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(54) Title: NUCHAIN CONTAINER CONDITIONING REGISTRATION AND TRANSFORMATION METHOD AND APPARATUS

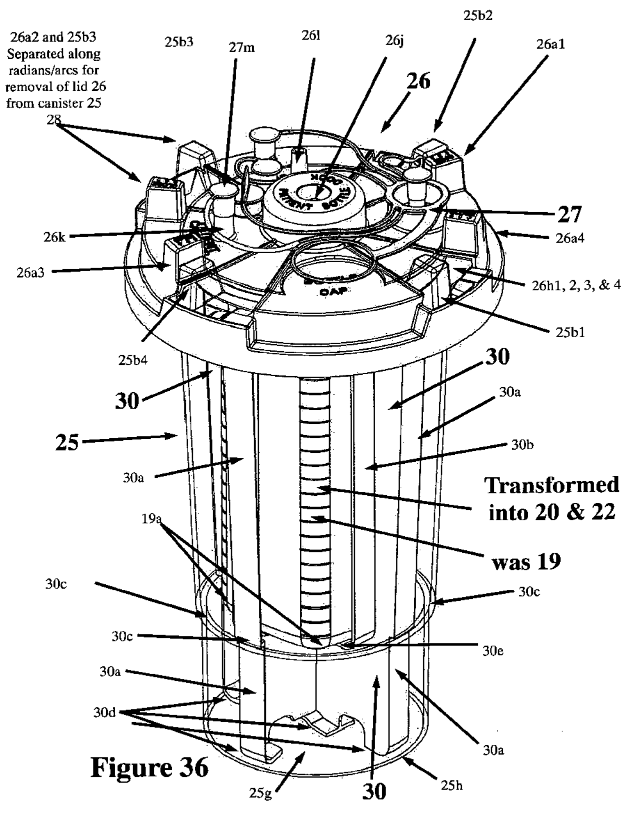

Figure 36

(57) Abstract: NuChain supply chain and disposal chain apparatus are created by NuPurposing containers and conditioning and transforming such containers from fluent material delivery containers into waste collection containers realizes operational efficiency. Novel structural features of waste collection systems allows bottle docking for the ingress of collection material into fluent material distribution containers as well as operation as a non-bottle docking waste collection system. The application moving canister and lid pillars closer together respectively operates to contain a force being drawn away from the collection system by sealing the system. The application moving other canister and lid pillars closer together operates to unseal the system.

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— *as to the identity of the inventor (Rule 4.17(i))*

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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NuChain Container Conditioning Registration and Transformation Method And Apparatus

Cross Reference To Related Application

This Patent Cooperation Treaty Patent Application is based on and claims priority of United States Provisional Patent Application Serial No. 61/395,584 filed in the United States on 05/15/2010.

Incorporation By Reference

This Patent Cooperation Treaty International patent application incorporates by reference herein United States Provisional Patent Application Serial No. 61/395,584 filed on 05/15/2010. This Patent Cooperation Treaty International patent application incorporates by reference herein United States Patent No. 7,185,681.

Field of the Invention

This invention relates to the field of reducing the waste stream burden in the medical field, but not limited to that.

Background of the Invention

This application relates to systems used in the collection and disposal of certain medical wastes. The collection of fluent waste material is a common procedure in the medical field. Most methods of surgical waste collection are carried out using vacuum suction. Some methods use gravity, while some use impelling devices which produce suction vacuum. Examples of such impelling devices may comprise a meniscus shaver, a lipo-suction system, an arthroscopic fluid pump, a tissue ablator, an endoscopic irrigation and aspiration wand and the like. Surgical fluid waste is collected in containers commonly referred to as canisters and/or canister liners. These waste collection devices are generally disposable, some are re-cycled, re-processed, or rewashed. Some collection devices are re-used. Some are partially reused while some are intermittently re-used. Some are disposable or partially disposable. Some are used in conjunction with servicing units while some are used with additive agents for treating the waste material. Some are used multiple times on multiple patients without the preferable cleaning in between treatment of different patients. In certain instances reused devices are cleaned, reprocessed, sterilized, re-sterilized and or recycled and or prepared for reuse. There are disadvantages to the use of disposable collection canisters and canister liners. One problem is that disposable collection canisters and disposable collection liners contribute contaminated infectious plastic waste to the medical waste stream which is undesirable for the environment. Reuse of disposable collection devices by recleaning, re-labeling or reprocessing or recycling and or sterilizing, has the disadvantages of adding costly labor and requiring additional labor costs for sorting, containing, transporting and handling of contaminated medical waste containers, and then the added costs of product re-entry into the internal/external product re-sterilization internal/external distribution system. There is a significant need to reduce medical waste. The need to reduce medical waste is a serious common goal of the United States and Internal Agencies. The Environmental Protection Agency (EPA) and the American Hospital Association has entered into a landmark Memorandum of Understanding (MOU) formally establishing the goals to reduce medical waste 50% by the year 2010. Hospitals for Healthy Environment (www.H2E-Online.org) was the name of the aforementioned alliance for waste reduction, supported by formidable organizations and companies such as the American Nurses Association, Healthcare Without Harm, the EPA, plus Group Purchasing Organization, leading health care organization, federal, state and local government agencies and health care associations and the like.

It is important in the health care field to have good quality sturdy and reliable products. This is true especially in the field of collection of contaminated biological waste material. Containers for these purposes must be easy to use, and be designed with good human factors and ergonomics for the operators of such devices. One key important ergonomic feature is that the systems for collection of biological waste must be easy to use, and the amount of effort and strength required to assemble such systems should be easy and require little effort by the operators. The instant embodiments of the instant case provide for such ease of use. In addition other useful features which represent good quality standards for collection containers and systems and methods involve stability so that when containers are placed on a horizontal surface they are stable. The container should be puncture, leak and impact resistant and be stable and secure when dropped. It should be manufactured out of materials which function for the intended purposes, and if made form a polymer, have a durometer which should not crack or break if dropped. Labels and brackets should be made durable. The system should be autoclavable so that if desired by the customer it may be reused. The systems should be available in various sizes to accommodate a variety of patient populations as well as be effective to operate in a number of different treatment situations and locations. The system should not have any parts that are sharp, that might compromise the operator's personal protection, and not tear gloves, or other personal protective equipment such as gowns, gloves, masks, etc. Designs of systems of this sort should promote safe clinical care and perform according to those safe clinical standards. The design should promote resistance to opening after final sealing for disposal, as well as promote easy assembly and easy opening (in this case easy sealing and unsealing) with good ergonomic and human factor attributes. All closure seals should function tightly and maintain the leak proof seal during use, handling and transport. The design should accommodate easy carrying and handling so that transport of the systems may be done safely without contaminating the surrounding environment. Grips and handles should be designed for ease of access and use. Parts should be designed for ease of decontamination, and be rugged to withstand multiple autoclaving if desired. Opening must be free of obstruction, entanglement and sub-assembly parts must be able to attach and dis-attach without requiring undue hand work or significant effort.

In addition various scenarios that occur during health care supply chain efficiency and supply management require unique features to products that encounter such scenarios. Some scenarios occur in the operating room. For example, collection systems should be designed to be easy to use during room turnover. Collection systems should be easy to use during intra-operative system changing. They should be easy to use after terminal sterilization and room setup. And they should be easy to use when preparing an operating room at the beginning of the operating day. Such collection systems should be easy to check/test to make sure they are operating correctly. Especially in a vacuum suction collection system, testing suction and checking seals must be easy and without undue fiddling or parts manipulation. This is especially significant whereas many times the individual who may be preparing the collection system for use , may do so prior to and at time different than actual use, which means the operator setting up the system for use is not the same operator using the system to collect waste. Ease of checking/testing, especially of the seals becomes important if, for example the prior individual does not properly assemble or prepare the system for subsequent use and the operator must then insure the system is in intended working condition at a later time. It is also desirable, when dealing with contaminated biological waste that minimum handling of unsealed containers holding biological waste material is kept to a minimum, and that containers are sealed prior to handling and transport. It is also important that a minimum of handling be required during the various scenarios mentioned above and that hand and hand coordination may be achieved to carry out the aforementioned clinical safety features. It is understood that the aforesaid features for the aforesaid scenarios do not only apply to the operating room. Other settings as further defined by the instant application are all applicable. Another example is that safe sealing of containers containing biological waste must be achievable with one handed technique as provided by the instant system. These practical features bring good ergonomic and human factors to the instant system while providing a good clinically safe system for the health care setting.

Description of the Prior Art

Certain disadvantages of the prior art in these regards will become better understood with the explanations of the following references. US Patent 5,792,126 to Tribastone, et. Al., discloses a collection canister system comprising canister interior of preferably 5000, 10000, and 15000 cubic centimeters and taught to be effective for all procedures. A container of this size has disadvantages because it is too big for many collection applications. For example, suction collection for anesthesia where it is convenient to have a small collection canister attached to an anesthesia machine is preferable, especially in that most anesthesia suction volumes constitute just a few cubic centimeters of sputum or pharyngeal throat saliva most of the time. Larger equipment is also inconvenient in smaller rooms where suction collection equipment is found such as in the emergency room, the intensive care unit, the coronary care unit, patient hospital rooms, the neo-natal infant care units, physician offices, physician owned surgery suites, physician office surgery and procedure rooms, outpatient surgery centers, ambulatory surgery center, ambulances and other rooms beside operating rooms which require smaller apparatus for smaller more confined spaces. There are also concerns with cross contamination in any system where contaminated waste material remains in a room during the presence of subsequent multiple patients. Another disadvantage of the larger 5000, 10000, 15000 cc containers is weight and mobility. Such weight in the extremely large heavy volumes are sometimes presents difficult ergonomics imposing risk of injury to personnel such as back pain, and other injuries whereby by seams in floors and door jams which are not smooth may induce tipping over and spillage of large volumes of medical waste. Another disadvantage of such large heavy containers is its size. Such large container are more difficult to keep clean and cumbersome to handle, and because of the awkward size could cause ergonomic strain as related to the 5,792,126 reference. United States Patent 5,960,837 to Cude et. Al., discloses a suction canister and in combination whereby only a destructive force will separate the parts which renders the Cude invention to be an only disposable product which is costly whereby each time a canister is used another is purchase to replace it. A purchase is made and is costly to the customer and each plastic disposable product enters the disposal chain waste stream and another piece of garbage enters the land fills or incinerators which are disadvantages. This is expensive, and requires ongoing inventory space, and inventory handling which are at a premium. Another disadvantage is a lack of choice for the customer to re-process, re-sterilize or re-use which options are beneficial but not available with the 5,960,837 reference. United States Patent 5,901,717 to Dunn et. Al., discloses a canister and flushing system. This system comprises a complex system for handling a collection canister. Disadvantages of this system are expensive equipment is required and it is complex equipment. These expenses and maintenance require periodic inspection by biomedical engineering which increases labor costs associated with its presence. In addition the equipment must be kept clean which is an additional requirement for daily operations. Other disadvantages are a reusable canister which requires costly labor for internal processing, reprocessing, resterilization and reusing. In most institutions, volume of such collection systems is quite high imposing internal/external processing costs. The system discloses the disposable flush kit which maintains higher disposable costs along with the higher costs associated with internal distribution, inventory handling and higher disposable waste removal costs. United States Patent 4,419,093 to Deaton discloses a reusable canister having a disposable lid and liner. This system is delivered in pieces and requires subassembly by the customer prior to operation. This requires additional labor which is costly and involves the inventory tracking of a plurality of pieces to a system in sets and often times lids and liners can become separated and when out of numeral matching balance one cannot be use with out the other, whereas resulting in a incomplete set and a unusable subassembly. This disadvantage complicates the ongoing internal/external distribution and tracking of pieces which adds costly labor, inventory management and excess handling. The 4,419,093 reference also discloses contribution of garbage to the waste stream which is a serious environmental concern. Other disadvantages of disposable collection container include the difficulty in which to assemble a lid to a container body. Many disposable canister systems have a container body which is stackable. This stack ability allows the container bodies to be nested on each other with one container resting substantially within the other with the exception of about one to two inches of body length. This stack ability feature is desirable whereas the volume of container handling in the disposable application is very high. For example a busy institution may process anywhere between 10,000 or less and/or 50,000 or more disposable canisters per year. The stack ability feature makes these canisters easier to transport in volume. One problem with the assembly of such stackable canisters and it's associated lid, is that the snap on feature of lid must be very tight in order to be fluid leak proof in the event of tip over and fluid spills. In order for these canister lid interfaces to be leak proof they must fit very tightly making for a very difficult assembly. The force required to assemble the canister and lids of this nature is greater than a force which would normally be deemed easy to use. In fact they can be very difficult to use. Good ergonomic systems include assembly and dis-assembly features that do not require undue finger, hand and/or upper body strength. May of the prior art collection systems have snap together features that, due to their seal designs, require more force to assemble, than some operators can provide. This is because of the force required to snap together the seals that are not meant to come apart, must be tight enough to stay sealed during transport, handling and tipping over. The applicant believes that if a system cannot be assembled with much less force and upper body strength of the average operator, then there are human factors and ergonomics design issues that are solved by the instant case. The applicant believes that the snap fit force utilized to keep a lid and canister housing together during transport and tipping is not the same force that provides for good human factor/ergonomic and good clinical handling. Applicant contents that when snap fit forces are greater that the average upper body strength of the average operator, then clinical safety is in jeopardy and personal protective equipment such as protective gloves are at risk for tearing or hole.

