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(12) **United States Patent**
Suteerawanit

(10) **Patent No.: US 12,527,311 B1**
(45) **Date of Patent: Jan. 20, 2026**

(54) **COMPOSABLE INSERTS FOR DIY TRAPS**

(71) Applicant: **Nick Suteerawanit**, Laguna Woods, CA (US)

(72) Inventor: **Nick Suteerawanit**, Laguna Woods, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **19/360,663**

(22) Filed: **Oct. 16, 2025**

(51) **Int. Cl.**
A01M 23/08 (2006.01)
A01K 69/08 (2006.01)

(52) **U.S. Cl.**
CPC ***A01M 23/08*** (2013.01); ***A01K 69/08*** (2013.01)

(58) **Field of Classification Search**
CPC A01M 23/08; A01K 69/08
See application file for complete search history.

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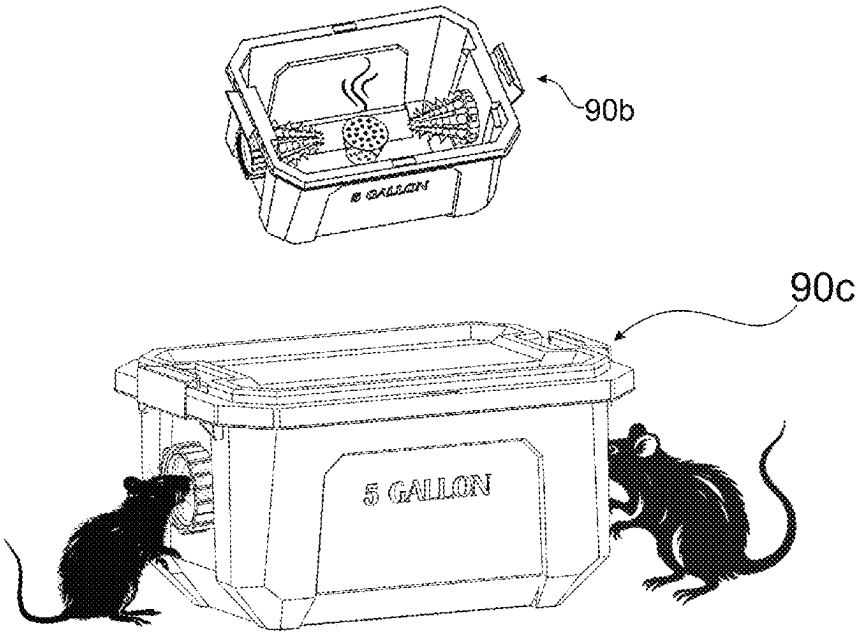
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Primary Examiner — Richard G Davis
(74) *Attorney, Agent, or Firm* — AGK Patent & Trademark Law; Philip Y Kim

(57) **ABSTRACT**

A composable insert system for converting a standard container, such as a storage tote, into a Do-It-Yourself (DIY) live trap. The system includes three modular components: a main flange body with an external thread and receiving slots, a plurality of individual thorny spike elements with bases that snap into the slots, and a lock nut. When assembled through an aperture cut into a container, the flange body is secured by the lock nut, and the attached spikes form a conical, one-way passage into the container's interior. The modular design allows for cost-effective manufacturing via simple molds and provides a versatile, scalable solution for users to create customized traps of various sizes for pests like rodents and fish. For aquatic use, the resulting trap can be made buoyant with foam or weighted to sink.

20 Claims, 25 Drawing Sheets



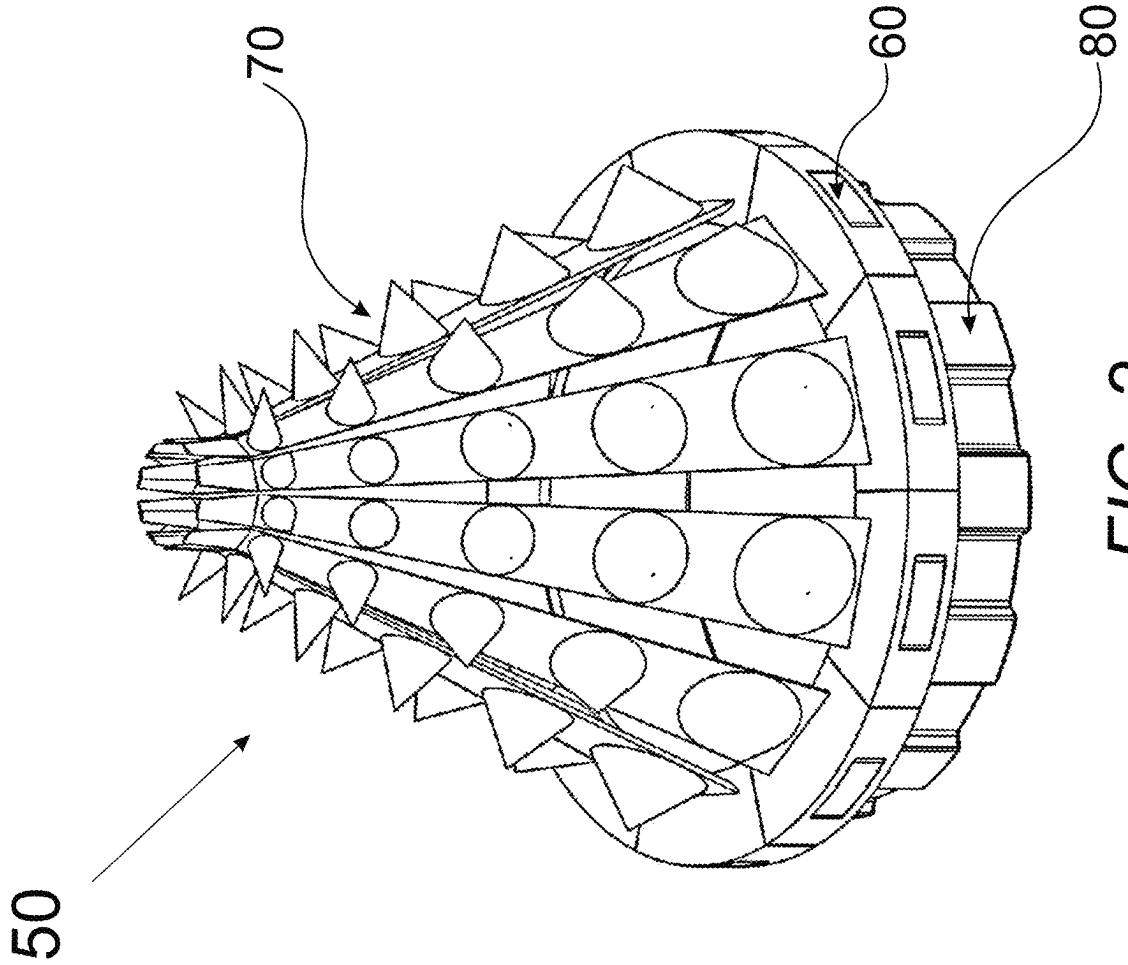


FIG. 2

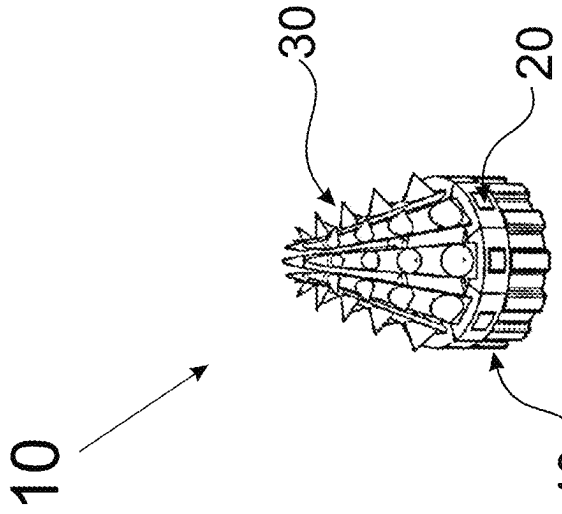


FIG. 1

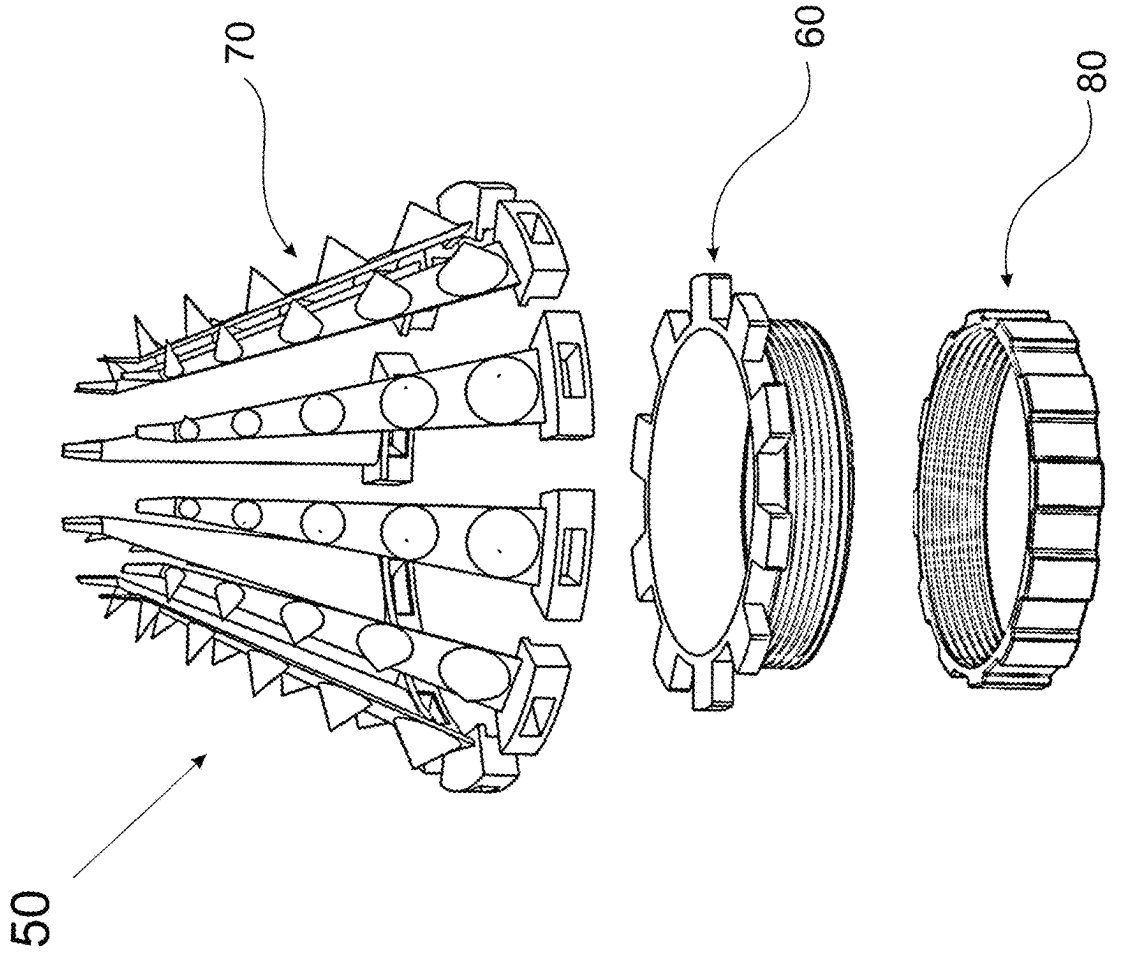


FIG. 4

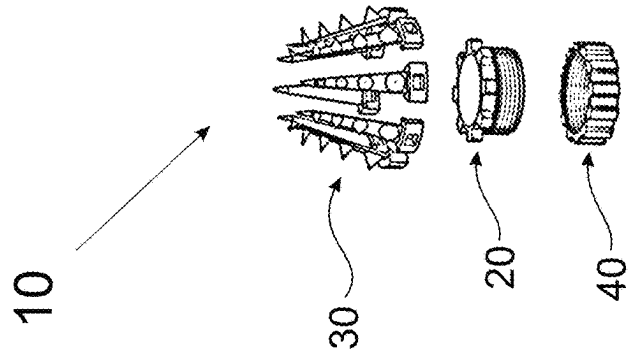


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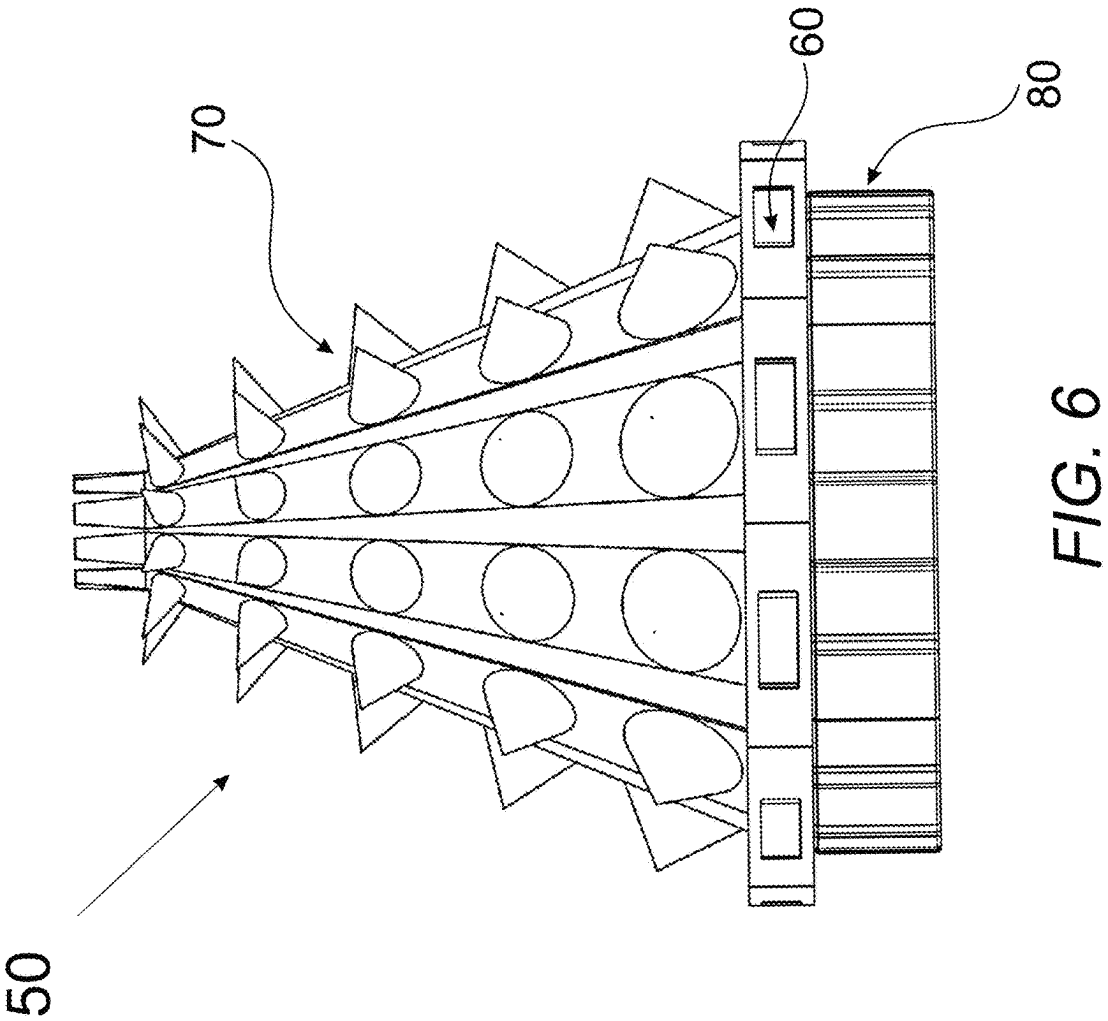


