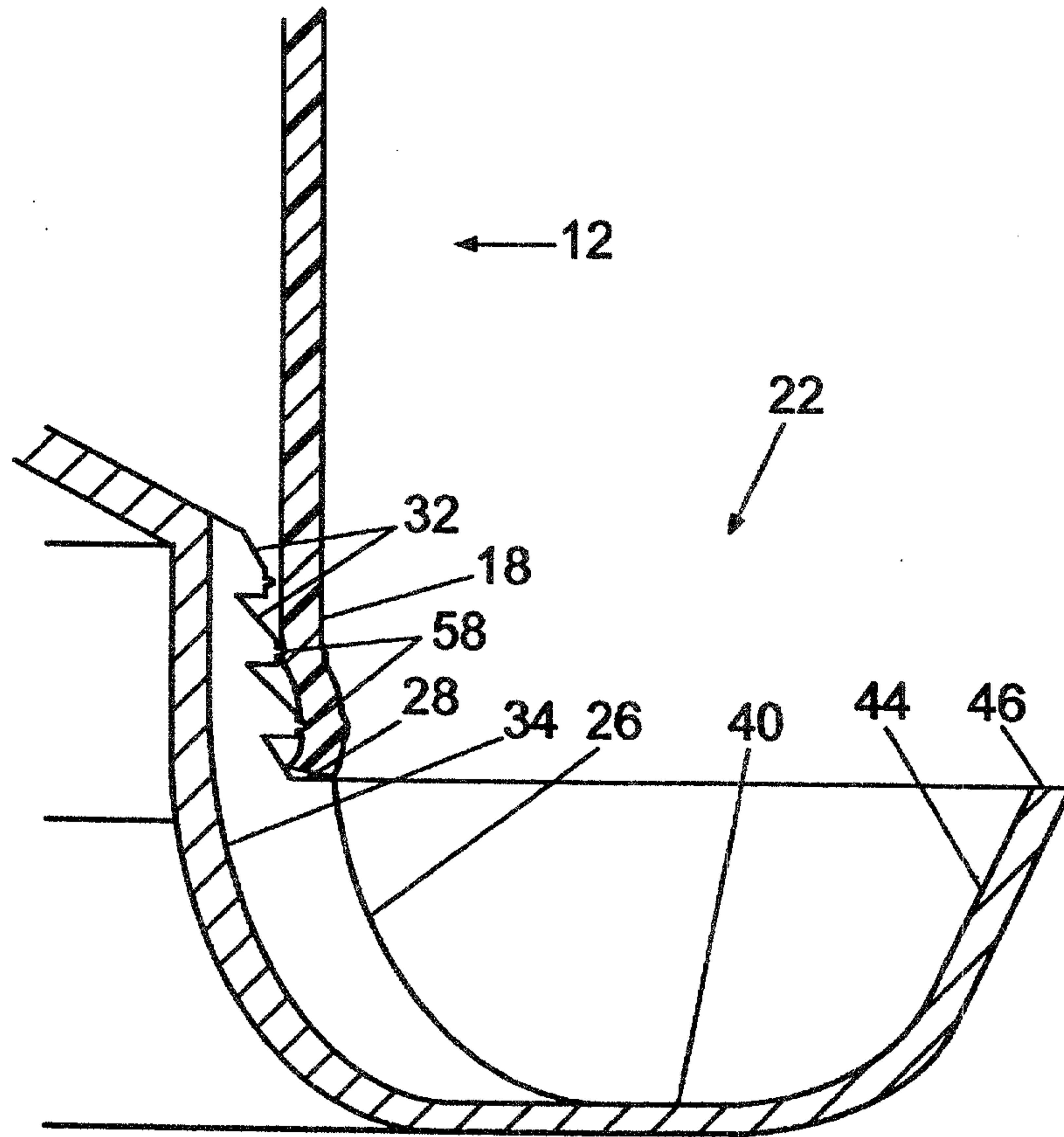


FIG. 6