Description of the Invention

The instant embodiments provides methods and apparatus for establishing and managing NuChain ERP (enterprise resource planning and management) systems by NuPurposing products and containers into uses and applications that provide additional value, rather than just throwing the spent containers into the garbage. The embodiments of the instant case solve problems encountered by NuPurposing containers. For example, when pour bottles are NuPurposed into canister liner applications it becomes cost competitive to manufacture re-usable and permanent canister systems and to NuPurpose containers. Also, human factors and ergonomics involving exchanging filled NuPurposed containers becomes difficult. Switching out bottles with respect to a permanent canister system requires the minimum amount of complexity of hand movement and hand strength. The instant case solves the problem of hand strength. The instant case solves the problem of human factors and ergonomics. The instant case solves the problem of cost competitive manufacturing of a lid, canister and capping member designs that only require single pull tooling. Also, the instant case solves the problem of having single pull tooling that can manufacture systems out of lower cost materials so the system also functions as a disposable. The instant case solves the problem of cost competitive manufacturing of a lid, canister, and capping member design that only requires a single pull tooling for manufacturing permanent systems out of more durable and heat resistant materials for permanent autoclavable systems. The Instant case also solves the problem of what to do in a scenario whereby there are no bottles to NuPurpose. The instant case also solves a problem and provides a functional ergonomic system having a low parts count requiring only a few number of single pull injection molding tools. The instant case embodiments comprise utilizing fluid enclosing product transfer delivery containers which do not embody the self inherent physical construct and capacity to maintain shape under extreme negative vacuum pressures reduced up to minus 1 atmospheres. Examples of cost effectively fabricated fluid enclosing containers made for delivery of fluids which may not embody inherent implosion resistant structural strength and rigidity needed for suction vacuum collection may include plastic delivery containers such as plastic pour bottles and intravenous containers. The present invention discloses cost effective practical solutions for reducing waste, reducing labor, reducing inventory, reducing the receiving, reducing the internal distribution, and reducing the inventory handling costs and the space required to carry inventory all involved with the collection of waste materials. These achievements are carried out by the instant embodiments whereby successful suction vacuum collection may be realized using in a flexible manner, cost effectively fabricated fluid enclosing distribution, commercialization, and transfer delivery containers. This patent application discloses collection systems that teach use of fluid enclosing product supply containers for collection, removal and disposal of waste material and into the disposal chain. In particular, delivery containers for general distribution, transfer, administration of pour bottle solutions and intravenous solution, parenteral and enteral solution containers and the like are converted into the waste collection and disposal chain. This application also teaches use of a common fluid enclosing container for both the supply and the disposal chain. The instant application also teaches use of containers found in inventory for supply and delivery of fluids and then transforming them for the collection removal, and disposal utility found in the disposal chain. This application teaches the use of a common fluid enclosing container for the product transfer and then integrates the container into systems for the collection and the removal of waste material. The instant application teaches waste reduction methods by integrating delivery containers fabrication and the collecting and disposing of waste materials. Two potential container fabrications processes applicable to the instant case comprise blow fill seal manufacturing, blow molding or continuous blow molding which produce an open top container. Another type of container fabrication process applicable to the instant application is a blow fill seal fabrication process commonly knows and a closed top manufacturing process whereby a container is formed, filled with fluid and hermetically closed within one machine. The instant application teaches the waste reduction methods by using manufacturing methods as mentioned such as blow molding, blow fill sealing, and also laminating sheets such as in intravenous solution container manufacturing methods to form enclosures. The purpose is to transform these containers which are derived from a fluid delivery mode, from product transfer and administration and then converting the container for collection, removal and disposal of waste materials.

The embodiments of the instant case provides container utility options for the transfer and administration of products, consumption of products and for the waste collection removal and disposal options. The embodiments of this instant case discloses the utilization of fluid filled product transfer containers such as pour bottles and/or intravenous solution containers(IV bags) (and/or other product/ fluid containing enclosures used for intravenous therapeutics and the administration of anesthetic agents as well as other medicaments) for the receiving, collecting, containment and disposal of waste. Using fluid enclosing product distribution transfer/administration containers also for the handling of waste results in optimal reduction of waste, reduction of inventory, reduction in labor, reduction of internal/external inventory distribution/processing/re-processing/re-using/re-cycling, reduction of inventory handling and waste disposal costs(brought by the (unnecessary) the need for separate supply and disposal containers in certain circumstances) , all are reduced by eliminating the supply chain costs with the fabrication of the said empty, fluid less separate supply and disposal/collection containers. The question arises why pay for disposable containers when a fluid delivery container can be derived from the supply side of the supply and disposal chain and then converted into a collection and removal/disposal container. Such container are supplied clean/sterile and are made to meet certain sterility assurance levels (SAL). The instant embodiments confer options allowing consumer choices for the reduction of waste. Plastic transfer containers such as blow molded containers, continuous containers, blow fill seal containers, intravenous solution containers, containers made of laminated sheets of polymers and of foils, are commonly used for the distribution transfer and administration of fluid products and other product such as sterile water, sterile saline solution intravenous solutions for IV therapeutics, IV solutions for administration of anesthetic agents and other water for injection (WFI) based fluid formularies as used in the medical field. Also included are cleaning solvents, prep solutions, alcohol solution and the like. Certain of these solutions are used for intravenous therapeutics, parenteral administration, and administration of anesthesia, wound irrigation, irrigation for arthroscopic, endoscopic, laparoscopic procedures, irrigation for urology procedures and many other types of applications. The instant application names additional fluid materials delivered in polypropylene, and high density/low density polyethylene and polyvinyl chloride containers which are all generally applied to high volume supplies and or engage the supply chain on a just in time basis or on a vendor managed inventory managed basis or a customer managed basis for delivery and consumption. Intravenous solution containers are also used for the distribution/commercialization of these container products. It is understood the disclosed teaching of the instant case are not limited to sterile liquid distribution/supply containers or the transfer of fluid filled product containers. Other product transfer containers may be suitably integrated with innovations of the instant case, to function with the delivery and waste disposal capacity. Other container such as prep solution containers, alcohol containers, solvent containers, cleaning solution containers and the like may function suitably within the scope of the present invention. These teaching are not intended to limit the attached claims below. Other product containers may also be used in the instant inventions. These product delivery containers are commercialized/distributed to the customer having volume cubic capacity sufficient in substantial proportion to the collection and the disposal of waste materials. The instant embodiments reduce the amount of plastic introduced to the waste stream. The instant embodiments reduce the recycling, reprocessing and labor associated with the handling and re-use procedures thereby lowering the associated costs of waste removal. The instant embodiments reduce the supply chain costs from manufacturing to disposal. Collecting fluent waste material in fluid enclosing delivery containers such as open top blow molded, or continuous blow molded containers, intravenous solution containers, irrigation solution containers, closed top blow fill seal containers or form fill seal containers, all which have been cost effectively fabricated with thin walls which do not have the strength or construction to resist high vacuum implosion forces provide various solutions, and options for solving the disadvantages and problems of prior art containers. When the methods and apparatus embodied in the teaching in the instant application are utilized, the instant embodiments also provides for reducing the handing, reducing the labor and reducing the costly process of recycling, re-using re-processing sterilizing and or re-sterilizing. Certain product delivery transfer containers are fabricated, commercialized and are already present or in the supply, distribution, inventory, administration chain and or in the customer facility.

The present invention conveniently transforms converts and integrates these fluid enclosing transfer delivery containers for their transformation to waste materials collection containers establishing a new type of environmental supply chain. We refer in part to this new novel environmental process as a disposal chain supply system by the deployment of disposal chain supplies to collect, remove and dispose of waste material. This defines new supply and disposal chain systems, methods and apparatus for using fluid enclosing distribution containers and methods for processing systems from the clean delivery side to the fluid administration/consumption into the dirty collection removal and disposal side integrating the disposal chain and the supply chain for environmental purposes herein referred to as disposal chain supply systems. In essence for example disposal chain supply systems define a novel environmental process. In essence for example disposal chain supply systems are defined by transforming distributing containers into collection removal and disposal containers. In essence for example a dispose and supply container is an environmental conversion and transformation methods. In essence for example a disposal chain/supply chain container utilizing disposal chain supply chain systems confers options and advantages and disclosed by the instant case. In essence for example disposal supplies are environmentally preferred. In essence for example disposal supplying is the environmentally preferred method.