FIG. 6

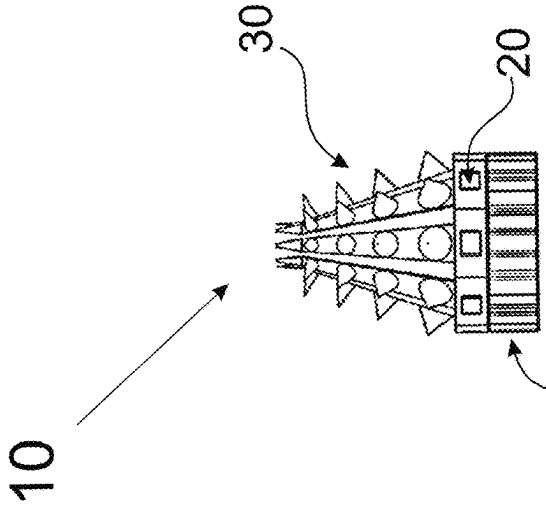


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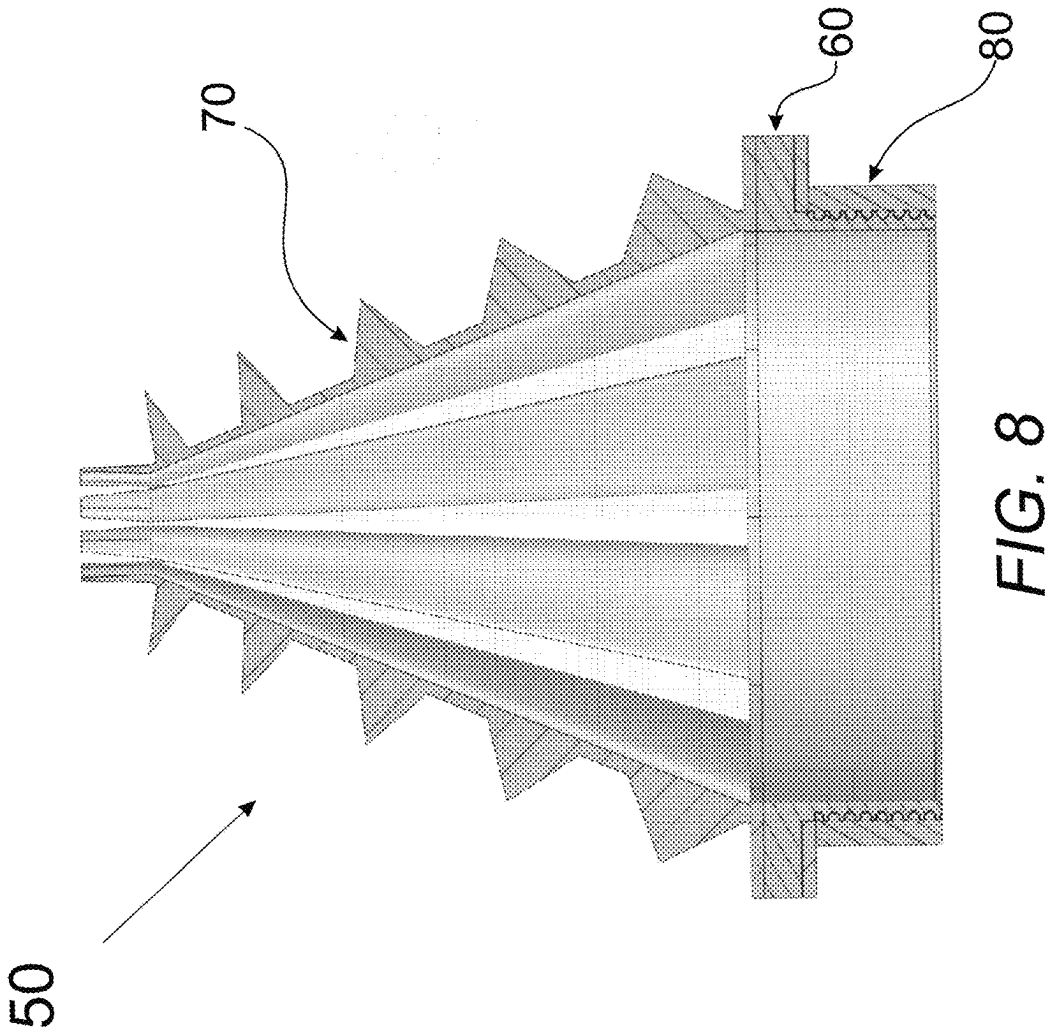


FIG. 8

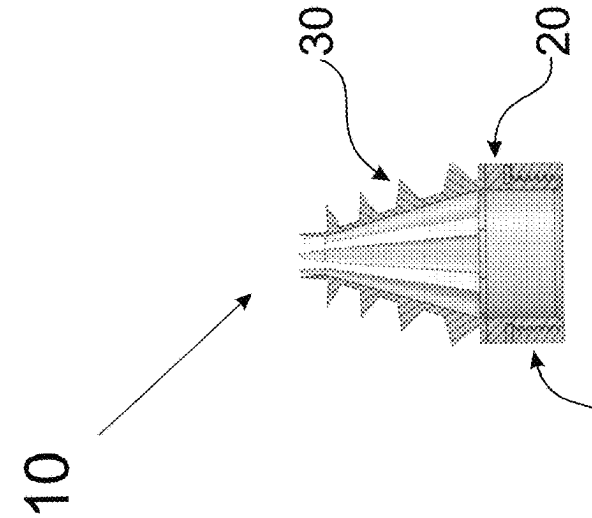


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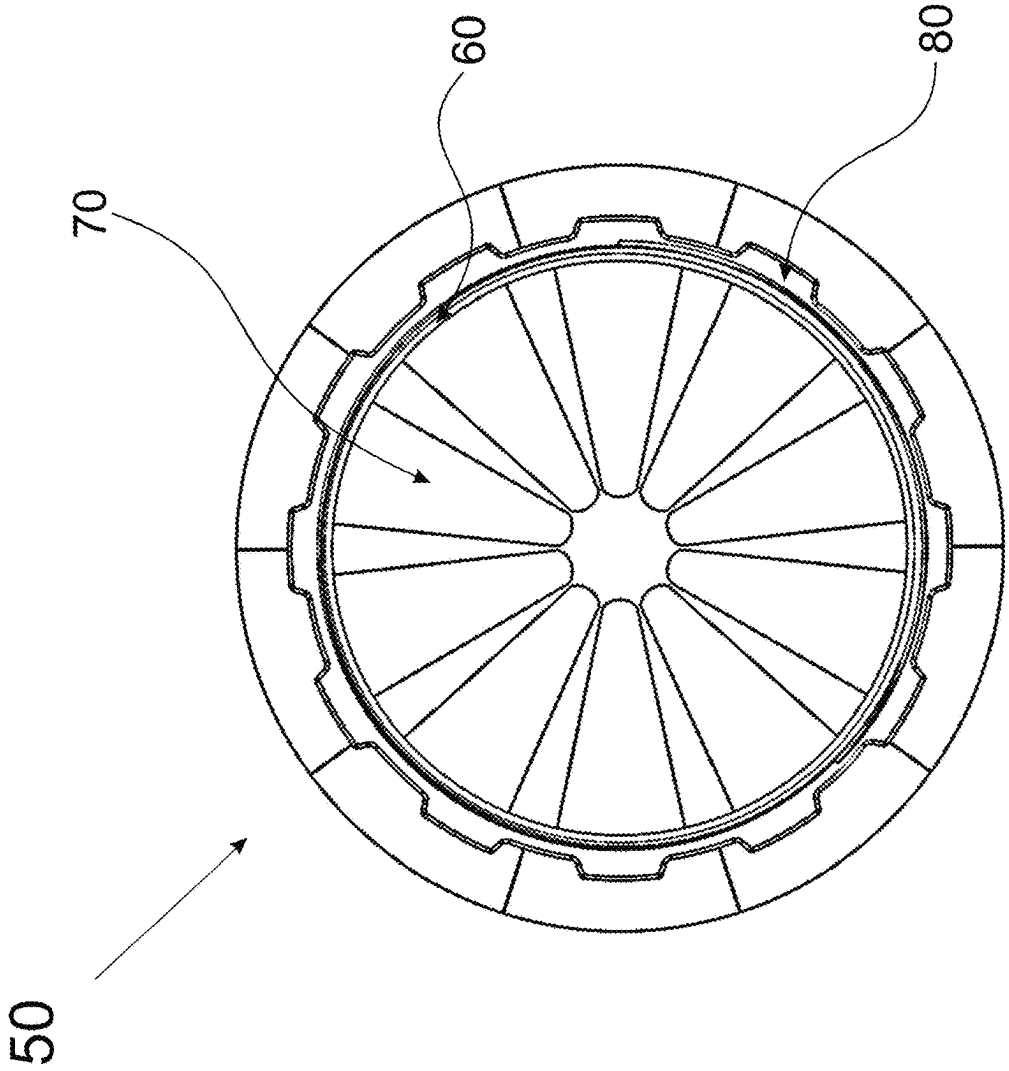


FIG. 10

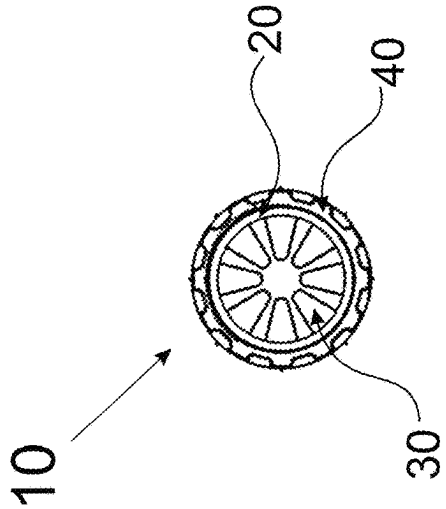


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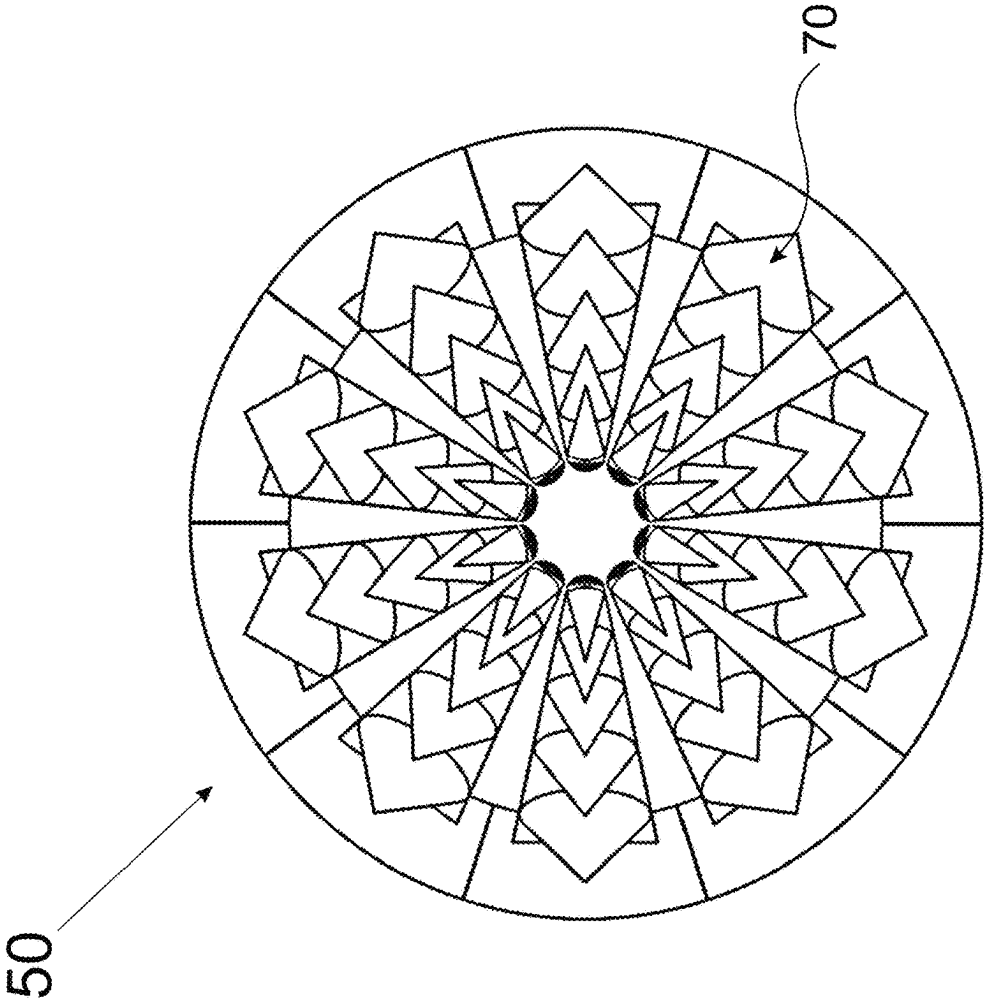