Difficulties exist with the use of certain containers when integrated into high negative pressure vacuum/suction system. Negative vacuum draw pressures at times up to minus one atmosphere of reduced pressure is common for drawing surgical waste materials from a surgical site into a collection receptacle. One problem is that the common blow molded or blow fill sealed containers are cost effectively manufactured with relatively thin plastic walls sometimes down the thickness range of .025 inches or less and are generally made with a plastic materials such as high density polyethylene, polypropylene, polyvinyl chloride, or other like materials. Thin walled containers are commonly fabricated to reduce the plastic material mass (volume of plastic materials per unit) to hold down production costs and shipping weight. It is common practice of container manufacturing to consume the minimum amount of material used per unit to fabricate each container yet maintain user function for cost effective manufacturing purposes. Common container material durometer comprising containers having such ranges of this wall thickness in these like materials are not generally strong enough to withstand the negative implosion pressures of up to minus one atmosphere of negative pressure as commonly found in a vacuum/suction system without imploding or deforming. Product fluid enclosing distribution transfer containers are commonly fabricated using processes know by artisans skilled in the arts of blow molding or continuous blow molding of open top containers and/or blow fill sealing of closed top containers as well as using such manufacturing processes such as thermal lamination of plastic sheet to form cavities/enclosures for the filling and production of intravenous solution containers and other parenteral containers and the like.

The solution to the problem of implosion and bottle/container deformity which occurs under high vacuum pressure is to connect a container to a suction collection system whereby container wall is interposed between its inner chamber and an outer space with each space subjected to a common amount of negative draw vacuum force/pressure. This force envelops itself inside and outside of the container which forms opposing pressures with provides reinforcing balances by effecting a similar inside and outside neutralizing net force at the same time on the container wall eliminating negative implosion forces on the container wall. This is carried out by the container and canister of the instant case co-acting to contain waste and balance negative draw forces along the composite draw path. This addresses the issue of container deformity. This instant application discloses the neck of the pour bottle as the utilitarian area of the bottle for coupling with the lid of a canister system. The instant application discloses a throat aperture space (pour spout) of a plastic pour bottle as a utilitarian area for engagement of draw forces. The instant application discloses the throat space aperture, pour spout as a utilitarian area for coupling of a throat aperture plug. The instant application discloses a positive and negative air/materials exchange plug for providing communication between the draw force and the inside and outside of a fluid enclosing container. The instant application discloses locating an air atmospheric pressure draw exchange at the neck of the container. The present application discloses interposing the container neck (pour spout) annularly between a plug and a lid for conversion coupling peripherally (not necessarily round). The present application discloses fabricating a blow molded container for delivery transformation and conversion. It is understood the invention is not intended to be limited to bottle neck configuration which are round. Any shaped bottle/neck shape lid/cover cap, plug, and boss configuration suitable for arrangement/construction having structuration to carry out the utility of the present invention may be fabricated and deployed to a carry out the utility of the instant case. The present invention discloses positioning the plastic container throat space in a negative pressure draw vacuum system whereby a container ingressing draw force is disposed to transfer and deposit medical waste material into the container and whereby a container egressing outdraw force is disposed to transfer the differential draw forces and atmospheric are, among other things toward a reduced pressure source. The embodiments of the instant case utilizes the inner chamber of a plastic pour bottle as part of the pressure vacuum draw path. The present case discloses several embodiments for carrying out the invention.

Purpose, Objects, Apparatus and Methods of the Embodiments

One object of an embodiment of realizing a NuChain supply chain and disposal chain apparatus by NuPurposing is to position a liquid transfer fluid enclosing container upstream to a patient delivery sequence, and then place the container downstream in connection with the flow of a waste material. Another object of an embodiment of creating a NuChain supply chain and disposal chain apparatus by NuPurposing is to convert a liquid container affecting egress of the liquid and then the positioning of the container in flow confining connection downstream to a source of waste material. Another object of the an embodiment of creating a NuChain supply chain and disposal chain system by NuPurposing is to pour solution from a container and then egress atmosphere air during place the container downstream along a vacuum draw path in flow control connection with a suction wand. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing liquid transfer container upstream to and in vascular access connection with a patient and then position the transfer container downstream in flow control composite connection with a vacuum draw path.

Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide supply chain efficiency whereby the dispensing container is also the receiving receptacle/container. Another object of an embodiment is creating a NuChain supply chain and disposal chain system by NuPurposing to provide the waste reducing processes whereby the egress of the container upstream from a healthcare patient is the same container positioned downstream in flow control association with a negative atmospheric pressure draw force and flow confining connection with a suction wand. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide practical steps for internal container handling including a) fabricating a transfer container, b) taking a transfer container and extending a draw path between a vacuum source and a suction wand, c) connecting a fluid enclosing delivery container to the path, d) depositing the waste material into the container. Another object of an embodiment is to provide methods and apparatus including a) enclosing a fluid in a container at manufacturing and transferring through distribution and administration for health care consumption, b) consuming at least a portion of the fluid product, c) converting the container into a vacuum collection system, d) removing the waste in the container e) disposing the waste. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing includes a supply and disposal method comprising a) manufacturing a fluid enclosing container for the distribution, transfer and administration of a fluid product, b) consuming at least a portion of the liquid, c) directing a draw force from and to the container along a composite draw path, d) depositing waste material into the container.

Another object of an embodiment establishing a NuChain supply chain and disposal chain system by NuPurposing is to provide a method for reducing supplies comprising, a) providing a container fabricated for the delivery of a product, b) delivering the product, c) connecting the container to a vacuum source system, d) drawing waste material into the container, e) removing the waste material in the container, f) disposing of the waste material. Another object of an embodiment is to provide a method for reducing waste involving an NuChain supply chain and disposal chain system comprising the steps of a) transforming a waste receptacle from a container manufactured for enclosing and delivering a fluid, b) connecting the container to a composite waste draw conduit, c) depositing the waste material in the container, d) removing the container from the draw path, converting another delivery container into a waste receptacle comprising transformation of a fluid enclosing supply container into a waste collection receptacle. Another object of an embodiment includes providing the methods and system for the transforming a plurality of supply containers into a plurality of waste containers. Another object of an embodiment establishing a NuChain supply chain and disposal chain system by NuPurposing is to enclose a plurality of supply containers having been transferred into a plurality of collection container within a single enclosure. Another object of an embodiment establishing a NuChain supply chain and disposal chain system by NuPurposing is to provide methods for transforming supplies into waste receptacles comprising the steps of a) constructing a fluid enclosing container, b) taking the container c) extending a draw path between a vacuum source and a suction wand d) connecting a delivery container to the path, e) depositing waste material into the container. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide methods for deriving waste receptacles from supply containers including the steps of a) providing a liquid product in a selectively connectable waste receptacle b) disposing the receptacle in a vacuum collection container system, c) drawing a force away from a container along a composite draw path between a source of waste material and a vacuum source d) depositing waste in the delivery receptacle. An object of the instant case comprises positioning a transfer container upstream in the flow of patient care sequence for liquid dispensing and administration, b) positioning the container inside a canister housing and downstream in the flow of patient care in a material receiving and receptacle mode. Another object of the embodiments herein creating a NuChain supply chain and disposal chain system by NuPurposing is disclosed whereby the receptacle is positioned on the clean side of the supply and disposal chain for dispensing of it contents and the dispenser is position on the dirty side of the supply and disposal chain for receiving waste material as a receptacle, and this receptacle is in receiving structuration with a gravity flow system and or a composite vacuum draw path. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide methods and system for drawing a negative pressure within a transfer dispensing container. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide methods for placing the container downstream to a flow control conduit depositing waste into the container under a positive push force, not a negative vacuum force. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide methods and apparatus in structuration with a draw force including the steps of a) enclosing a fluid in a container at fabrication and providing the liquid product in a selectively connectable receptacle, b) disposing the receptacle in a vacuum collection canister system, c) drawing a force along a composite path along a source of waste, d) depositing the waste into a delivery receptacle. Another object of the embodiments herein creating a NuChain supply chain and disposal chain system by NuPurposing as disclosed is to provide connect ability to a transfer container and a vacuum canister collection lid. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a composite negative atmosphere draw path formed at least in part by the interior of a transfer container. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a draw force directed by a composite draw path in part co-acting to transform a delivery container to dispose waste material. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a canister in structuration with a fluid enclosing supply transfer container forming at least a portion of a composite draw path interposed between a vacuum source and a site of material waste. Another object of an embodiment is to combine in association with the novel features cited above, a negative draw path with a material flow path. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to combine a draw path with the material draw path to dispose material in a transfer container to remove waste material from a site. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a throat aperture space/plug/seal disposed in a transfer container access/port site forming at least a part of the draw path controlling draw force to and from a transfer container. Another object of an embodiment creating a NuChain supply chain and disposal chain apparatus by NuPurposing is to provide a receptacle derived from a health care delivery sequence converted to co-act with a canister, a lid, a draw force, a composite path, a throat plug to dispose waste. Another aspect of an embodiment creating a NuChain supply chain and disposal chain apparatus by NuPurposing is to provide supply chain efficiency methods comprising the steps of a) fabricating liquid enclosing delivery container, b) transferring the liquid to a delivery site, c) administering the liquid and connecting the container in structuration with a waste collection, d) collecting the waste. Another aspect of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide supply chain efficiency methods comprising a) manufacturing a fluid enclosing container for the distribution of a liquid product b) distributing a liquid product, c) consuming at least a portion of the product d) directing a negative suction vacuum draw force to the container, e) connecting the container to a composite draw path having a suction wand at one end thereof, e) placing the suction wand in suctioning wand with waste material and drawing the waste material into the container, f) removing the material in the container, g) disposing the material. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide the step of a) fabricating a fluid enclosing delivery container for disposal and collection in a waste collection system. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a method of reducing waste comprising enclosing a fluid product in a fabricated delivery container, egressing the fluid from the container, and connecting the container along a vacuum draw path, drawing waste material into the container, removing the material for disposal, disposing the material. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a method of collecting supplies and transforming them into waste receptacles comprising the steps of a) collecting delivery supply containers, b) placing the containers positioned to receive waste in vacuum canisters, c) drawing vacuum, d) controlling the draw force to direct waste material for disposing waste in the transfer container. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a process of converting containers having dispensed at least some container contents, converting the container into a vacuum collection system receptive to waste collection and or removal and or disposal. Another object of the aforementioned objects is to provide a method of handling a dispenser and a receptacle wherein the dispenser is the receptacle. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a delivery collection container system using fluid enclosing bottle fabricated from a blow molding, and or a continuous blow molding process out of previously shaped polymer performs. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a delivery and collection container fabricated from a fluid enclosing blow fill seal manufacturing process container. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a suction /vacuum system which renders product distribution/ transfer containers receptive to waste materials. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a collection system for reducing waste that is derived from product delivery. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to reduce internal/external distribution, internal/external inventory management whether management is carried out by a vender management program or by a customer. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is for the consumer to account for the cubic volumes of incoming fluids and cubic volumes of outgoing waste materials for analysis and matching incoming and outgoing waste materials to the number of containers needed to optimize the supply purchasing process. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide methods and system for sealing a vacuum draw path and for unsealing a vacuum draw path so that pour bottles, intravenous solution containers, and other types of containers may function to improve supply chain metrics relating to reducing inventory, labor, costs, shipping, and for reducing the overall mass of materials contributed to the waste stream. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide convenient methods and system for connecting and disconnecting a composite draw path utilizing in part at least one collection container derived from a supply chain matrix involving the commercialization of a fluent material, that but for this invention would ordinarily be utilized in such a way as not to confer ecological efficiency. Still a further object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a lid such that movement of the lid with respect to a canister in one direction causes sealing of a vacuum draw path between a bottle, plug, lid and canister. Still a further object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a lid such that rotational movement of a canister with respect to a lid in the other direction, causes an unseal ability of a vacuum draw path between both a bottle, plug, lid and canister. Still a further object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a system using parts manufactured by single pull injection molding tools. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a suction canister system that functions as both a bottle docking system and a normal canister. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide bottle docking capability in a fashion that is ergonomic and easy to use. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide a system embodying few parts of competitive cost manufacturing so that if the user does not have bottles available to dock as collection receptacles, the system is cost effective and capable of use as a both disposable non-docking and re-usable non-docking canister system. Another object of an embodiment creating a NuChain supply chain and disposal chain system by NuPurposing is to provide permanent autoclavable and re-usable canister systems to reduce the amount of waste mass entering a facility and leaving a facility and then entering the waste stream. This Patent Application incorporates by reference herein United States Patent 7,185,681. This Patent Application incorporates by reference herein United States Provisional Patent Application Serial Number 11/787,036.