FIG. 12

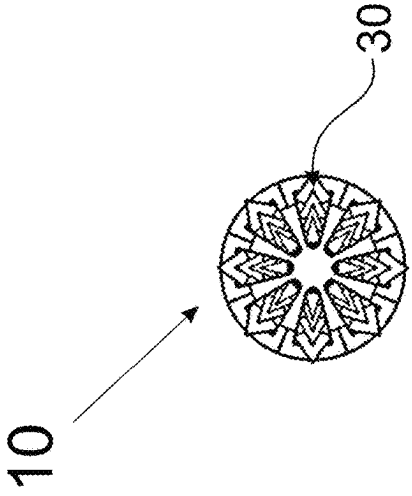


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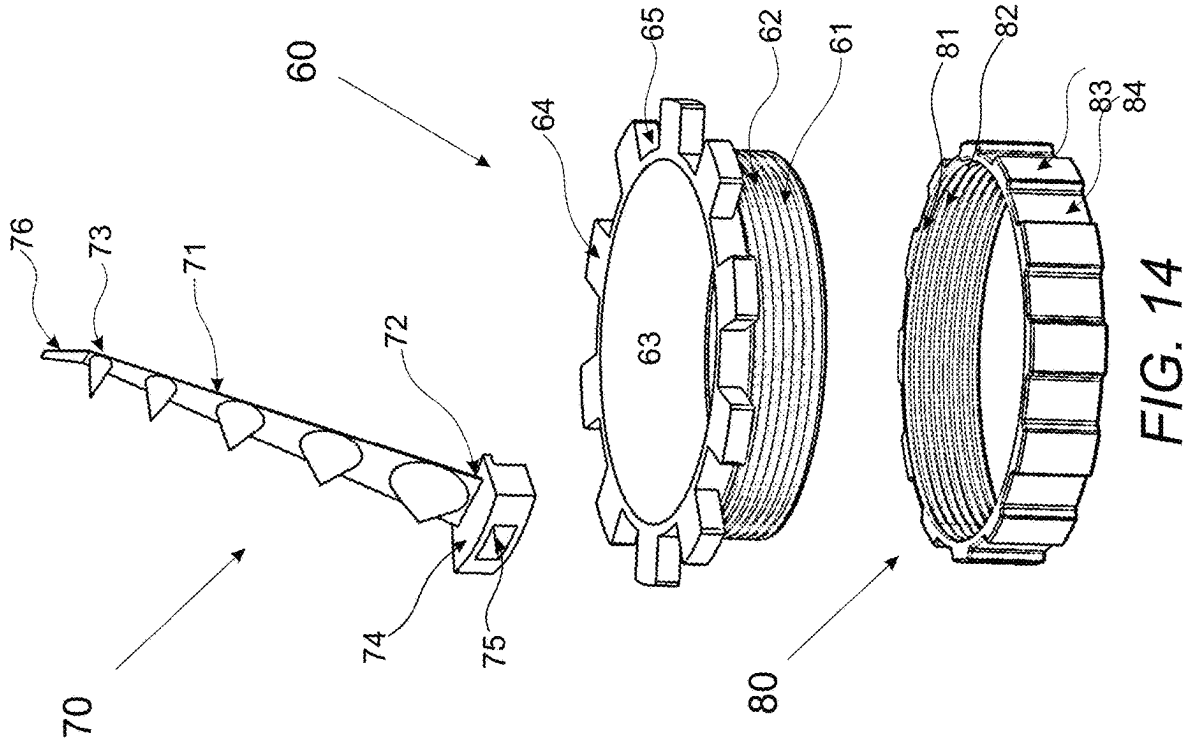

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FIG. 14

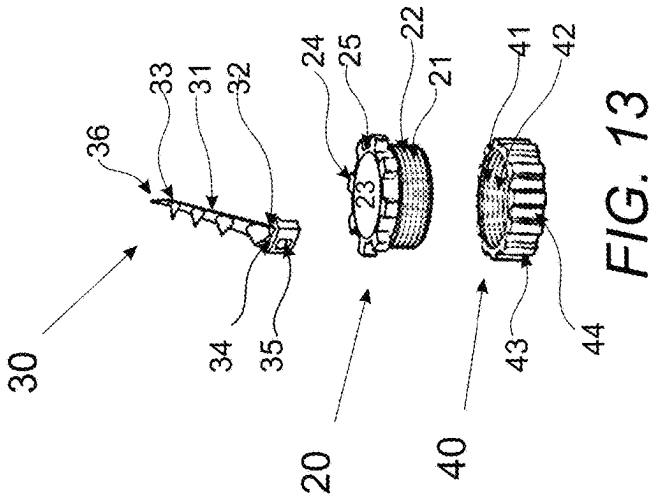

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FIG. 13

The 7 Types of Plastics
PETE
Polyethylene Terephthalate
Soda bottles, water bottles, food packaging
Recycled?
Yes
HDPE
High-Density Polyethylene
Milk jugs, detergent bottles, shampoo containers
Recycled?
Yes
PVC
Polyvinyl Chloride
Pipes, window frames, vinyl flooring, medical equipment
Recycled?
Rarely
LDPE
Low-Density Polyethylene
Plastic bags, six-pack rings, various containers, plastic wraps
Recycled?
Yes, but uncommon
PP
Polypropylene
Food containers, bottle caps, straws, textiles, automotive parts
Recycled?
Yes
PS
Polystyrene
Disposable coffee cups, plastic food boxes, cutlery, insulation
Recycled?
Rarely
Other
Various Plastics
Sunglasses, compact discs, baby bottles, large water jugs
Recycled?
Rarely

FIG. 15

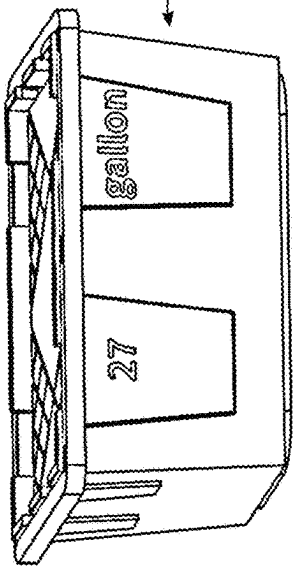


FIG. 17

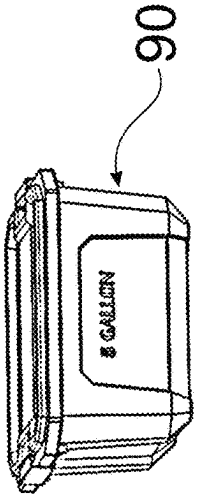


FIG. 16

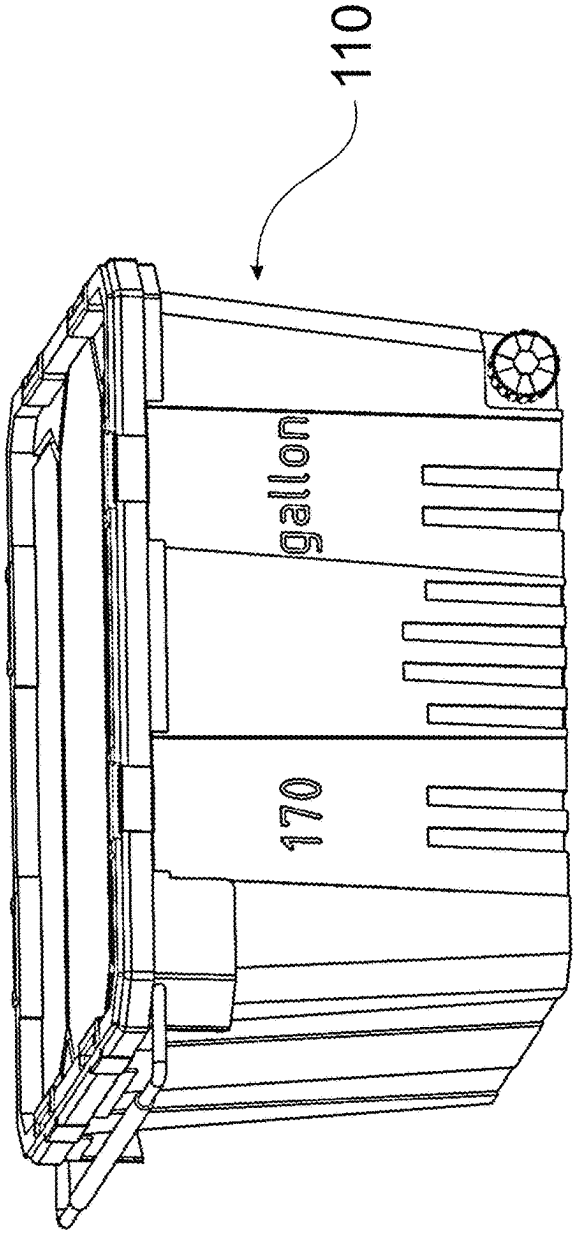


FIG. 18

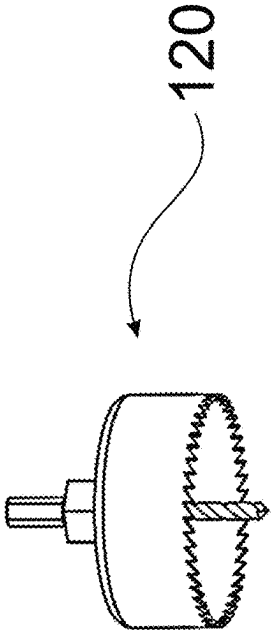


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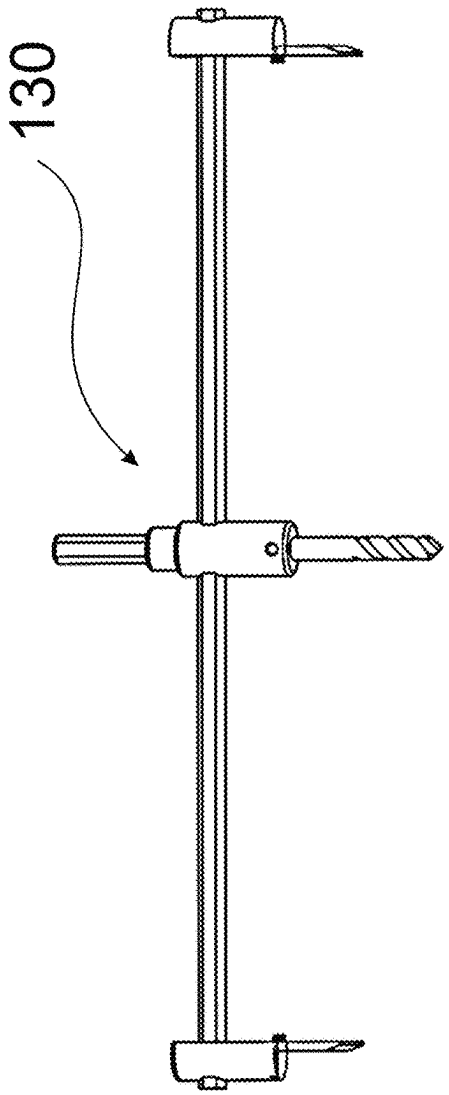


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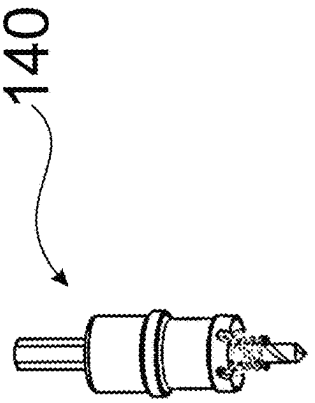


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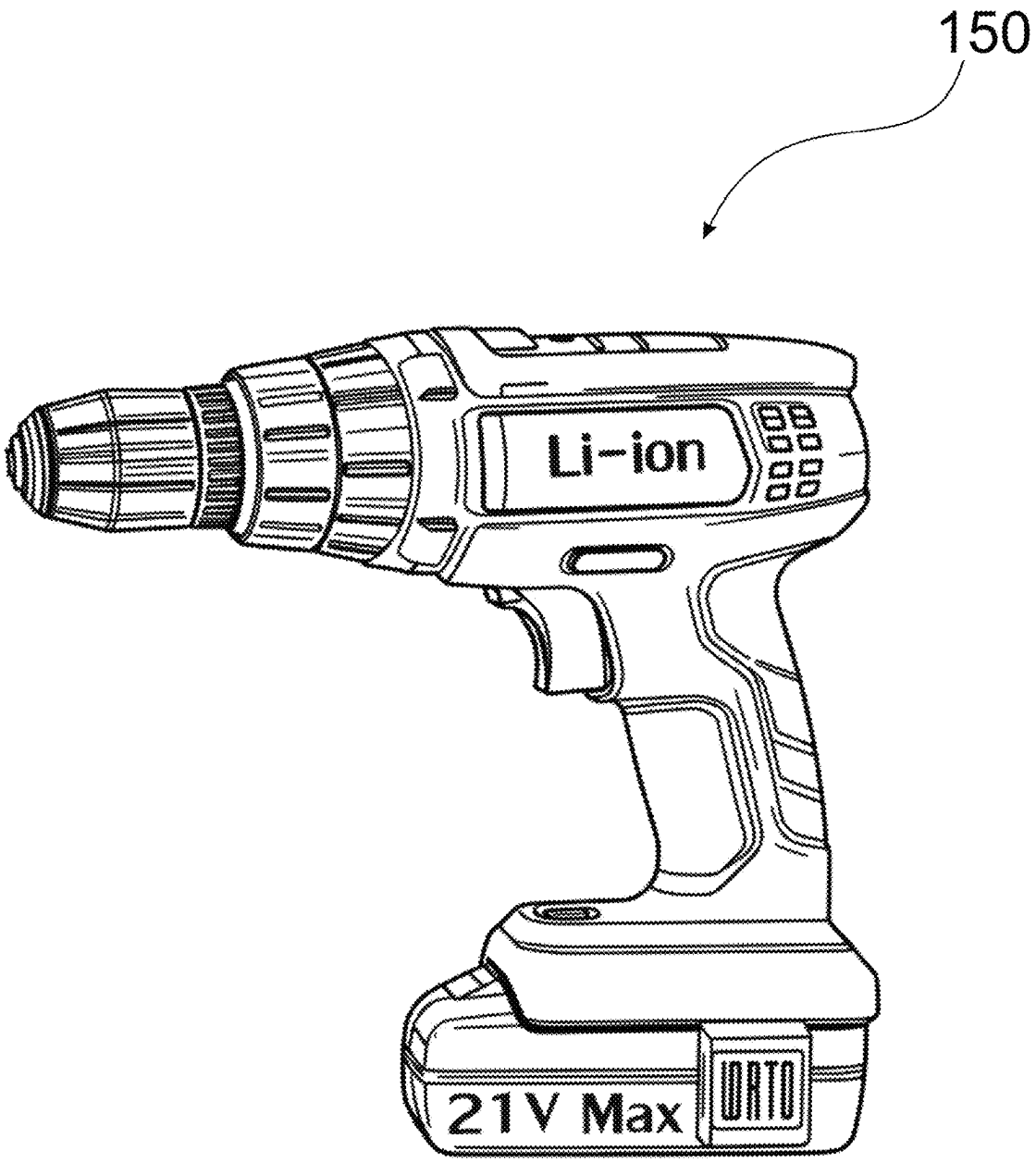


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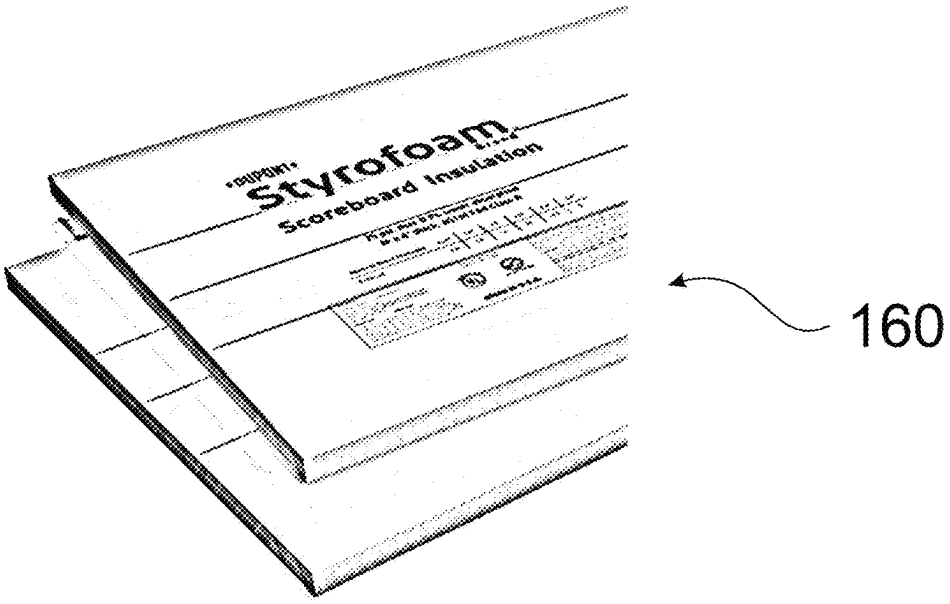