Definitions

Bottle dock means a permanent or disposable canister housing systems embodiments of the instant case which is capable of having a fluent material commercialization container transformed and disposed therein for the collection of fluent material waste by the NuPurposing of fluent material commercialization containers into waste collection containers.

NuChain means the novel supply chain apparatus and disposal chain apparatus created by the NuPurposing of containers such that the transformation and conversion of fluent material delivery containers into collection containers creates a new supply chain and disposal chain apparatus which links the supply chain apparatus of one supply chain and disposal chain apparatus to the disposal chain of a completely separate supply chain and disposal chain apparatus eliminating one supply chain apparatus and one disposal chain apparatus.

NuPurpose/NuPurposing means the creation of a new purpose for containers such that instead of using a container for an intended purpose and then throwing away such a container realizing no value, the container is utilized for a new purpose like the new collection of waste materials in a separate supply chain and disposal chain system indication, but not limited to that.

Brief Description of the Drawings

Figure 1 is a drawing of a prior art supply chain apparatus showing how a fluent material filled container 1 may be distributed to a facility 5 and once the fluent material is used an empty container 3 is then discarded into the garbage. Similarly, a separately purchased empty container 2 may also be distributed to the facility 5 and when that empty container is used or filled it goes into a fluent filled waste container disposal chain apparatus.

Figure 2 is a drawing of a NuChain supply chain apparatus showing the elimination of supply chain apparatus 2a and disposal chain apparatus 3a wherein a fluent material container is transformed into a collection container linking the supply apparatus of one supply and disposal chain apparatus with the disposal apparatus of a second supply and disposal chain apparatus. This is emphasized by the broken lines depicting the eliminated portions the aforementioned apparatus. Figure 2 depicts the transformation of said fluent filled containers from a first condition shown by circled 1-11, being transformed 13 into a waste collection container as shown by circled 2-12, said transformation 13 from condition 1 to condition 2 being carried out within the facility.

Figure 3 shows the same drawing as Figure 2 with the exception that the fluent filled containers circled 1 converts and is transformed 13 from a first condition circled 1-11, to a second condition 2-12 of a waste collection container circled 2-12 as shown by transfer vector 14 leaving the facility 5a and by transfer vector 15 as returning to the facility transformed into a second condition. It is understood that the process shown in Figure 3 does not depend on the containers described being the same actual physical embodiments in every instance, however in some instances the containers will be the same physical embodiments associated with facility 5 and 5a and in other instances the containers shown will be containers derived from separate facilities in that one of the underlying concepts is that NuPurposed containers may be derived from other sources.

Figure 4 shows a drawing of a NuChain apparatus wherein the distribution and receiving of empty incoming separately produced waste collection containers of Figures 1, 2 and 3 is eliminated, an the disposal of the empty fluent material containers are eliminated and the supply chain apparatus of a first supply chain apparatus is linked to the disposal chain apparatus of a second disposal chain apparatus establishing a NuChain supply chain and disposal chain apparatus.

Figure 5 shows a prior art drawing of a first supply chain and disposal chain apparatus and a second supply chain and disposal chain apparatus wherein a fluent material container 1 is processed through a facility and/or toward and away from a point of consumption as shown by transfer vector 17 and then leaves a facility/point of consumption as an empty waste container whereby no container transformation or reconditioning occurs. In addition Figure 5 shows the distribution and receiving of a new empty prior art waste collection container that goes through a facility and/or point of consumption as shown by vector 18 and then leaves the facility and/or point of consumption as a separately produced waste collection container containing waste material.

Figure 6 shows a first supply chain and disposal chain 1, 17a and 3, and a second supply chain and disposal chain 2, 8a and 4, and some of the cost metrics associated with each. On a procure to pay valuation basis the cost factors shown, such as 1e-1k, 2e-2k, 3e-3l and 4e-4l as well as other metrics that are appraisable (not shown) may be appraised for each supply chain and disposal chain apparatus that is associated with a point of consumption and or a facility to obtain economic values for each.

Figure 7 shows a NuChain enterprise resource planning supply chain and disposal chain apparatus connecting the two prior art supply chain and disposal chain apparatus whereby a fluent material filled product distribution container has transformed into a waste collection container and creates a new value defined as a NuChain enterprise resource planning process and NuChain supply and disposal chain apparatus.

Figure 8 shows show's a new NuChain Enterprise Resource Planning sustainability and environmentally preferred supply chain and disposal chain apparatus whereby a new filled fluent material container may be distributed to a facility and/or a point of consumption as such a container is conditioned and transformed to collect waste material.

Figure 9 shows a supply apparatus which shows the prior art supply chain and disposal chain apparatus wherein a full fluent material commercialization container 1, 6, 5, 7 & 3, and a separate second supply chain and disposal chain apparatus embodying a newly delivered empty collection container which gives rise for the need for a container transformation of the instant case and give rise for the need for an online exchange so that facilities and point of consumption may benefit from empty fluent material distribution containers may be exchanged between departments of a facility, between point of consumption associated with various supply chain and disposal chain apparatus, between separate facilities, so that a mechanism exists for users needing access to NuPurposed, transformed and conditioned containers to find and procure from facilities and/or points of consumption where there may be an overabundance of such containers which may be NuPurposed and utilized by a user which is not the same user of the first container embodied in the first supply chain and disposal chain apparatus.

Figure 10 shows a supply chain and disposal chain apparatus where the used fluent material distribution container has been transformed from a condition one-circled 1 to a condition two-circled 2 and gives rise to the need for an online exchange in the event there may be an overabundance of containers.

Figure 11 shows a similar supply chain apparatus as Figure 10 however the transformation of the new full commercialization container transforms from condition 1 to condition 2 is a process that occurs outside a facility/point of consumption as shown by transfer vectors 14 and 15. Figure 11 give rise to the need for an online exchange for users to learn of, access and procure containers for the transformation of, or containers which have been transformed as taught by the instant case, in the event a facility or point of consumption is in the possession of an overabundance of containers. This exchange would allow more containers to be conditioned and transformed and prevent such an overabundance of containers from being discarded and contributed to the waste stream.

Figure 12 is a drawing of a supply chain and disposal chain apparatus which depicts the commercialization, distribution and receiving of a new full fluent material container being received by a facility/point of consumption, being consumed at a point of consumption and then being conditioned for transformation into a waste collection container.

Figure 13 is a side elevation cutaway view of a newly distributed fluent material commercialization container 19 containing unused fluent material 20.

Figure 14 is a side elevation cut away view of a fluent material distribution container wherein at least a portion of said fluent material has egress out of said container 19 leaving cubic volume available inside 21 of container 19 for the ingress of waste material. Container 19 in Figure 14 either has been conditioned or is in a position to be conditioned for the collection of waste materials. Cap 23 of container 19 may be held in abeyance during the conditioning and transformation of container 19.

Figure 15 is a side elevation cutaway view of container 19 having been conditioned and transformed for the collection of waste material. The waste material 22 is seen in Figure 15. Cap 23 may be replaced on to container 19 to provide a leak proof seal to prevent waste leakage during a disposal process of a disposal chain apparatus. It is understood that cap 23 of Figures 13, 14 and 15 may be the same cap or a different cap whereas many containers are mass produced with the same dimensional specification and will serve the purpose of sealing a waste container 19 of Figure 15. Alternative seals may be used for sealing container 19 to seal waste 22 inside container 19 as shown in Figure 15.

Figure 16 is a side elevation view of a suction tip 22. Suction tips are commonly referred to as suction wands and may go by other common names such as Argyle Suction tips, Tonsil Suction tips, Pool suction tips, Adson suction tips, Frazier tips etc. etc. The suction tip as shown in connection with a suction tubing 23 are commonly connected to form a conduit for waste material being drawn from a source of waste material into collection container such as container 19 as taught by the instant case. Said conduits are commonly used in many forms of care such as open surgery, and other procedures such as arthroscopic surgery, endoscopic procedures, robotic surgery, minimally invasive procedures, computer assisted surgery as well as such conduits are used in procedures that are performed on all parts of a human or animal.

Figure 17 is a top isometric view of a bottle docking suction canister system conditioned to operate as normal suction canister in the instance where no bottles are available to dock inside the system.

Figure 18 is a top isometric view of a locking, plugging and capping and holding member 27.

Figure 19 is a top isometric view of a suction canister lid 26 which can also perform as a bottle docking suction canister system lid 26.

Figure 20 is a top isometric view of a canister 25 which can also perform as a bottle docking suction system canister 25.

Figure 21 is a top plan view of lid 26.

Figure 22 is a side elevation view of blow up of the circle of Figure 23, showing a canister/lid/plug/bottle seals compression ramp depicting 4 places 26f1, 2, 3, & 4.

Figure 23 is a side elevation view of lid 26.

Figure 24 is a bottom plan view of lid 26.

Figure 25 is a top plan view of canister 25.

Figure 26 is a side elevation view of canister 25.

Figure 27 is a top plan view of lid 26 showing the various features of lid 26 and where such features are arranged with respect to arcs and radians that may form a 360 degree circle. The spatial and temporal arrangements of lid 26 and canister 25 are operated by the sealing and unsealing of lid 26 and canister 25 based on the arrangements of said features.

Figure 28 is a top plan view of lid 26 showing the radiuses of lid pillars which define moment lever distances relative to other features of lid 26 and canister 25.

Figure 29 is a top plan view of canister 25 showing radiuses and arcs of various features of canister 25 depicting the structural arrangements of canister 25 features that interface with lid 26. Said features operate to form a seal between lid 26 and canister 25. During the bottle docking mode of operation, said features also operate to form a seal between a bottle, a bottle plug 65 and lid 26.

Figure 30 is a top plan view of canister 25 showing structural arrangement of features of canister 25 which interface for the formation of seals between lid 26 and canister 25. During the bottle docking mode of operation, the said features of canister 25 also operate to form seals between a bottle, a bottle plug 65 and lid 26.

Figure 31 is a blow up cutaway side elevation view of locking member 27a, lid 26 and canister 25.

Figure 32 is a blow up cutaway side elevation view of locking member 27a as lid lock hole 26l may be positioned in alignment with any one of canister locking holes 25a1, 2, 3, & 4 in preparation for pressing locking member 27a down to lock the rotation and seal of the canister/lid, and the bottle docking assembly.

Figure 33 is a blow up cutaway view of locking member 27a having been further pressed down through lid lock hole 26i and/or any one of canister locking holes 25a1, 2, 3, & 4.

Figure 34 is a top isometric view of a suction canister assembly of canister 25, lid 26 and member 27 in the mode of operation where bottle docking is not taking place because, for example a bottle is not available for docking. Lid port 26k is uncapped and open for connection to a patient suction tubing. Lid port 26l is uncapped and open and is available for connection to a conduit that is connected to a source of negative pressure. Lid port 26j is shown capped by member 27k. In this configuration, the suction canister system is in structuration of functioning as a non bottle docking system. The system is in a condition to draw waste under reduced pressure through a conduit and into the system as shown in Figure 34. Also member 27b of capping member as shown in Figure 18 is also shown plugging pour spout 26p of lid 26.

Figure 35 is a top isometric view of Figure 34 with locking member 27a pressed down locking the canister 25 and lid 26 into rotational security. This is accomplished by alignment of lid lock hole 26i of lid 26 and one of canister 25 lid locking holes 25a1, 2, 3, & 4 as shown in Figure 33.

Figure 36 is a top isometric view of the bottle docking mode of operation whereby bottle 19 is disposed in canister 25. Bottle 19 is supported by a stand 30. Bottle neck retains a plug 65(not shown).

Figure 37 is a top isometric view of the collection system in a bottle docking mode of operation. Figure 37 shows a view of lid 26 and canister 25 and member 27 in a condition sealing lid 26 to canister 25 as well as forming a seal between lid 26, plug 65(not shown), bottle 19. Figure 37 also shows the relationship of lid pillars 26a1, 2, 3, & 4 in physical structuration with canister pillars 25b1, 2, 3, & 4. Each of canister and lid pillars are depicted by the number 28 throughout the drawings defining varying sealing and unsealing juxtaposition relation. Figure 37 also shows capping member 27 conditioned and positioned so that plug 65 is accessible to the suction tip and suction tubing (i.e. a conduit) as shown as an exemplary embodiment so that waste materials may be drawn from a source of waste into bottle 19. Lid port 26l is also shown uncapped and available for a connection with a tubing/conduit that is connected at the other end to a source of reduced pressure.

Figure 38 is a top isometric view showing a bottle docking canister system wherein waste material has been drawn into bottle 19 as shown by number 21. Canister 25 and lid 26 are shown in a fully sealed and locked position.

Figure 39 is a top plan cutaway view of the sealing/closing assembly of lid 26 and canister 25 as depicted along the broken arrows.

Figure 40 is a top isometric cutaway view of Figure 39 showing the relationship of canister 25 and lid 26 during its unsealing counter rotation. Canister and lid relationship 28 is marked in two places depicting the physical juxtaposition of the canister and lid pillar structuration motion.

Figure 41 is a top plan cutaway view of unsealing/opening of canister 25 and lid 26 as shown along the arrows.

Figure 42 is a top plan cutaway view of Figure 41 showing the relationship of canister 25 and lid 26. The progression of the relationship between lid 26 and canister 25 are shown going from Figures 46, 44, 42 and 40 depicting going from the sealed mode to the unsealed mode of lid 26 and canister 25. The progression of the relationship between lid 26 and canister 25 view in the reverse progress, i. e. from Figures 40, ,44, 42 and 46 show the opposite effect going from the unsealed mode to the sealed mode of operation.

Figure 43 is a top plan view of a cutaway of canister 25 and lid 26 as shown in Figure 44 depicted by the arrows.

Figure 44 is a top isometric view of the cutaway of Figure 43 showing the counter motion between canister 25 and lid 26 to a greater extent operating to seal canister 25 to lid 26 and lid 26 to plug 65 (not shown) sealing having been established to create a reduced pressure so that waste material may be drawn into bottle 19 (or canister 25 in the event a bottle is not docked within the system.

Figure 45 is a top plan view of canister 25 and lid 26 relationship showing a cutaway of canister 25 and lid 26 along the arrows.

Figure 46 is a top isometric view of cutaway of Figure 45 depicting canister 25 and lid 26 is a fully sealed counter motion structuration process.

Figure 47 is a top isometric view of a bottle 19a held by a bottle holder 30a1.

Figure 48 is a top isometric view of a bottle 19b which is of a smaller size than the bottle 10a of Figure 47 and Figure 48 shown bottle 19b being held in a holder sized and shaped for a smaller bottle.

Figure 49 is top isometric view of bottle 19c being held by a holder 30c1 which is sized and shaped to hold a bottle smaller than the bottle 19b of Figure 48.

Figure 50 is a top isometric view of a fluent material container as depicted in Figures 13, 14, and 15 having one label attached therewith/thereon.

Figure 51 is a top isometric view of fluent material container having a different label attached therewith/thereon.

Figure 52 is a top isometric view of a fluent material container having a different label attached thereon/therewith.

Figure 53 is top isometric view of a fluent material container in a condition to be re-labeled.

Figure 54 is a top isometric view of a fluent material container in a condition to be re-labeled.

Figure 55 is a top isometric view of a fluent material container in a condition to be re-labeled.

Figure 56 is a top isometric view of a fluent material container in a condition having a label associated therewith and associated thereon which is different.

Figure 57 is a top isometric view of a fluent material container in a condition having a label associated therewith and associated thereon which is different.

Figure 58 is a top isometric view of a fluent material container in a condition having a label associated therewith and associated thereon which is different.

Figure 59 is a top isometric view of a fluent material container in a condition having a label associated therewith and associated thereon which is different.

Figure 60 is a split view of two related operational aspects of Figure 60 each of said views being a side elevation cutaway view. The lower view shows a bottle plug and cap assembly. The upper view is of a plug and cap assembly depicting a first plug and cap operational structuration.

Figure 61 is a split view of two related operational aspects of Figure 61 each of said views being a side elevation cutaway view. The lower view shows a bottle smaller than that of Figure 60 engaged in a bottle plug and cap assembly. The upper view is of a plug and cap assembly depicting a second plug and cap operational structuration.

Figure 62 is a split view of two related operational aspects of Figure 62 each of said views being a side elevation cutaway view. The lower view shows a bottle smaller than that of Figure 61 engaged in a bottle plug and cap assembly. The upper view is of a plug and cap assembly depicting a third plug and cap separated.

Figure 63 is a plan bottom view of the plug of Figure 65.

Figure 64 is a plan bottom view of the plug of Figure 66.

Figure 65 is a side elevation of plug 66.

Figure 66 is a side elevation view of plug 67.

Figure 67 is a top plan view of plug 66 of Figure 65.

Figure 68 is a top plan view of plug 67 of Figure 66.

Detailed Description of the Drawings

Turning to Figure 1. Figure 1 shows two separate supply chain and disposal chain apparatus's. In these two prior art supply chain and disposal chain apparatus's

Figure 1 shows a filled container in a new condition. Number 2 shows an empty separately produced collection container in a new condition. Number 3 shows an empty container of container 1 that is being discarded as garage into the waste stream. Number 4 is a used empty collection container of number 2. Number 5 shows a facility and/or point of consumption. Number 6 shows a supply chain transfer vector showing the receiving of container 1 by a facility 5 from manufacturing, or received at a point of consumption. Number 7 is a supply chain transfer vector showing a transfer of empty container 3 from facility to a waste receiving location. Number 8 depicts a supply chain transfer vector showing the receiving a separately produced empty collection container 2 by facility 5 (or a point of consumption) from manufacturing. Number 9 shows a supply chain apparatus transfer vector of contaminated and used container 2 being transferred from facility 5 to a waste receiving location.

Turing to Figure 2. Figure 2 shows in broken lines the elimination of empty waste collection container 2 as depicted by 2a and the elimination of the entire supply chain apparatus of container 2-8a. Number 7a shows the elimination of the disposal chain vector apparatus of empty collection container 1 and 3a shows the elimination of disposal chain apparatus of container 1 as an empty unused supply chain container. Also shown within facility 5a circled one is depicted by 11 which defines container 1 in a first condition. Supply chain apparatus transfer vector 13 represents the conditioning and transformation of container 1 into a different state in so far as it is been conditioned for the collection of waste as a collection container.

Turning to Figure 3. Figure 3 shows the supply chain apparatus of Figure 2 however the conditioning and preparation of container 1 as depicted by 11, 13 and 12 into a different state of collecting contaminated waste material occurs outside of the facility where the point of consumption of container 1 took place. Supply chain apparatus transfer vector 14 defines the container being transferred to a location outside of facility 5a and supply chain apparatus transfer vector 15 shows container 1 being transferred back to facility 5a in its conditioned, transformed and prepared for use in a different state as a contaminated waste collection container inside facility 5a. It is understood that facility 5a may be the same facility or a different facility in that container 1 may be engaged in a NuPurposing exchange (or an online NuPurpose exchange). Container 1 enters facility 5a for egress of its fluent materials and is conditioned and transformed into a waste collection container but then ingresses fluent waste material at a different facility as a result of having been subject to procurement and acquisition rights of a completely different facility, and/or a completely separate point of consumption in a different department of facility 5a or for a different consumption or different use than used in facility 5a.

Turning to Figure 4. Figure 4 shows a NuChain supply chain and disposal chain apparatus having eliminated the portions of the supply chain apparatus and the disposal chains apparatus of Figure 3. The broken lines of 2a, 8a and 7a and 3a having been eliminated. Figure 4 shows the NuChain supply chain being defined as number 1 which defines a fluent material distribution container. Number 6 defines the supply chain apparatus transfer vector toward facility 5a where a point of consumption occurs and a transformation of container 1 into a waste collection container occurs. Number 9a is a supply chain apparatus transfer vector showing a container 1 having waste material contained therein and being transferred away from facility 5a towards a waste receiving location.

Turning to Figure 5. Figure 5 shows two separate supply chain and disposal chain apparatus's in 2 prior art modes of operation involving current status quo enterprise resource planning showing the supply chain apparatus transfer vectors 6, 17 and 7 representing how a new full container is received by a facility at 6 and flows through a facility at 17 and then flows away from a facility at 7 wherein the new full container becomes an empty container as waste/garbage lacking further utility (i.e. not NuPurposed). Also new empty collection container 2 is shown by supply chain apparatus transfer vector 8 as being received by a facility 5 going through the facility and going away from the facility 9 going from a newly procured empty waste collection into a waste collection container 4 for having fluent material waste enclosed therein for transfer and disposal.