Styrofoam
Scoreboard Insulation
160

FIG. 23

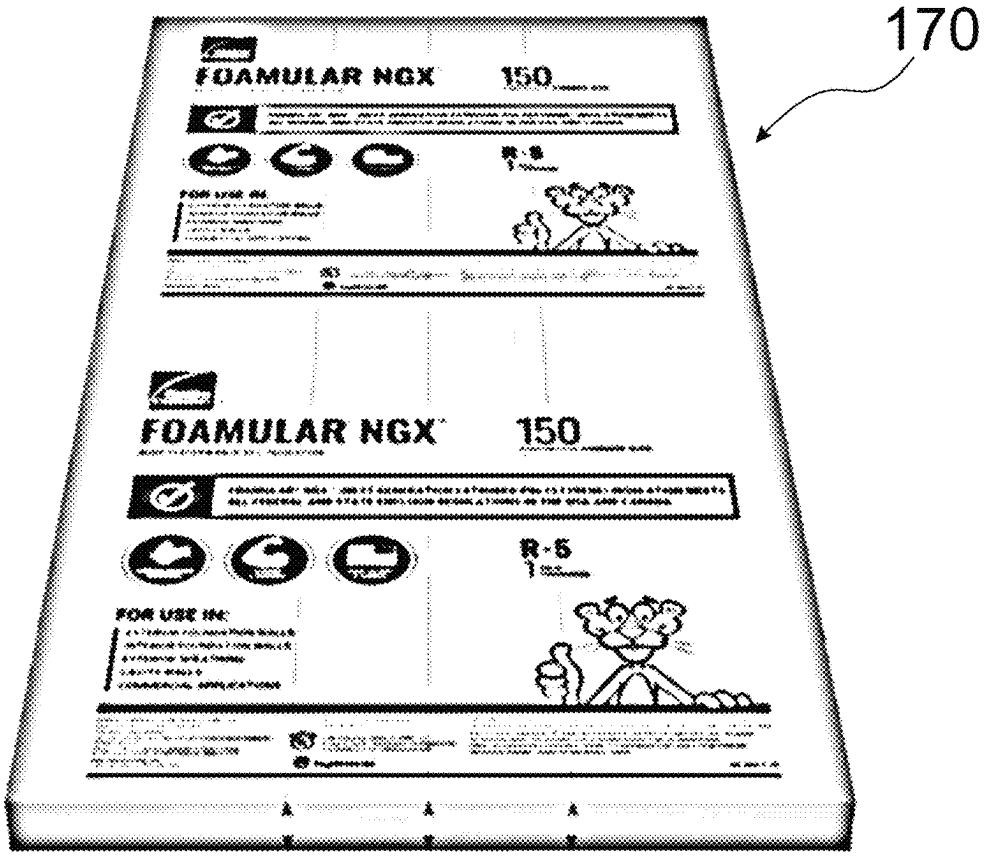

170
FOAMULAR NGX
150
R-5
FOR USE IN:
FOAMULAR NGX
150
R-5
FOR USE IN:

FIG. 24

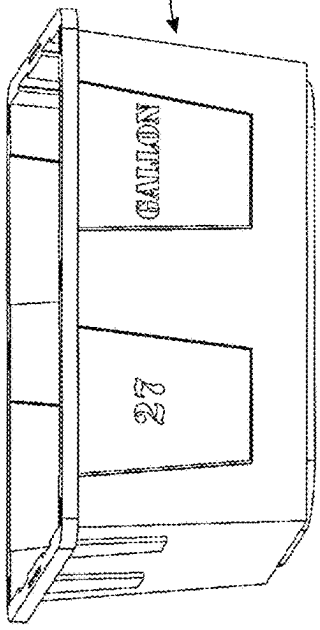
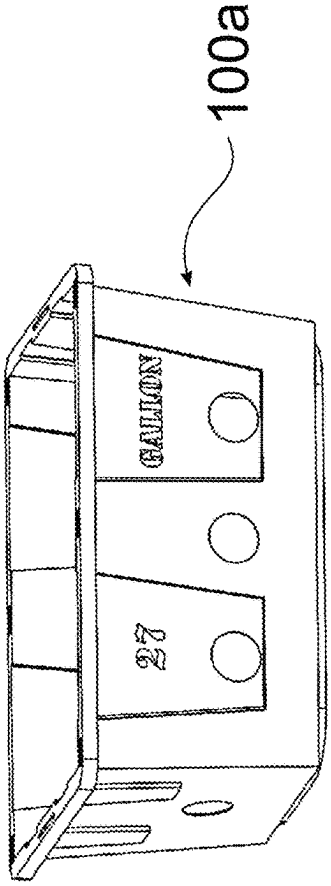


FIG. 27



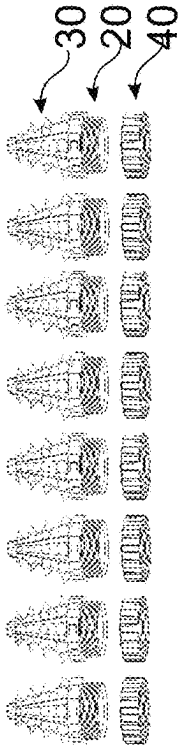


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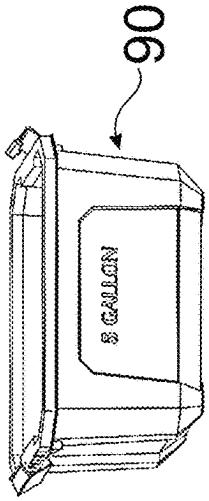
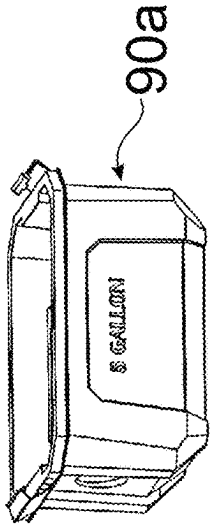


FIG. 25



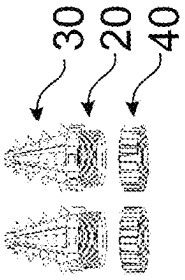


FIG. 26

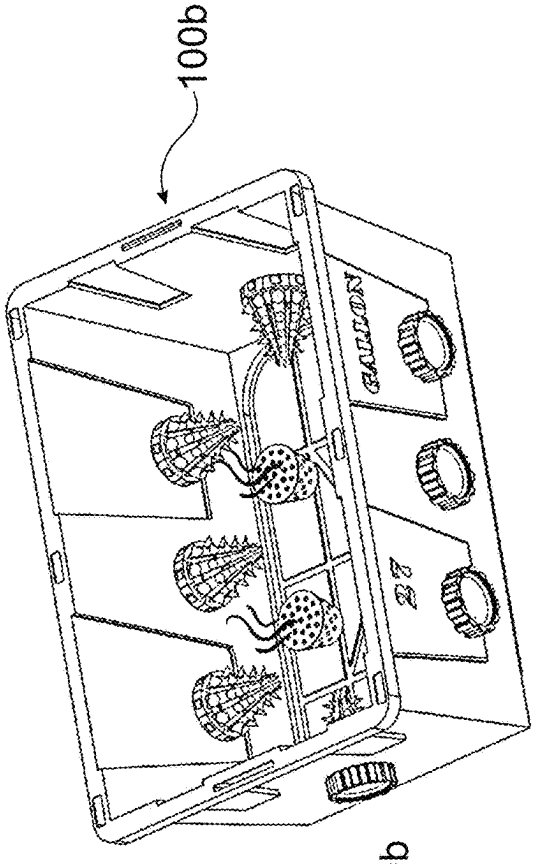


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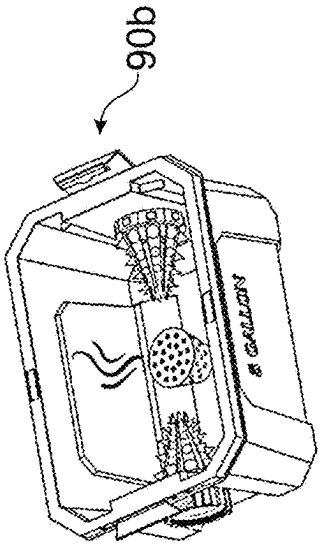


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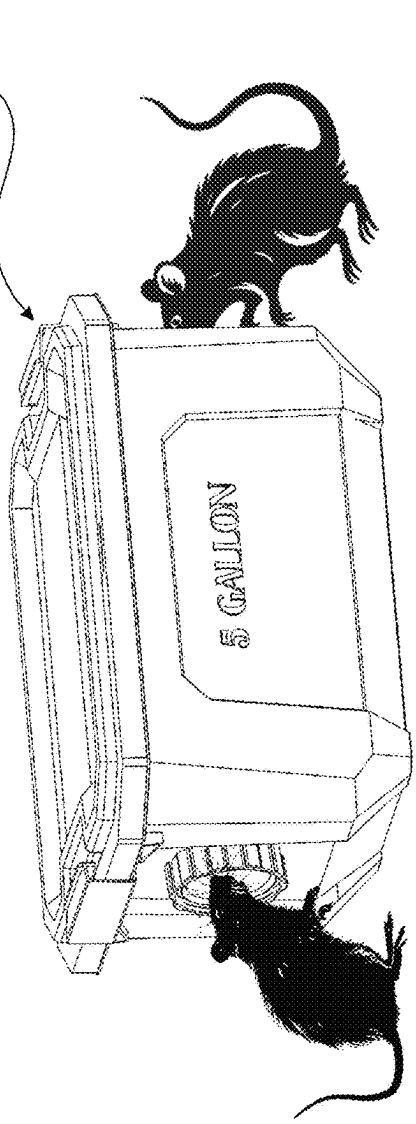


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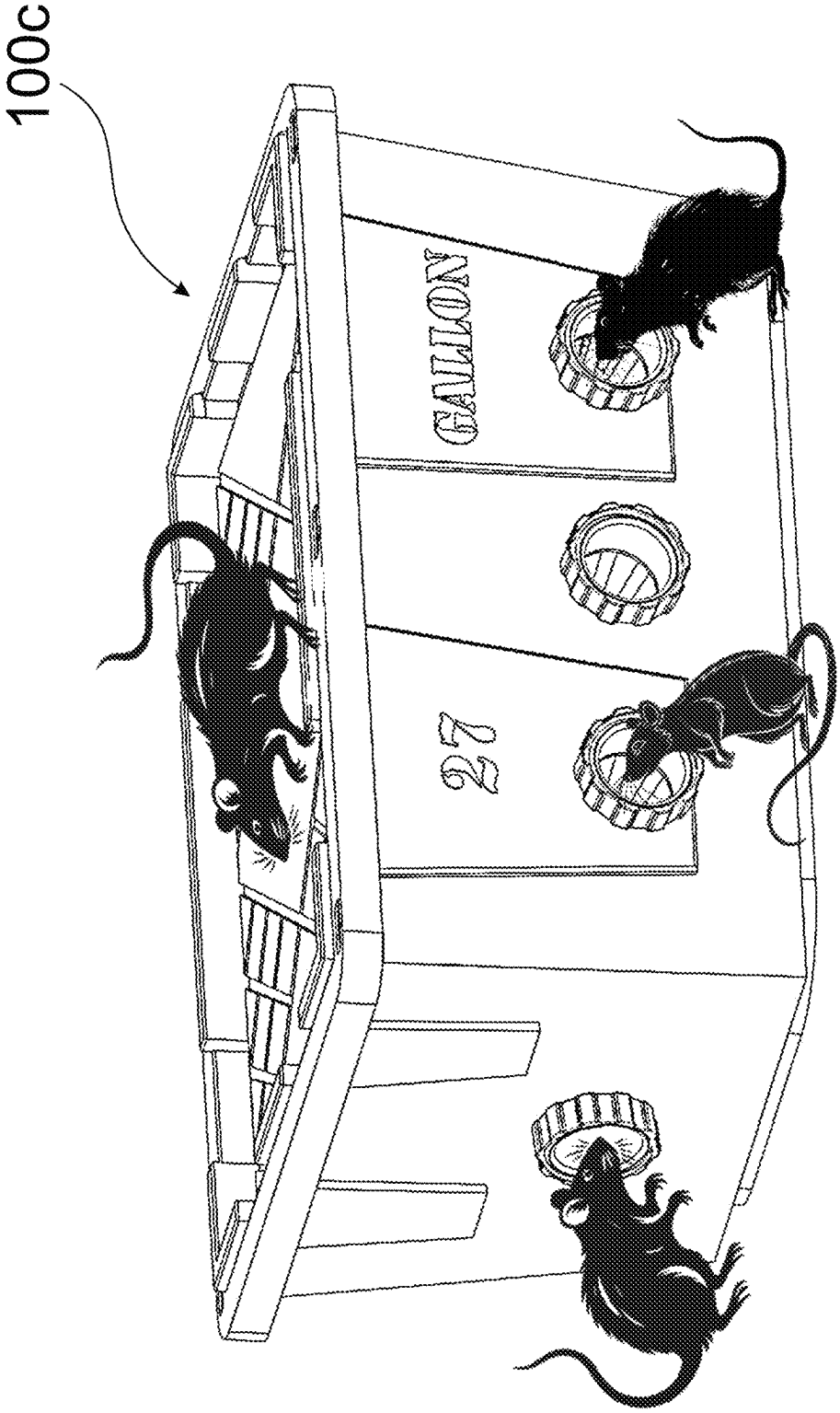


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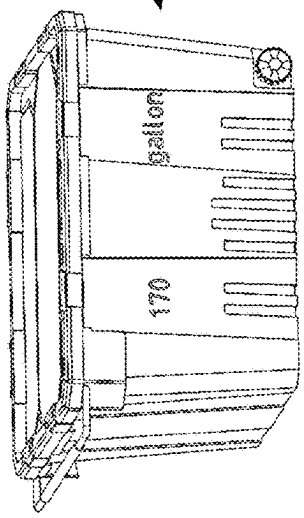