Turning to Figure 6. Figure 6 shows a supply chain apparatus showing separately and individually on a procure to pay appraisal basis of the current prior art an enterprise resource planning and management of containers 1 and containers 2 as they each separately and individually transfer along their respective separate supply chain and disposal chain apparatus's as they would individually flow through a facility in accordance with the prior art at 17a and 18a. New full container 1 is shown having cost associated with its procurement such as inventory/storage 1e, human resource metrics 1f, waste transfer metrics 1g, net green house metrics 1h, net mass/weight metrics 1i, quantity difference 1j, and delta packaging metrics 1k. In addition, container 1 becomes an empty waste container along 17a and has no further value which adds cost drives associated therewith such as inventor/storage metrics 3e, human resource metrics 3f, waste transfer metrics 3g, net green house gas metrics 3h, net mass/weight metrics 3i, quantity difference metrics 3j, disposal metrics 3k, and condition/maintenance metrics 3l. In addition, newly procured empty waste collection container 2 has associated costs such as inventory/storage metrics 2e, human resource metrics 2f, waste transfer metrics 2g, net green house gas metrics 2h, net mass/weight metrics 2i, quantity difference metrics 2j, and delta packaging metrics 2k. In addition, used waste collection container 4 has associated costs such as inventory/storage metrics 4e, human resource metrics 4f, waste transfer metrics 4g, net green house gas metrics 4h, net mass/ weight 4i, quantity difference 4j, disposal metrics 4k and condition/maintenance metrics 4l. This is not meant to be a complete list of costs however the lists associated with containers 1, 2, 3, & 4 of Figure 6 provides enough of a representative sample to teach the appraisal concept for the purposes of appraising the value of NuPurposing which creates the novel supply chain and disposal chain apparatus of NuPurposing.

Turning to Figure 7. Figure 7 shows the NuChain enterprise resource planning supply chain and disposal chain apparatus of the elimination of the supply chain costs and the disposal chain costs with the elimination of new empty collection container procurement as depicted by the broken lines 2a and the associated supply chain apparatus costs at 18b and also defined by the cost savings of elimination of the supply chain apparatus costs depicted at 2, 2e, 2f, 2g, 2h, 2i, 2j, 2k of Figure 6 as is depicted by broken arrow lines 2a and 18b of Figure 7 and in addition to the elimination of the separate disposal chain apparatus costs depicted at 3, 3e, 3f, 3g, 3h, 3i, 3j, 3k and 3l of Figure 6 as depicted by broken lines 17b and 3a in Figure 7 by eliminating the procurement costs of a new empty collection container and by eliminating the disposal costs of used empty containers going into the trash. New full collection container 1 becomes the collection container 4a as a NuPurposed container creating a NuChain supply chain and disposal chain apparatus. Container 1 is transformed and conditioned for the ingress of waste material and number 10 as marked in three places of Figure 7 as the NuChain supply chain apparatus and disposal chain apparatus transfer vector that connects new full container 1 with the disposal chain of fluent waste material as depicted by 4a as created by NuPurposing containers as taught by the instant case.

Turning to Figure 8. Figure 8 shows a direct supply chain 1(center) connecting new full container 1(left) to be conditioned and transformed to ingress waste materials 1(right).

Turning to Figure 9. Figure 9 shows the schematic of Figure 1 and gives rise to the need of a NuChain enterprise resource planning supply chain apparatus and disposal chain apparatus NuPurpose container need exchange that would benefit society from an overabundance of containers that may not have the need to be NuPurposed in a particular facility.

Turning to Figure 10. Figure 10 shows the supply chain of Figure 2 showing the elimination of 2a, 8a, 7a and 3a giving rise for the need of an online exchange for the exchange, sale and procurement of containers where there may be an overabundance of containers for NuPurposing whereby a particular facility may not have the need to NuPurpose and where another facility may benefit from the procurement of and conditioning and transforming of containers NuPurposing in their separate facility. These containers are exchanged between facilities, and/or separate entities for the purposes of transforming containers into a condition for NuPurposing into waste material ingressing containers. In the event that an overabundance of containers exist and may be transformed and conditioned for a new purpose, and online exchange will allow procurers to access and procure such containers.

Turning to Figure 11. Figure 11 shows a NuChain supply chain and disposal chain enterprise resource planning model that teaches an online exchange user as to what to evaluate when considering a NuChain procurement of containers for NuPurposing in a facility that may need conditioned for transformation into NuPurposed containers. This schematic gives rise to an online NuPurposing container procurement exchange in the event a facility has a overabundance of containers that may be NuPurposed by another facility or in the event a facility has an inadequate supply of containers for NuPurposing at the volume levels desired and the other facility wishes to procure containers for NuPurposing to make up for the inadequate volume. The exchange may be between different departments of the same facility, different departments of different facilities, between different entities, between different facilities. Supply chain apparatus transfer vectors 14 and 15 show that the conditioning and or transformation of containers into a different state may be carried out by a separate facility. An online exchange would allow separate facilities to become aware of and have access to the exchange, sale and procurement of collection containers from facilities that have an abundance of collection containers without having to procure separately produced empty collection containers 2a and thus prevents the expense of the associated costs, as well as the supply chain costs of disposal costs at 7a and the costs of disposal of empty waste containers 3a.

Turning to Figure 12. Figure 12 shows the NuChain supply chain apparatus and disposal chain apparatus depicting the connection between the two separate prior art supply and disposal chains as shown in Figures 9, 6, 5 and 1. Figure 12 shows a NuChain that is created by the NuPurposing of containers as taught by the instant case. NuPurposing containers creates a streamlined and cost effective practice for the delivery of new materials and for the collection of waste materials whereby container 1 is received by facility 5a along transfer vector 6 and then container 1 having been conditioned and transformed into a collection container by NuPurposing leaving facility 5a as a consumed collection container 4a.

Turing to Figure 13. Figure 13 side elevation cutaway view showing a bottle 19 in a fluent material distribution condition. Bottle 19 is shown having a new fluent material 20 contained therein by cap 23. Cap 23 has internal threads 23a. Bottle 19 shows threads 19a and a pour spout at 19b. Bottle 19 also has an outside perimeter 19d and a bottom 19c.

Turning to Figure 14. Figure 14 is a side elevation cutaway view showing bottle 19 having egressed its fluent material 20 of Figure 13. Bottle 19 is shown having space inside which represents available cubic volume to ingress waste material as shown by 21. Bottle 19 is shown having cap 23 removed.

Turning to Figure 15. Figure 15 is a side elevation cutaway view showing bottle 19 having ingressed waste material as shown by 22. Figure 15 shows bottle 19 as having been bottle docked and having ingressed waste materials 22.

Turning to Figure 16. Figure 16 is a side elevation view showing an exemplary suction tip commonly known in the art as a suction wand showing a connection 24 to a suction tubing 23. Number 21 represents a source of reduced pressure (not shown) which draws negative pressure into suction tip 22 at 20 along the arrows 20b shows in five places as a negative draw pressure draws waste material from a source of waste depicted by 20a and along the conduit formed by the tip and tubing as the arrows are depicted in five places of Figure 16 which passes through the connection 25 and through the suction tubing 20b toward a canister for the deposit of waste material whereby negative draw force at 21 pulls vacuum forces that draw waste materials into canister 25 and or bottle 19.

Turning to Figure 17. Figure 17 is a top isometric view showing the bottle docking system as taught by the instant case assembled in an exemplary operative mode of an ordinary suction canister without bottle docking a bottle 19 inside. Lid 26 is shown in the spatial and temporal process of being assembled to canister 25. Capping member 27 is disposed accordingly on lid 26. Canister pillars 25b1, 2, 3, & 4 of Figure 25 can be seen projecting up through lid pillar apertures 26h1, 2k, 3, & 4 of Figure 21. Lid aperture 26j is shown unplugged, however during use as an ordinary suction canister would be plugged by cap member 27k of Figure 18. Also cap member 27c of Figure 18 would be capped. Canister 25 is shown having an outside bottom 25h and an inside bottom 25g. Canister 25 is shown having inside walls in two places at 25i.

Turning to Figure 18. Figure 18 is a top isometric view of capping member 27. Capping member 27 comprises cap 27c which caps tubing port 27 of 27b. Cap 27 also comprises a plurality of retainers. Retainer 27f positions and retains cap 27c.

Retainer 27o positions and retains lid lock 27a. Retainer 27j positions and retains cap 27i. Retainer 27l positions and retains cap 27k. Retainer 27p positions and retains cap 27m. Retainer 27h positions and retains cap bottle cap ring holder 27g. Plug 27b plugs lid pour spout 26p and positions all aspects of cap member 27 with respect to features of lid 26. Plug 27b is sized and shaped to fit and plug lid pour spout 26p of lid 26. Lid lock 27a retained and positioned for easy depression into lid lock hole 26i of lid 26. Cap 27i is retained and positioned to cap vacuum tubing port 26l of lid 26. Lid plug cap 27k is retained to plug center lid aperture 26j. Cap 27m is retained and positioned to cap patient tubing connection port 26k of lid 26.

Turning to Figure 19. Figure 19 is a top isometric view of lid 26 showing the detailed features of lid 26. Lid 26 comprises four lid pillars 26a1, 2, 3, & 4. 26i represents the lid lock hole. 26k comprises the suction tubing connection port for a patient suction tubing. 26l comprises a suction tubing connection port for a source of vacuum. 26p comprises a pour spout. 26j comprises a center aperture for a patient suction tubing to be used during a bottle docking mode of operation by connection to a patient tubing connection on a bottle plug (not shown). 26h1, h4, h3, & h1 each comprise an aperture for acceptance passage and movement of canister pillars 25b1, 2, 3, & 4. 26f1, 2, 3, & 4 comprise ascending sealing ramps positioned to contact the bottom side 25b1e, 2e, 3e & 4e of canister pillars 25b1, 2, 3, & 4. Ultimately when in the fully compressed condition lid contact surfaces 26g1, 2, 3, & 4 engage in contact with canister pillar bottom edge 25b1h, 2h, 3h & 4h as counter rotational motion between canister 25 and lid 26 compresses lid 26 and canister 25 together to form a seal therebetween.

Turning to Figure 20. Figure 20 is a top isometric view of canister 25. Canister 25 comprises canister pillars 25 b1, 2, 3, &4. 25c1, 2, 3, & 4 comprise the lid lift ramp. 25a1, 2, 3, &4 comprise canister lock hole. Flat surface 25e marked in four places comprises the top flat contact surface for contact between lid 26 and canister 25. 25d marked in three places shows the canister seal that seals with lid seal 26o as shown in Figure 24. Canister seal is disposed at the top of the inside rim of canister 25 for sealing canister 25 for sealing with the annular lid seal 26o of lid 26 as shown in Figure 24.

Turning to Figure 21. Figure 21 is a top plan view of lid 26. Figure 21 shows coordinates 33 A at 0, 34 B at 90, 35c at 180 and 36 and D at 270 forming a x-y coordinate plane with cross hairs intersecting the center of lid aperture hole 26j. Lid pillars are shown at 26a1, 2, 3, & 4. Lid locking hole is shown at 26i. Tubing connection port for a source of reduced pressure is shown at 26l. Suction tubing port connection is disposed to draw waste material from a patient and/or source of waste to go into the canister when operating as a canister showing 26k. The canister pour spout is located at 26p. Canister pillar apertures are shown at 26h1, 2, 3 & 4. Canister bottom sealing surface is shown at 26g1, 2, 3, 4. Canister pillar ascending ramp is shown at 26f1, 2, 3, & 4. Lid pillar indicia at 26c1, 26c2 show the indicia "CLOSED" with each pillar depicting three arrows showing the direction of motion/force in which pressure should be applied on lid pillar sides 26e1 and 26e2 in order to close and seal the lid and canister with respect to the respective pillars to move the pillar according to the indicia on top of the pillars. Indicia shown at 26b1 and 26b2 each depicting the indicia "OPEN" and each having the three arrows on each lid pillar depicting the sides 26d1 and 26d2 of lid pillars 26a2 and 26a4 showing which sides of the lid pillars 26a2 and 26a4 pressure applied to open and unseal the canister and lid. 27p shows the upwardly projecting lid boss making clearance for the bottle neck and plug. 26u shows the place on the lid where the bottle cap may be placed and retained by cap retaining ring 27g of capping member 27.