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FIG. 33

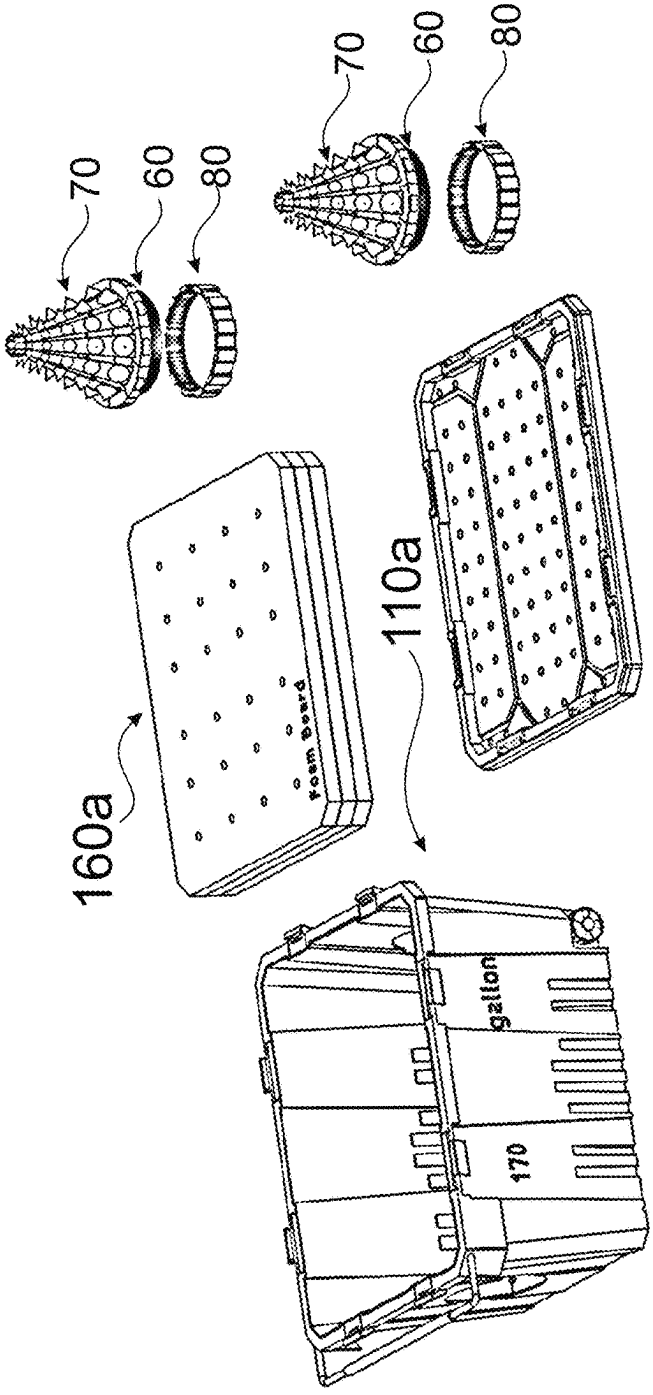

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FIG. 34

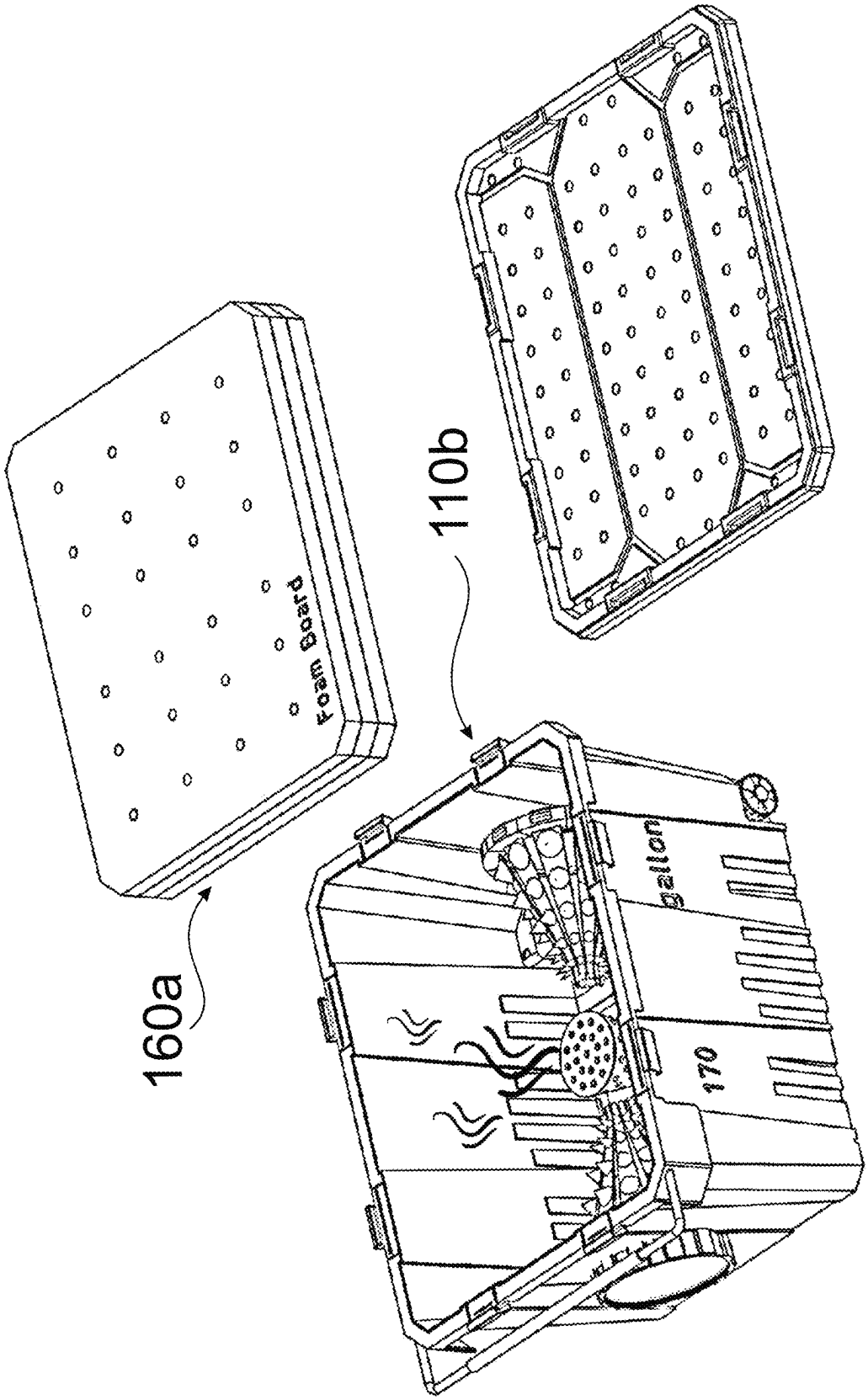


FIG. 35

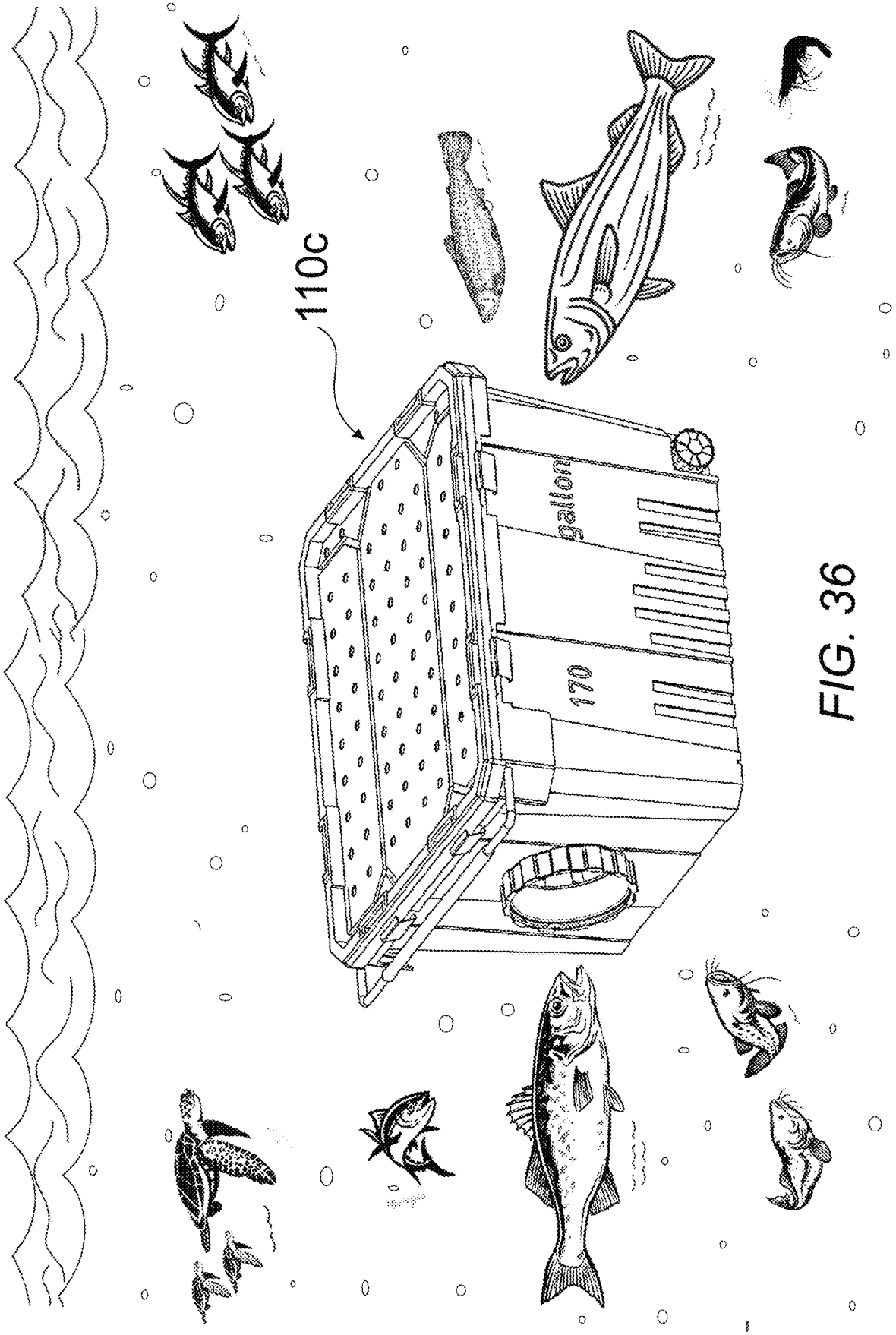


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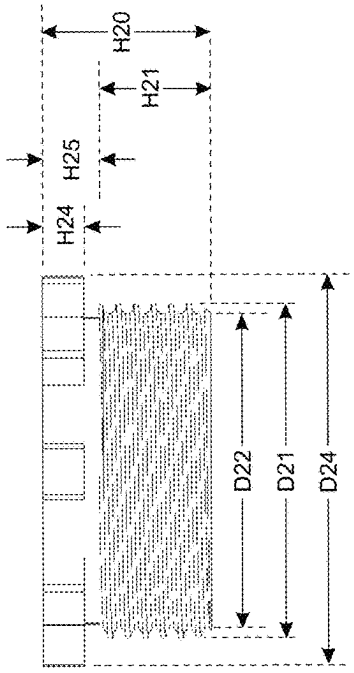


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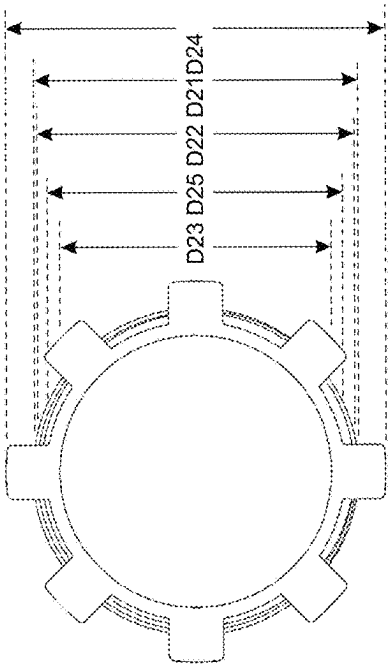


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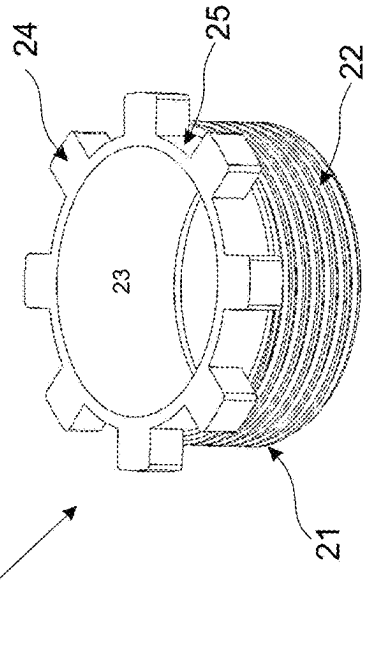


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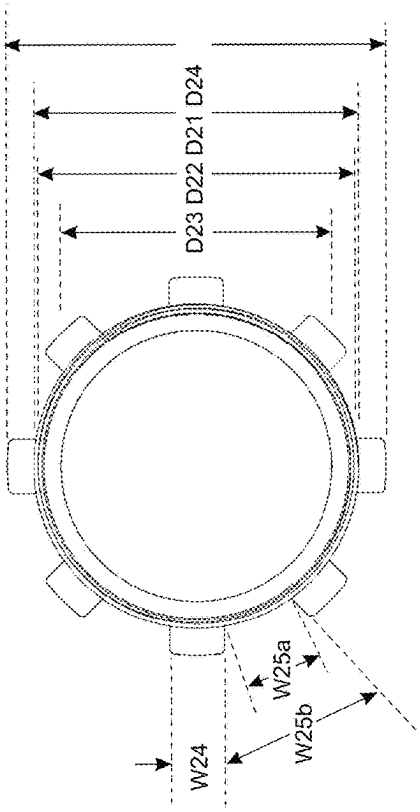


FIG. 39

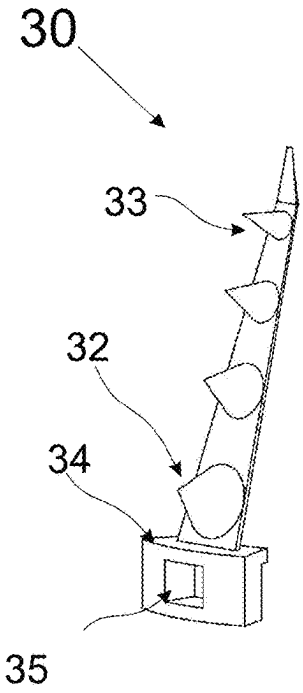


FIG. 41

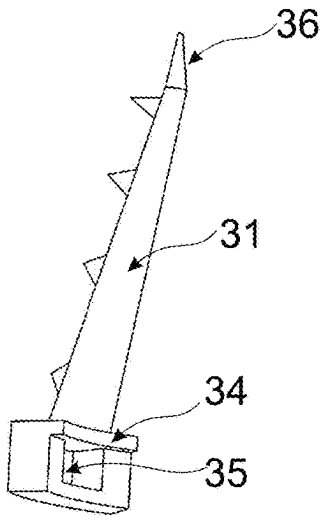


FIG. 42

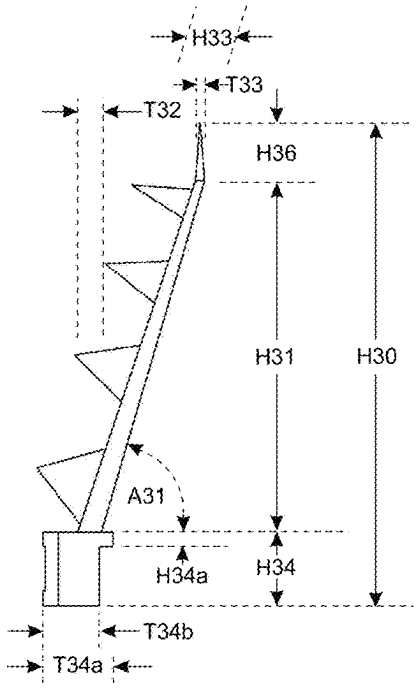


FIG. 43

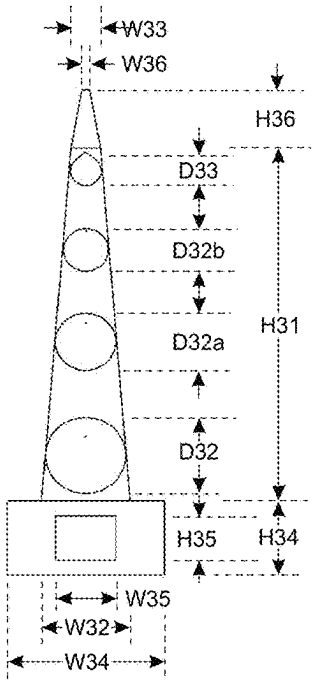


FIG. 44

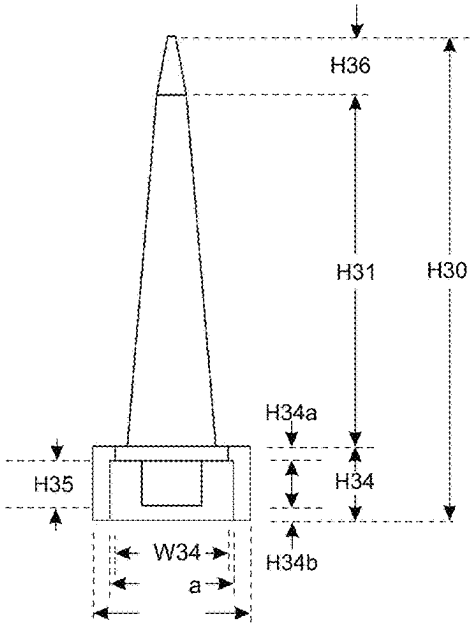


FIG. 45

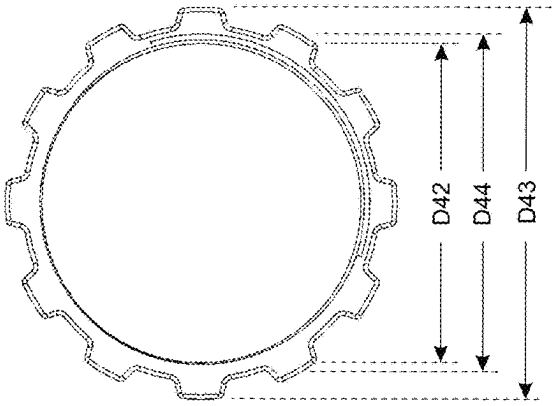


FIG. 47

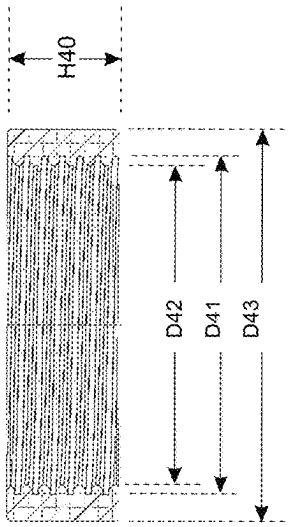


FIG. 49

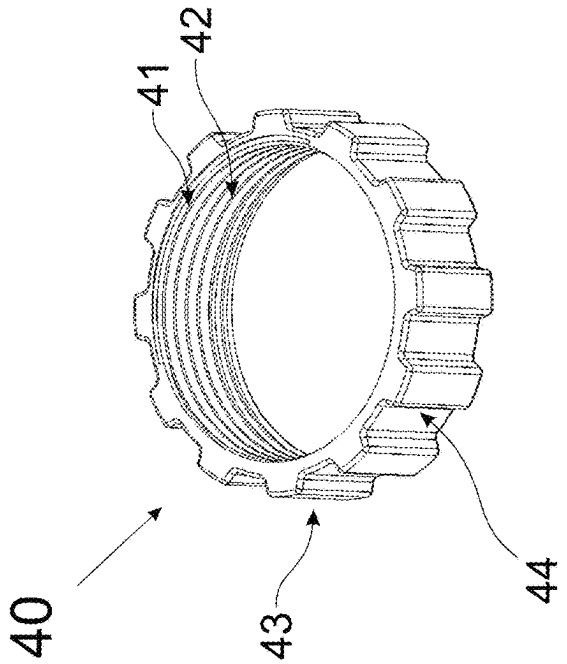


FIG. 46

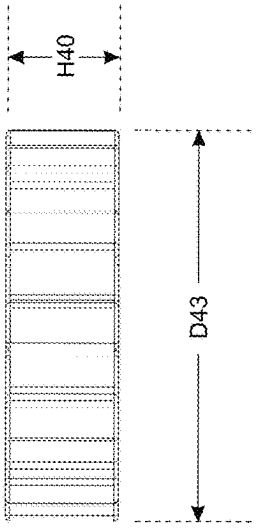


FIG. 48

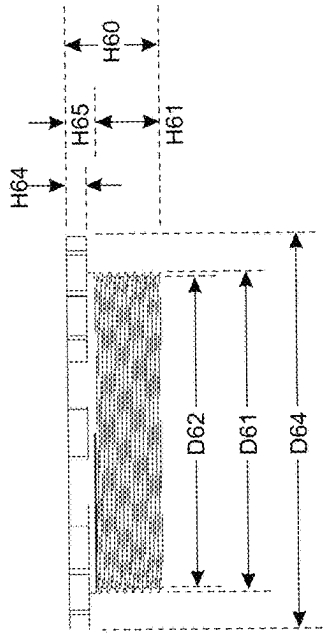


FIG. 51

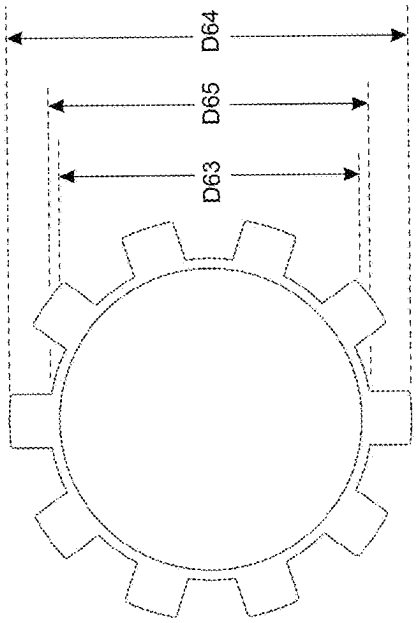


FIG. 53

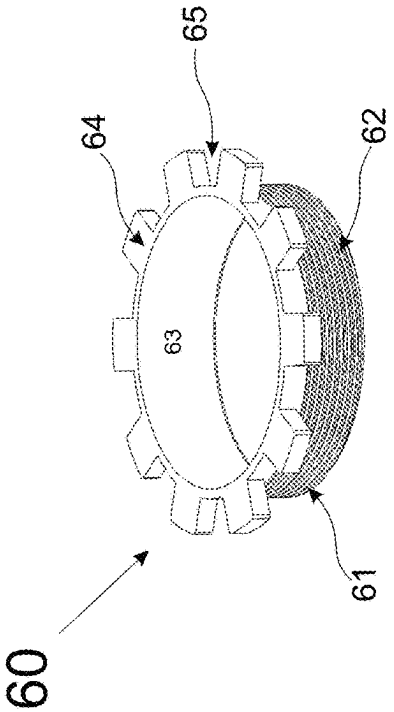


FIG. 50

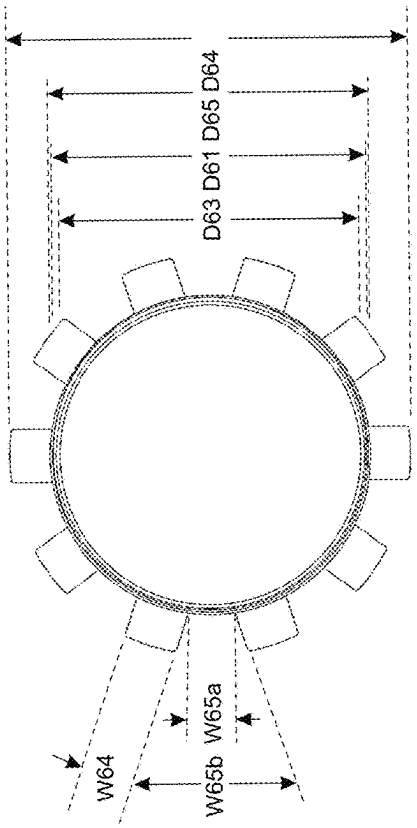


FIG. 52

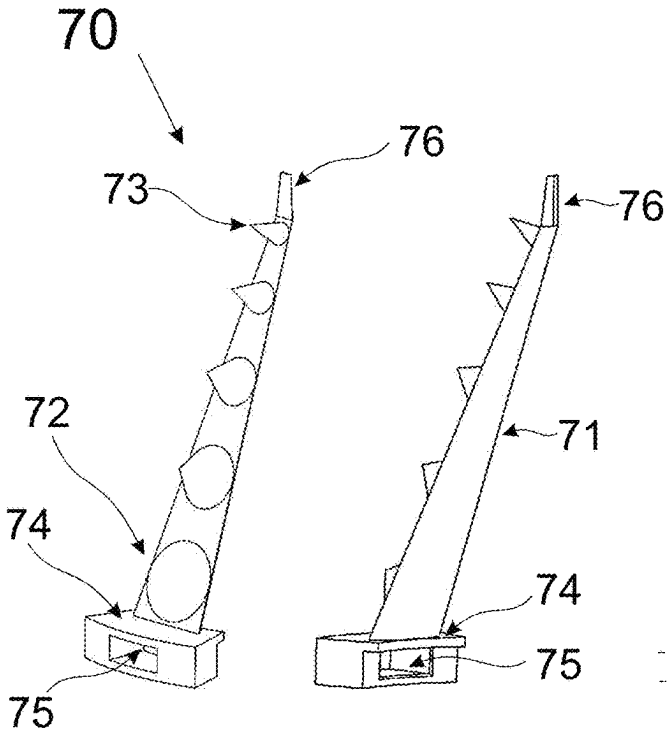


FIG. 54

FIG. 55

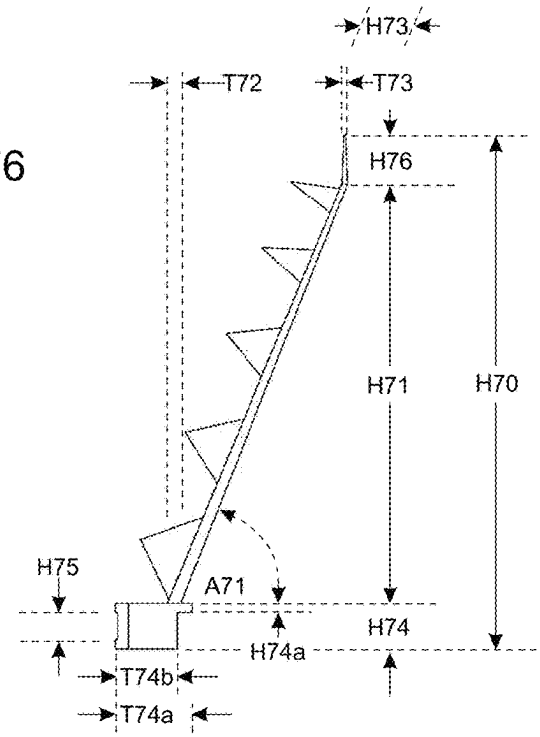


FIG. 56

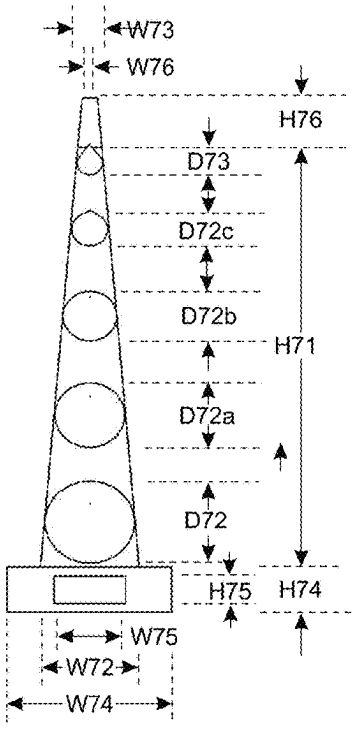


FIG. 57

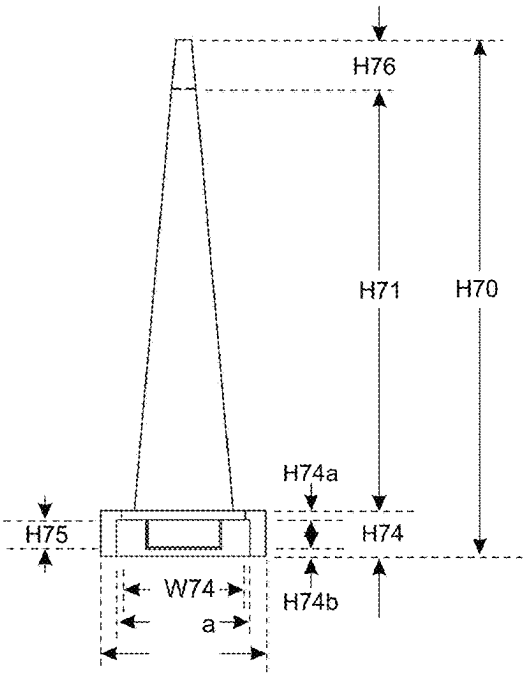


FIG. 58

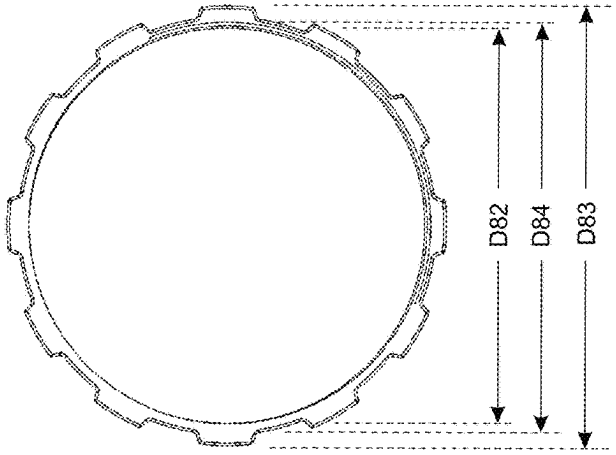


FIG. 60

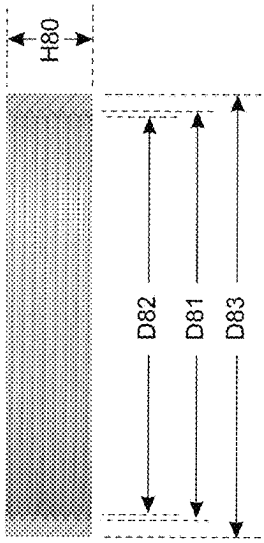


FIG. 62

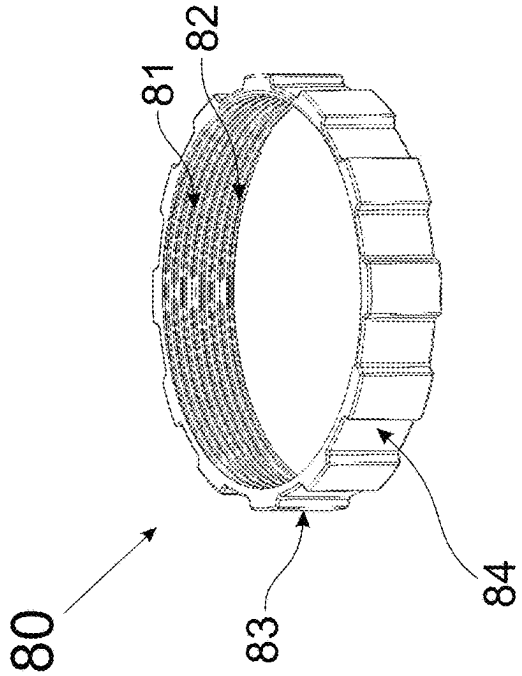


FIG. 59

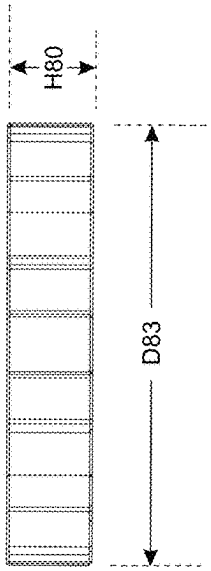


FIG. 61

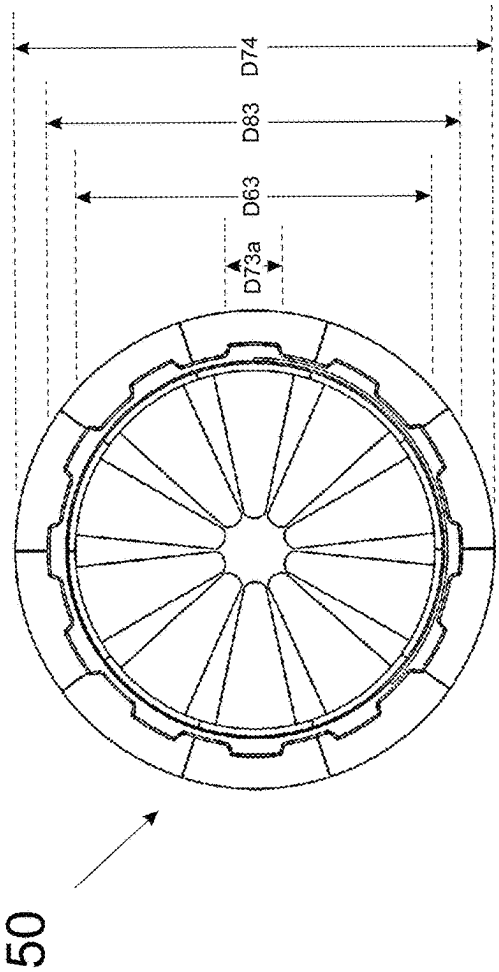


FIG. 65

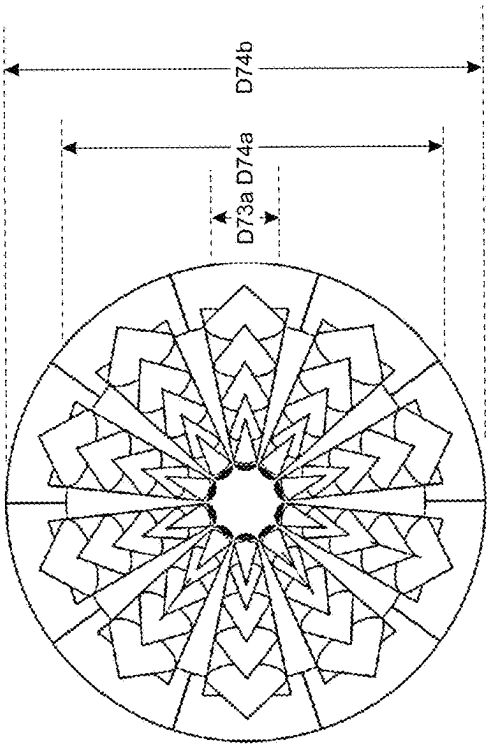


FIG. 66

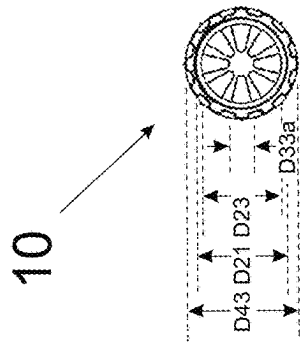


FIG. 63

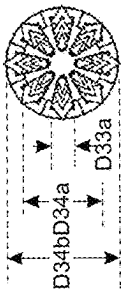


FIG. 64

COMPOSABLE INSERTS FOR DIY TRAPS

BACKGROUND OF THE INVENTION

The present invention relates to pest control, and in particular to a modular, Do-It-Yourself (DIY) composable insert system for constructing live traps for pests such as rodents and invasive fish species using common, user-supplied containers.

The effective management of pests presents an ongoing challenge in residential, agricultural, and ecological contexts. Rodents, for example, can cause property damage and pose health risks in homes and businesses. Similarly, invasive fish species can disrupt local ecosystems, outcompeting native populations for resources. While various traps are commercially available, they often come with significant drawbacks.

The manufacture of conventional one-piece traps, particularly those incorporating complex internal structures like one-way funnels or inwardly-projecting spikes, requires intricate and expensive molds. This complexity in plastic injection molding leads to high manufacturing costs, which are ultimately borne by the consumer. Furthermore, these pre-manufactured traps are of a fixed size and design, offering little adaptability for different target species, varying levels of infestation, or specific environmental placements. A trap designed for a small rodent is ineffective for a large invasive fish, and vice-versa.

In contrast, a wide variety of low-cost, durable containers are readily available to the public. Plastic storage totes, for instance, are sold in numerous sizes, from small 5-gallon bins to large 170-gallon rolling totes, at hardware stores, membership clubs, and general retailers. These containers represent ideal, robust bodies for live traps. However, there is a lack of standardized, effective, and easy-to-install components that would allow an average person to convert such a container into a reliable trap.

Therefore, a need exists for a cost-effective, versatile, and easily manufactured system that empowers end-users to create customized live traps from commonly available containers, thereby overcoming the cost and rigidity limitations of conventional, pre-made traps.

SUMMARY OF THE INVENTION

The present invention addresses the above and other needs by providing a composable insert system designed to be installed into a user-provided container to create a highly effective DIY live trap. The system is modular, comprising a main flange body, a plurality of individual thorny spike elements, and a corresponding lock nut. This three-part design simplifies manufacturing to just three manageable molds per size, significantly reducing production costs and logistical complexity compared to a single, large trap body.

In accordance with one aspect of the invention, the main flange body is engineered with an external thread and a series of receiving slots. The individual thorny spike elements are designed with a unique base that securely but removably snaps into these slots, allowing a user to assemble an inwardly-projecting conical barrier piece by piece. This assembled cone creates a one-way passage: the smooth, angled outer surfaces of the spikes guide a pest easily into the trap, while the sharp, overlapping inner points make egress impossible. The entire assembly is then securely fastened to the wall of a container by the lock nut.

In accordance with another aspect of the invention, the system is fully scalable to target a wide range of pests. A smaller-scale version, intended for installation into a 3-inch diameter hole, is optimized for rodents. A larger-scale version, which can be adapted for holes ranging from 6 inches up to 36 inches, is designed for various sizes of fish. This scalability allows a user to select the appropriate insert and container size for their specific needs, from a small household mouse trap to a large-capacity floating trap for managing invasive fish in a pond or lake.

The present invention provides numerous benefits, including: 1) significantly lower manufacturing cost by breaking down a complex part into simple, composable elements; 2) unparalleled versatility for the end-user, who can choose the size, number, and placement of trap entrances; 3) simple and intuitive assembly using common household tools, such as a cordless drill and a standard hole saw; and 4) reduced storage and shipping volume due to the compact, unassembled nature of the components.

BRIEF DESCRIPTION OF DRAWINGS

The above and other aspects, features and advantages of the present invention will be more apparent from the following more particular description thereof, presented in conjunction with the following drawings wherein:

FIG. **1** is a trimetric view of the fully assembled composable insert for a DIY rodent trap.