Turning to Figure 22. Figure 22 is a side elevation blow up cutaway of the circled portion of Figure 23 which depicts the ascending canister pillar compression ramps 26f1, 2, 3, & 4. Also shown in this blowup of Figure 22 is the canister pillar bottom sealing surface 26g1, 2, 3, & 4.

Turning to Figure 23. Figure 23 is a side elevation view of lid 26 with the cutaway of the lid ascending sealing ramp 26f1, 2, 3, & 4 and canister pillar bottom sealing surface 26g1, 2, 3, & 4. Also depicted are the annular outside lid skirt 26y marked in two places as well as the upwardly bottle neck/plug 65 clearance boss 27p.

Turning to Figure 24. Figure 24 is a bottom plan view of lid 26. As depicted by the bottom plan view of lid 26 as can bee seen the annular canister sealing surface 26o.

Canister struts 26n1, 2, 3, 4, 5, 6, 7, & 8 can be seen in 8 places. Annular lid plug seal can be seen at 26x. Center lid aperture 26j for allowing connection access to plug (not shown) and patient suction tubing connection can be seen at 26j. The lid 26 annular skirt can be seen at 26y. 26s1, 2, 3, & 4 comprise rotational riding rails for each of the canister pillars 25 b1, 2, 3, & 4 as the lid is located and placed on canister 25, lid 26 pillars 25b1, 2, 3, & 4 may be rotated contacting lid rails 26s1, 2, 3, & 4 until such relationship exists whereby the lid pillars are under lid pillars aperture spaces 26h1, 2, 3, & 4 whereby the lid drops down onto the canister as the lid pillars 25b1, 2, 3, & 4 pass thorough the lid pillar apertures 26h1, 2, 3 & 4. The canister pillars contact the lid rails 26s1, 2, 3, & 4 and the canister pillars 25b1, 2, 3, & 4 slidably engaged the lid rails and are in contacting engagement until the canister pillars 25b1, 2, 3, & 4 then drops through lid apertures 26h1, 2, 3, & 4 to begin the counter rotational sealing action between lid 26 and canister 25. The upwardly projecting lid bottle neck clearance boss can be seen at 27p. 26l comprises the suction tubing connection port for a source of reduced pressure. Suction tubing connection port for the patient suction tubing (for the canister only mode of operation, i.e. not for a bottle docking mode of operation) can be seen at 26k. Lid lock hole can be seen at 26i. Hydrophobic filter press fit struts can be seen at 26m1, 2, & 3 to protect the reduced pressure tubing and negative pressure source system that draws negative pressure into the canister system through tubing connection port 26l. Also shown at a radius center point just inside the perimeter of upwardly projecting bottle neck/plug clearance boss 27p, lid struts 26n1, 2, 3, 4, 5, 6, 7, & 8 take an upward projecting angle to act as a funnel guide, or a chamfer guide to create a precision seal fit between annular plug seal 26x and bottle plug (not shown).

Turning to Figure 25. Figure 25 is a top plan view of canister 25. Canister pillars are shown at 25b1, 2, 3, & 4. Canister locking holes are shown at 25a1, 2, 3, & 4. Canister sealing surface is show at 25d in four places. An x,y coordinate plane is shown by 33 a at 0 degrees, 34 b at 90 degrees 35 c at 180 degrees, and 36 d at 270 degrees. The lines a-c and d-b intersect at cross hairs in the center of canister 25 as shown by 25gl-x,y. The inside wall of canister 25 is marked at 25i in four places. Canister top sealing surface as shown at 25e in four places. The canister unsealing ramp is shown at 25c1, 2, 3, & 4. Canister pillar top is shown at 25b1a, 2a, 3a & 4a. It is the top of these canister pillars at the outside portion of 25b1a, 2a, 3a &b 4a that make slidably engagement contact with and ride on the composite annular sliding rails as shown in the lid bottom plan view of Figure 24 at 26s1, 2, 3, & 4. The canister pillar inside angle is shown at 25b1b, b2b, b3b & b4b. Canister pillar outside angle is shown at 25b1c, 25b2c, 25b3c and 25b4c. Canister pillar side 25b1e, 25b2e, 25b3e and 25b4e are intended for force being applied thereon against canister pillar 25b1, b2, b3 and b34 in one direction. Canister pillar side 25b1f, 2f, 3f and 4f are intended to have force applied thereon in the opposite rotational direction. The inside bottom of canister 25 is shown at 25g.

Turning to Figure 26. Figure 26 is a side elevation view of canister 25. The outside bottom canister 25 is shown at 25h. The inside bottom of canister 25 is shown at 25g. The stacking separation ridge is shown at the outside of the canister at 25k at two places. The outside ascending wall of canister 25 is marked at 25j in two places. The inside ascending wall of canister 25 is marked at 25i in two places. The top sealing lid surface of canister 25 is marked at 25e in two places. The annular lid sealing surface of canister 25 is marked at 25d in two places. Canister pillars 25b1, 25b3 and 25b4 are shown. Canister pillar 25b2 is hidden behind canister 25b4. Canister pillar top is shown at 25b1a, 25b3a, 25b4a. Canister pillar top 25b2a is hidden behind canister pillar 25b4. Canister pillar inside angle 25b1b and 25b3b are marked in two places and are represented by canister pillar bottom compression ramp 25b4e and 25b3e which are marked in two places and are represented by angle M at 45. Canister pillar outside angle 25b1c and 25 b3c and 25b4c are marked at three places and are represented at angle L at 41. Canister lid sealing surface 25d is shown as an annular top inside rim surface of the inside of canister 25 and is represented by angle J at 42. Canister pillar side pressure surfaces can be seen at 25b3f and 25b4f. Canister side pressure surfaces are shown at 25b1e and 25b4e. Lid unsealing, lowering and sealing registration ramp is shown at 25c1, 25c2 and 25c4 and are represented by angle L at 44. Lid unsealing, lowering and sealing registration ramp 25c3 is hidden on the back side of canister pillar 25b3. Canister pillar bottom lid contact sealing surface 25b1h, 25b3h and 25b4h can be seen at three places. Downwardly projecting annular canister skirt can be seen at 25f. The height of lid unsealing, lowering and sealing registration ramp is shown at 25b3h. The distance between the outermost lower portion of outside pillar angle of 25b1 and 25b3 can be seen as E at 37. The uppermost portion of the outside angle of canister pillar 25b1, 25b3 can be seen at F at 38. The lower portion of canister pillar inside angle of canister pillar 25b1 and 25b3 can be seen as G at 39. The diameter of annular lid sealing surface 25d of canister 25 can be seen as measurement H at 40.

Turning to Figure 27. Figure 27 is a top plan view of lid 26. It understood arcs of Figure 27 may be in plurality with respect to lid 26. Figure 27 shows an x,y coordinate plane system A which defines degrees shown at 33, B defines 90 degrees shown at 34, C defines 180 degrees shown at 35 and D defines 270 degrees shown at 36. S defines an arc shown at 50 which represents an arc that begins substantially at the center of lid pillar 26a1 and extends substantially to the center of lid pillar 26a2. Letter V defines an arc which is shown at 53 which represents an arc that begins substantially at the center of lid pillar 26a1 and extends substantially to the opposite end of canister pillar bottom seal surface 26g1. Letter W defines an arc shown at 55 which represents an arc beginning at one end of canister pillar pass through aperture 26h1 and extends substantially to the center of lid pillar 26a1. Letter U defines an arc shown at 52 which begins substantially at one end of canister pillar pass through aperture 26a and extends substantially to canister pillar aperture 26h4. The clockwise facing sides of 26h1 and 26h4 are shown. Letter W1 defines an arc shown at 56 which begins substantially at the center of lid pillar 26h4 and extends substantially at the end of the counterclockwise facing end of lid aperture 26h4. Letter V1 defines an arc beginning at one end of an intermediate portion of lid pillar 26b2 and extends substantially to the other end of the counterclockwise facing end of ascending lid ramp 26f4. Letter R defines and arc shown at 49 which begins substantially at the clockwise facing side of canister pillar aperture 26h2 and extends substantially to the counterclockwise facing side of canister pillar aperture 26h2. Letter N defines an arc shown at 45a beginning at the center of lid locking hole 26i and extends substantially to letter a-zero degrees shown at 33. Letter P defines an arc shown at 47 which begins substantially at the center of lid lock hole 26i and extends substantially to an intermediate point along lid pillar bottom sealing surface 26g2. Letter Q defines an arc shown at 48 which begins substantially at the center of lid lock hole 26i and extends substantially to counterclockwise facing surface lid pillar side 26q1. Letter T defines an arc shown at 57 which begins substantially at D 270 degrees shown at 36 and extends substantially along an intermediate portion of the surface of lid pillar bottom sealing surface 26g3.

Turning to Figure 28. Figure 28 is a top plan view of lid 26. Letter Y shown at 58 which defines a dimension beginning at the cross hairs where line AC and line BD are shown crossing substantially at the center of lid aperture 26j and extends substantially to the outside surface of lid pillar 26a1, 26a2, 26a3 and 26a4. Letter X shown at 57 defines a dimension beginning at the cross hairs where line AC and line BD cross substantially at the center of lid aperture 26j and extends substantially to the inside facing surface lid pillars 25a1, 25a2, 25a3 and 25a4. It is understood that arcs of Figure 28 may be in plurality with respect to lid 26.

Turning to Figure 29. Figure 29 is a top plan view of canister 25. It is understood that arcs of Figure 29 may be in plurality with respect to canister 25. Letter A references zero degrees shown at 33. Letter B references 90 degrees shown at 34. Letter C references 180 degrees shown at 35. Letter D references 270 degrees shown at 36. O,O reference the x,y coordinate plane defining the cross hairs where line AC and line BD cross located substantially at the center of canister 25. Letters AB defines an arc shown at 61 which begins substantially at the center of canister lock hole 25a1 and extends substantially to clockwise facing side of canister pillar 25b1f of canister pillar 25b1 of canister 25. Letters AA shown at 60 defines an arc shown at 69 which begins substantially at the center of canister lid lock hole and extends substantially to the center of an adjacent canister lid lock hole. Letters AC defines an arc shown at 34 which begins substantially passing through the center of canister pillar 25b1 and extends substantially to the center of canister lid lock hole 25a4. Letter Z defines an arc shown at 59 begins substantially at the clockwise facing side of canister pillar 25b2f and extends substantially to the counterclockwise facing side of canister pillar 25b3e of canister pillar 25b3 of canister 25. Letters AD defines an arc shown at 63 which begins substantially at the counterclockwise facing side of canister pillar 25b3e and extends substantially at the clockwise facing side of 25b3f of canister pillar 25b3 of canister 25. It is understood that the features shown associated with the values of the distances, arcs, angles and radians of Figures 26, 27, 28 and 29 may be modified without departing from the scope of the attached claims.