FIG. **2** is a trimetric view of the fully assembled composable insert for a DIY fish trap.

FIG. **3** is an exploded view of the composable insert for a DIY rodent trap, showing the three main components.

FIG. **4** is an exploded view of the composable insert for a DIY fish trap.

FIG. **5** is a side view of the assembled composable insert for a DIY rodent trap.

FIG. **6** is a side view of the assembled composable insert for a DIY fish trap.

FIG. **7** is a cross-section view of the assembled composable insert for a DIY rodent trap.

FIG. **8** is a cross-section view of the assembled composable insert for a DIY fish trap.

FIG. **9** is a bottom view of the assembled composable insert for a DIY rodent trap.

FIG. **10** is a bottom view of the assembled composable insert for a DIY fish trap.

FIG. **11** is a top view of the assembled composable insert for a DIY rodent trap.

FIG. **12** is a top view of the assembled composable insert for a DIY fish trap.

FIG. **13** is a detailed trimetric view of the individual components of the composable insert for a DIY rodent trap.

FIG. **14** is a detailed trimetric view of the individual components of the composable insert for a DIY fish trap.

FIG. **15** is a chart showing types of plastics suitable for manufacturing the inserts.

FIG. **16** is a perspective view of a 5-gallon storage tote suitable for use with the present invention.

FIG. **17** is a perspective view of a 27-gallon storage tote suitable for use with the present invention.

FIG. **18** is a perspective view of a 170-gallon rolling tote suitable for use with the present invention.

FIG. **19** is a view of a 3-inch hole saw for installing the rodent-sized insert.

FIG. **20** is a view of an adjustable circular cutter for installing the fish-sized insert.

FIG. **21** is a perspective view of a 1-inch hole saw for drilling 1-inch holes.

FIG. **22** is a perspective view of a cordless drill used for installation.

FIG. **23** is a sectional view of foam expanded polystyrene.

FIG. **24** is a perspective view of extruded polystyrene foam used for flotation according to the present invention.

FIG. **25** illustrates a 5-gallon tote prepared for cutting.

FIG. **26** illustrates a 5-gallon tote after cutting, with rodent insert components ready for assembly.

FIG. **27** illustrates a 5-gallon tote prepared for cutting.

FIG. **28** illustrates a 5-gallon tote after cutting, with fish size insert components ready for assembly.

FIG. **29** shows a 5-gallon tote with two assembled inserts and bait inside.

FIG. **30** illustrates a 27-gallon storage tote with eight rodent-sized inserts and baits according to the present invention.

FIG. **31** illustrates a 5-gallon storage tote with closed top cover and ready to be placed in the infestation area to catch rodents.

FIG. **32** is a perspective view illustrating a 27-gallon tote configured as a large-capacity rodent trap with eight assembled inserts.

FIG. **33** is a perspective view of is a perspective view of a 170-gallon rolling tote.

FIG. **34** illustrates a 170-gallon tote after cutting, with fish insert components and foam boards ready for assembly.

FIG. **35** illustrates a 170-gallon rolling tote composed with a couple of inserts and baits inside according to the present invention.

FIG. **36** illustrates a fully assembled 170-gallon fish trap deployed and floating on the water's surface.

FIG. **37** is a perspective view of the main flange body for the rodent trap insert.

FIG. **38** is a dimensioned side view of the main flange body for the rodent trap insert.

FIG. **39** is a dimensioned bottom view of the main flange body for the rodent trap insert.

FIG. **40** is a dimensioned top view of the main flange body for the rodent trap insert.

FIG. **41** is a perspective front view of a single thorny spike element for the rodent trap insert.

FIG. **42** is a perspective rear view of a single thorny spike element for the rodent trap insert.

FIG. **43** is a dimensioned side view of a single thorny spike element for the rodent trap insert.

FIG. **44** is a dimensioned front view of a single thorny spike element for the rodent trap insert.

FIG. **45** is a dimensioned rear view of a single thorny spike element for the rodent trap insert.

FIG. **46** is a perspective view of the lock nut for the rodent trap insert.

FIG. **47** is a dimensioned top view of the lock nut for the rodent trap insert.

FIG. **48** is a dimensioned side view of the lock nut for the rodent trap insert.

FIG. **49** is a dimensioned cross-sectional view of the lock nut for the rodent trap insert.

FIG. **50** is a perspective view of the main flange body for the fish trap insert.

FIG. **51** is a dimensioned cross-sectional view of the main flange body for the fish trap insert.

FIG. **52** is a dimensioned bottom view of the main flange body for the fish trap insert.

FIG. **53** is a dimensioned top view of the main flange body for the fish trap insert.

FIG. **54** is a perspective front view of a single thorny spike element for the fish trap insert.

FIG. **55** is a perspective rear view of a single thorny spike element for the fish trap insert.

FIG. **56** is a dimensioned side view of a single thorny spike element for the fish trap insert.

FIG. **57** is a dimensioned front view of a single thorny spike element for the fish trap insert.

FIG. **58** is a dimensioned rear view of a single thorny spike element for the fish trap insert.

FIG. **59** is a perspective view of the lock nut for the fish trap insert.

FIG. **60** is a dimensioned top view of the lock nut for the fish trap insert.

FIG. **61** is a dimensioned side view of the lock nut for the fish trap insert.

FIG. **62** is a dimensioned cross-sectional view of the lock nut for the fish trap insert.

FIG. **63** is a dimensioned bottom view of the present invention.

FIG. **64** is a dimensioned top view of the present invention.

FIG. **65** is a dimensioned bottom view of the present invention.

FIG. **66** is a dimensioned top view of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The following description is of the best mode presently contemplated for carrying out the invention. This description is not to be taken in a limiting sense, but is made merely for the purpose of describing one or more preferred embodiments of the invention. The scope of the invention should be determined with reference to the claims.

Where the terms "about" or "generally" are associated with an element of the invention, it is intended to describe a feature's appearance to the human eye or human perception, and not a precise measurement, or typically within 10 percent of a stated value.

Referring now to the drawings, a complete set of composable inserts for a DIY rodent trap **10** is shown in FIG. **1**, and for a DIY fish trap **50** in FIG. **2**. As illustrated in the exploded views in FIG. **3** and FIG. **4**, each insert assembly comprises a main flange body **20** for rodents, **60** for fish; a plurality of thorny spike elements **30** for rodents, **70** for fish, which form the one-way barrier; and a lock nut **40** for rodents, **80** for fish, which provides the securing mechanism. FIGS. **5** to **12** are different views of the present invention.

An exploded view of the rodent-sized components is provided in FIG. **13**. The main flange body **20** is a cylindrical piece with an external thread defined by its major diameter **21** and minor diameter **22**. At its distal end, a flange **24** extends radially outward and preferably includes integrated teeth to provide a positive grip against a container surface, preventing rotation during and after installation. The central opening of the body defines the entry diameter **23**. A series of opening slots **25** distributed around the circumference of the body **20**. Each single thorny spike element **30** is designed to be seated securely in one of these slots **25**. Spike **30** comprises an elongated spike body **31**, which is tapered to a sharp top thorn **36**. The base of the spike **34** is specifically shaped for an interlocking fit into a slot **25**, incorporating a snug fit slot **35** that lock into place. When all individual spikes **30** are installed, they form an inwardly-projecting conical structure, as seen in FIG. **11**, that allows pests easy entry while making exit physically impossible. The lock nut **40**, featuring a corresponding

internal thread (major diameter **41**, minor diameter **42**) and a textured outer grip **43** for easy hand-tightening, clamps the flange body **20** to the wall of a container.

The specific dimensions of the rodent insert components, detailed in FIG. **37** through FIG. **49**, are optimized for effectiveness. For the main flange body **20**, shown in FIGS. **37**, **38**, **39**, and **40**, the major exterior diameter D**21** is preferably between 2.5 inches and 5 inches, and more preferably about 3 inches. This dimension is specifically chosen to correspond with a widely available and standard 3-inch hole saw bit, simplifying installation for the user. A minor exterior diameter D**22** is preferably between 2.36 inches and 4.73 inches, and more preferably about 2.835 inches. The entry diameter D**23** is preferably between 2 inches and 4.5 inches, and more preferably about 2.5 inches, providing an inviting opening for common rodents. The flange diameter D**24** is preferably between 3 inches and 6 inches, and more preferably about 3.5 inches. The opening slots diameter D**25** is preferably between 2.5 inches and 4.5 inches, and more preferably about 2.75 inches. The flange tooth width W**24** is about 0.5 inches, while the opening slot width W**25***a* is about 0.573 inches, and the gap between slots width W**25***b* is about 0.877 inches. The overall height H**20** of the body is preferably between 1.25 inches and 2 inches, and more preferably about 1.5 inches. This includes a threaded section height H**21**, which is preferably between 0.875 inches and 1.375 inches, and more preferably about 1 inch, a flange tooth height H**24**, which is preferably between 0.25 inches and 0.5 inches, and more preferably about 0.375 inches, and a flange height H**25** which is preferably between 0.375 inches and 0.625 inches, and more preferably about 0.5 inches.

For the thorny spike **30**, detailed in FIGS. **41**, **42**, **43**, **44**, and **45**, the overall height H**30** is about 4.29 inches, which includes a spike body height H**31** of about 3.162 inches and a top thorn height H**36** of about 0.5 inches. The base height H**34** is about 0.632 inches, composed of a base upper section height H**34***a* of about 0.125 inches and a base lower section height H**34***b* of about 0.125 inches. The snug fit slot height H**35** is about 0.378 inches. The spike has a lower width W**32** of about 0.75 inches, tapering to an upper width W**33** of about 0.25 inches. The base width W**34** is about 1.334 inches, composed of an upper width W**34***a* of about 0.953 inches and a lower width W**34***b* of about 1.048 inches. The snug fit slot width W**35** is about 0.508 inches, and the top thorn width W**36** is about 0.065 inches. Diameters along the spike are about 0.68 inches at the base (D**32**), 0.51 inches in the middle (D**32***a*), 0.38 inches in the upper section (D**32***b*), and 0.26 inches at the tip (D**33**). The angle of inclination A**31** is about 77 degrees. The spike has a thickness at its base T**32** of about 0.203 inches and a thickness at its tip T**33** of about 0.076 inches. The base has a side thickness T**34***a* of about 0.5 inches and a center thickness T**34***b* of about 0.375 inches.

For the lock nut **40**, shown in FIGS. **46**, **47**, **48**, and **49**, the major internal diameter D**41** is about 3.02 inches to ensure a secure, slip-free mating with the external thread of the flange body. The minor internal diameter D**42** is about 2.85 inches. The outer grip diameter D**43** is about 3.5 inches, and the inner grip diameter D**44** is about 3.185 inches. The overall height H**40** of the lock nut is about 1 inch.

FIG. **14** provides a detailed view of the larger, fish-sized components, which are strategically scaled up and modified for an aquatic environment. As detailed in FIG. **50** through FIG. **62**, the fish-sized flange body **60** has a major exterior diameter D**61** preferably between 6 inches and 36 inches, and more preferably about 12 inches. The minor exterior diameter D**62** is preferably between 5.75 inches and 35.25 inches, and more preferably about 11.654 inches. The entry diameter D**63** is preferably between 5.5 inches and 34 inches, and more preferably about 11.25 inches. The flange diameter D**64** is preferably between 7.5 inches and 45 inches, and more preferably about 15 inches, while the opening slots diameter D**65** is preferably between 5.75 inches and 36 inches, and more preferably about 12 inches. The flange tooth width W**64** is about 2 inches, the opening slot width W**65***a* is about 1.754 inches, and the gap between slots width W**65***b* is about 2.704 inches. The overall height H**60** is preferably between 3 inches and 10 inches, and more preferably about 3.5 inches. This includes a threaded section height H**61** preferably between 2.25 inches and 8 inches, and more preferably about 2.5 inches, a flange tooth height H**64** preferably between 0.5 inches and 2.25 inches, and more preferably about 0.75 inches, and a flange height H**65** preferably between 0.75 inches and 2 inches, and more preferably about 1.0 inch.

For the corresponding fish-sized thorny spike **70**, detailed in FIGS. **54**, **55**, **56**, **57**, and **58**, the overall height H**70** is about 14.38 inches. This includes a spike body height H**71** of about 11.75 inches, an upper part height H**73** of about 1.375 inches, and a top thorn height H**76** of about 1.375 inches. The base height H**74** is about 1.25 inches, with an upper section height H**74***a* of about 0.25 inches and a lower section height H**74***b* of about 0.25 inches. The snug fit slot height H**75** is about 0.77 inches. The top thorn height H**76** is about 1.375 inches. The spike has a lower width W**72** of about 2.75 inches, tapering to an upper width W**73** of about 0.67 inches. The base width W**74** is about 4.696 inches, with an upper width W**74***a* of about 3.734 inches and a lower width W**74***b* of about 3.463 inches. The snug fit slot width W**75** is about 2.1 inches. Diameters along the spike are about 2.5 inches at the base (D**72**), 1.95 inches (D**72***a*), 1.5 inches (D**72***b*), 1 inch (D**72***c*), and 0.7 inches at the tip (D**73**). The angle of inclination A**71** is about 68 degrees. The spike has a thickness at its base T**72** of about 0.37 inches and a thickness at its tip T**73** of about 0.157 inches, while the base has a side thickness T**74***a* of about 1.875 inches and a center thickness T**74***b* of about 1.436 inches.

For the fish-sized lock nut **80**, shown in FIGS. **59**, **60**, **61**, and **62**, the major internal diameter D**81** is about 12.03 inches, and the minor internal diameter D**82** is about 11.693 inches. The outer grip diameter D**83** is about 13 inches, and the inner grip diameter D**84** is about 12.36 inches. The overall height H**80** of the lock nut is about 2.5 inches.

The method of assembly of a composable inserts for DIY traps comprising the steps of: first, the user selects a container appropriate for the target pest, such as a compact 5-gallon tote **90** (FIG. **16**) for mice or a large-volume 170-gallon tote **110** (FIG. **18**) for invasive carp. Using a common cordless drill **150** and an appropriate cutting tool—such as a 3-inch hole saw **120** (FIG. **19**) for the rodent insert or an adjustable circular cutter **130** (FIG. **20**) for the fish insert—the user creates a clean aperture in the container wall (FIG. **25**). The main flange body (**20** or **60**) is then inserted through this aperture from the outside. From inside the container, the user snaps the base **34** of each thorny spike **30** into an opening slot **25** on the flange body, repeating the process until all spikes are in place and the conical barrier is fully formed. Finally, the user threads the lock nut (**40** or **80**) onto the flange body from the outside and hand-tightens it to securely affix the entire insert assembly to the container wall.

FIG. **29** illustrates a completed small rodent trap **90***b*, demonstrating how two inserts can be installed on a 5-gallon

tote for multiple entry points. FIG. **32** illustrates a high-capacity rodent trap **100***c* made from a 27-gallon tote with eight inserts installed, suitable for a heavy infestation. For aquatic applications, as depicted in FIG. **34**, waterproof foam boards **160***a*, preferably made of durable, closed-cell extruded polystyrene (XPS) **170**, are cut to size and placed inside the 170-gallon tote **110***a* before the lid is secured. This provides substantial buoyancy, allowing the completed trap **110***c* to float stably on the water's surface as shown in FIG. **36**, a configuration ideal for surface-dwelling invasive species. For targeting bottom-dwelling species, the foam is omitted and weights, such as bricks or concrete blocks, can be placed inside the container to make it sink and rest on the substrate.

As detailed in the chart of FIG. **15**, the components are preferably manufactured from a rigid, durable, and weather-resistant plastic capable of holding a sharp point and withstanding environmental exposure. Materials such as Polypropylene (PP, Category 5) offer excellent rigidity and fatigue resistance, making them ideal for the snap-fit mechanism. High-Density Polyethylene (HDPE, Category 2) provides superb durability and impact resistance. Polyethylene Terephthalate (PET, Category 1) is also suitable due to its stiffness and strength. The choice of such materials ensures the longevity and reliable performance of the trap in both terrestrial and aquatic environments.

While the invention herein disclosed has been described by means of specific embodiments and applications thereof, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope of the invention set forth in the claims.

I claim:

1. A pest-prevention assembly comprising:

a flange body having an external thread and a central opening;

a flange extending radially outward from a distal end of the flange body for engaging a container surface;

a plurality of slots distributed around the circumference of the flange body;

a plurality of spike elements, each spike element including a base configured to interlock with a corresponding slot and an elongated body terminating in a pointed end, the plurality of spike elements collectively forming an inwardly-projecting barrier that permits entry into the container while obstructing exit; and

a lock nut having an internal thread configured to mate with the external thread of the flange body, the lock nut being operable to secure the flange body to the wall of the container.

2. The pest-prevention assembly of claim **1**, wherein the flange body is cylindrical.

3. The pest-prevention assembly of claim **1**, wherein the flange further comprises a plurality of teeth extending therefrom, the teeth configured to grip the container surface to prevent rotation of the flange body.

4. The pest-prevention assembly of claim **1**, wherein the elongated body of each spike element is tapered from the base to the pointed end.

5. The pest-prevention assembly of claim **1**, wherein the base of each spike element and its corresponding slot are configured with a snap-fit interlocking mechanism.

6. The pest-prevention assembly of claim **1**, wherein the lock nut includes a textured outer surface to facilitate hand-tightening.

7. The pest-prevention assembly of claim **1**, wherein the cylindrical flange body has an external thread diameter of approximately 3 inches, suitable for a rodent trap.

8. The pest-prevention assembly of claim **1**, wherein the cylindrical flange body has an external thread diameter of between 6 inches and 36 inches, suitable for a fish trap.

9. The pest-prevention assembly of claim **1**, wherein the flange body, spike elements, and lock nut are integrally molded from a plastic material.

10. The pest-prevention assembly of claim **9**, wherein the plastic material is selected from the group consisting of Polypropylene (PP), Polyethylene (PE), and Polyethylene terephthalate (PET).

11. A pest-prevention assembly for constructing a rodent trap, comprising:

a cylindrical flange body having an external thread with a major diameter of approximately 3 inches and a central opening defining an entry diameter of approximately 2.5 inches;

a flange extending radially outward from a distal end of the flange body, said flange including a plurality of teeth configured to grip an exterior container surface to prevent rotation;

a plurality of slots distributed around the circumference of the flange body;

a plurality of individual spike elements, each spike element including a base configured to interlock with a corresponding slot and an elongated, tapered body terminating in a pointed end, the plurality of spike elements collectively forming an inwardly-projecting conical barrier that permits rodent entry while obstructing exit; and

a lock nut having an internal thread configured to mate with the external thread of the flange body and a textured outer surface to facilitate hand-tightening, the lock nut being operable to secure the flange body to a wall of a container.

12. The pest-prevention assembly of claim **11**, wherein the base of each spike element and its corresponding slot are configured with a snap-fit interlocking mechanism.

13. The pest-prevention assembly of claim **11**, wherein the flange body, spike elements, and lock nut are molded from a plastic material.

14. The pest-prevention assembly of claim **13**, wherein the plastic material is selected from the group consisting of Polypropylene (PP), Polyethylene (PE), and Polyethylene terephthalate (PET).

15. The pest-prevention assembly of claim **11**, in combination with a container having a wall defining an aperture, wherein the flange body is installed in said aperture and secured by said lock nut, and wherein the conical barrier projects into an interior volume of said container.

16. A method for repurposing a commercially available storage container into a pest trap using a standard power drill and hole saw, comprising the steps of:

selecting a commercially available storage container having an interior volume and at least one wall;

creating a circular aperture of a predetermined diameter through the wall of said container using a standard hole saw bit attached to a power drill;

inserting a modular flange body, having an external thread dimensioned to correspond with said predetermined diameter, through said aperture from an exterior of the container;

assembling an inwardly-projecting conical barrier by attaching a plurality of discrete spike elements to the flange body from an interior of the container; and

securing the flange body to the wall of the container by threading a lock nut onto the external thread from the exterior of the container.

17. The method of claim 16, wherein the commercially available storage container is a plastic storage tote with a capacity ranging from 5 gallons to 170 gallons.

18. The method of claim 16, wherein the step of creating a circular aperture is performed using a 3-inch diameter hole saw bit to prepare the container for a rodent trap assembly.

19. The method of claim 16, wherein the step of creating a circular aperture is performed using an adjustable circular cutter to create an aperture with a diameter between 6 inches and 36 inches to prepare the container for a fish trap assembly.

20. The method of claim 16, further comprising the step of placing a buoyant material within the interior volume of the container to enable the trap to float on water.

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