Turning to Figure 30. Figure 30 is a top plan view of canister 25 and depicts annular sealing surface 25d marked by seven arrows and how the lid sealing surface 25d annularly relates to the center of canister 25 as shown at 25g1-x,y in so far as an x,y coordinate plane line AC crosses line BD at substantially the center of canister 25. This view also depicts how the inside angle of canister pillars 25b1b, 25b2b, 25b3b and 25b4 may function as a chamfer guide for guiding lid 26 and the inside edge of lid apertures 26h1, 26h2 26h3 and 26h4 to assist registration of lid 26 and canister 25 to properly seal canister sealing surface 25d with lid seal 26o. In addition canister pillar outside surface angle 25b1c, 25b2c, 25b3c and 25b4c of canister pillars 25b1, 25b2, 25b3 and 25b4 also function as outwardly facing chamfer guides to assist with registration of lid 26 and canister 25 whereas the said outwardly facing chamfer guides interface with the outside edges of lid apertures 26h1, 26h2, 26h3 and 26h4 to guide and register lid 26 and canister 25. It is also contemplated that canister seal 25d and lid seal 26o are properly registered and aligned for sealing. Both horizontal and vertical registration between lid 26 and canister 25 are assisted so that alignment and sealing of lid seal 26o of lid 26 and canister seal 25d of canister 25 are engaged in such alignment and registration.

Turning to Figure 31. Figure 31 is a side elevation blow up cutaway view of the top plan view of the assembly of lid 26 and canister 25 along the cutaway arrows shown at the left of Figure 31, to depict the manner in which locking cap 27a may reside within lid 26 through lid lock hole 26i to contact canister 25. In this view the rotational relationship between lid 26 and canister 25 is such that lid lock hole 26i is not centered over canister lock holes 25a1, 2, 3, or 4. This structuration occurs while canister 25 and lid 26 are not in a fully sealed and operational relationship.

Turning to Figure 32. Figure 32 is a side elevation blow up cutaway view of the top plan view of the assembly of lid 26 and canister 25 along the cutaway arrows shown at the left of Figure 32 whereby the rotational relationship between lid 26 and canister 25 is in a fully sealed position which aligns lid lock hole 26i with at least one of the four canister lid lock holes 25a1, 2, 3, or 4 such that lid lock cap 27a may be directed downwardly through the centered holes in that lid 26 and canister 25 may be rotationally locked by interference of cap 27a.

Turning to Figure 33. Figure 33 is a side elevation blow up view of the top plan view of the assembly of lid 26 and canister 25 along the cutaway arrows shown to the left of Figure 33 which is the same disclosure as Figure 32 with the modification that cap 27a is shown pressed down through lid lock hole 26i and at least one of canister lid lock holes 25a1, 2, 3 or 4. This rotationally stabilizes lid 26 and canister 25 by interference with cap 27a extending through holes in lid 26 and canister 25.

Turning to Figure 34. Figure 34 is a top isometric view of the non-bottle docking assembly of canister 25, lid 26 and cap member 27 in a sealed structuration. Canister 25 of this Figure is shown without a bottle docked inside whereas one feature of an embodiment is that system of the instant case operates a both a normal waste collection canister system when no bottles are desired to be docked and also operates as a waste collection bottle docking system. This system is functional as both a normal suction canister system and a bottle docking system. The canister in Figure 34 remains useful in a facility in the event that the facility does not have an inventory of bottles for transformation into waste ingressing collection receptacles within the canister systems as shown in the instant case, which bottles are shown docked in the embodiments of the instant case showing bottle docking capability. Figure 34 shows at 28 depicted in a plurality of places lid pillars and canister pillars are separated as depicted in two places and also in two places lid pillars and canister pillars are juxtaposed in two places to define lid seal 26o and canister seal 25d are properly aligned, registered and sealed. Also shown are directional arrows depicting the clockwise motion potential of lid 26 and the counterclockwise motion potential of canister 25. The operation of sealing annular lid seal 26o with annular canister seal 25d is the operation of simply squeezing the lid pillars and canister pillars. The canister pillars that are intended to be squeezed to seal lid 26 and canister 25 at annular lid seal 26o and annular canister seal 25d is to place lid 26 onto canister 25 and simply squeeze or pinch the lid pillars having indicia "CLOSED" on 26c1 and 26c2 together with the canister pillars located in the direction of the arrows defined by the indicia "CLOSED". Similarly, when in this structuration lid pillar surface tops 26b1, 26b2 show indicia "OPEN" and to unseal seals 26o and 25d the process of squeezing lid pillars 26a2 and 26b2 together with the canister pillars shown in the direction of the "OPEN" arrows on the surfaces of lid pillars 26b2 and 26a2. The operation of unsealing canister seal 25d from lid seal 26o is to move together lid pillars and canister pillars shown as separated depicted by 28 marked twice in Figure 34. The moving together of lid pillars and canister pillars as depicted twice as 28 cause the effect of canister pillar outside bottom surface 25bih, 25b2h, 25b3h and 25b4h to ascend upwardly with respect to lid 26 and to ride up the lid/canister compression and sealing ramp of 26f1, 26f2, 26f3 and 26f4 to the extent that 25b1h, 25b2h, 25b3h and 25b4h ride up to and onto the canister pillar sealing surfaces 26g1, 26g2, 26g3 and 26g4. The moving of pillars depicted at 28 causes the sealing between lid 26 at 26o and canister 25 at 25d. Also seen in Figure 34 is the lid pillars 26a1, a2, a3 and a4 as well as canister pillars 25 b1, b2, b3 and b4. Also shown in this view at 26k is a suction tubing connection port for the connection of a patient suction wand and or a suction tip as defined in the instant case for the purposes of drawing waste material into canister 25 under reduced pressure, but not limited to that. Also shown in this view is a vacuum tubing connection port 26l for the connection to a source of reduced pressure. A conduit connects the canister system to a source of waste material. It is understood that pillars positioned opposite, and, for example, pillars 26a1 and 25b1 are opposite pillars 26a3 and 25 b3 and each of these pairs of pillars may be moved by one hand singularly to operate the system or they may be both moved simultaneously by two hands to operate the canister system. The same exists for the other opposing pillars. Pillars 26a2 and 25b2 are opposite pillars 26a4 and 25b4 and each of these pairs of pillars may be moved together by one hand singularly to operate the system or they may be both moved together simultaneously to operate the system. The forces required to operate the system are confined to the offsetting counter forces and do not operate to move the entire system. This is important whereas canister systems are often on wheels, or on IV poles which are on wheels, or are mounted on other non stationary equipment which is not wheels, or other moving and non stationary base supports and operate to substantially restrict any counter opposing forces directed rotationally between the lid 26 and the canister 25, such forces are designed for being off set. The instant case embodiments are designed to the extent that the counterclockwise and clockwise forces used to operate the systems of the instant case do generate unwanted laterally generated forces when lid 26 and canister 25 are properly operated. This keeps the canister system and whatever holds the canister system within a desired footprint spatially within in the environment for which it is used. The design of the instant case also prevents the undesired rotation o the entire system as a result o the counter forces placed on the lid and canister pillars simultaneously. Also shown in this view capping member 27k caps and seals the lid 26 center aperture 26j whereas there is no bottle to be docked in this embodiment whereas the tubing connector ob bottle plug not shown is not necessarily to be activated in this scenario because there no bottle being docked in this embodiment scenario of Figure 34. Figure 34 shows the inventions of the instant case being employed and a normal canister system embodying novel operating features.

Turning to Figure 35. Figure 35 is a top isometric view which is similar to Figure 34 except that locking cap member 27 a is pressed down through lid lock hole 26i of lid 26 and canister locking hole 25a1, a2, a3 and or a4 of canister 25 as depicted in Figure 33.

Turning to Figure 36. Figure 36 is a top isomeric view of bottle docking system showing canister 25, lid 26, capping member 27, with the transformed bottle 19 shown and depicted as transformed into 20 and 22 as shown in Figures 13 14 and 15. Bottle 20 is conditioned for transformation into a waste ingressing receptacle and ultimately will dispose of waste material in a condition as shown in Figure 15 being re-capped and sealed for the transfer of waste. Also it is shown at 25b1, 25b2, 25b3 and 25b4 that these canister pillars of canister 25 are projecting upwardly through lid apertures 26h1, 26h2, 26h3 and 26h4 for the placement of lid 26 onto canister 26 for the application of the counter rotational forces on lid pillars and canister pillars to seal lid seal 26o with canister seal 25d and to seal lid seal 26x with bottle plug 65 (not shown). Also seen in Figure 36 is bottle holder 30. Bottle holder 30 is shown with a bottle resting surface 30e, a first indicia surface 30b for showing markings that represent how much collected material has been ingressed into bottle 19 which has been conditioned and transformed in preparation to become 20 and 22. Bottle holder 30 also shows surface 30a which is the surface closer to inside wall of canister 25. Surface 30a of bottle holder 30 is a surface which may have indicia markings for showing how much collection material has been ingressed into both the bottle 22 and the canister 25. Also shown in Figure 36 is bottle holder 30 having bottoms depicted at 30d which rest inside canister 25 on its bottom surface 25g. 30c shows the stepped portion of the upright standards of bottle holder 30 which are located at the same location of the stepped portions along the annular wall of canister 25. Also shown in Figure 36 is bottle bottom 19a which rests on bottle holder at 30e. It is understood that as lid pillars and canister pillars are urged for the purposes of sealing the bottle docking system, and as the canister pillars ascend up the lid ramps resulting in compression of lid 26 and canister 25 together, there is also a compression of the components of the bottle docking system such that canister inside bottom 25g and lid holder bottom 30d move together causing compression between the two, and, bottle 20 and holder surface 30e are moved together causing compression between the two, plug 65 and bottle 20 are moved together causing compression between the two, and lid 26 and canister are moved together ultimately resulting in 1) sealing of canister 25 and lid 26, 2) sealing of lid 26 and bottle plug (not shown) 65, sealing of bottle 20 and plug 65(not shown). It is also noted that the height of lid ramps 26f1, 2, 3, & 4 is great enough so that all of the manufacturing stack up tolerances of the canister 25, lid 26, bottle 20(in the conditioned and transformed assembly), and bottle holder 30, will all function to provide seals sufficient to contain and direct the reduced pressure of a vacuum draw path such that collection material may be ingressed into bottle 20. Similarly, when unsealing the system for disassembly, the height of unsealing ramps 25c1, 25c2, 25c3 and 25c4 as shown in Figure 26 is sufficient to unseal canister 25 and lid 26. Figure 36 also shows 26a2 and 25b3 separated along radians/arcs for removal of lid 26 from canister 25.

Turning to Figure 37. Figure 37 is a top isometric view showing lid pillars ad canister pillars juxtaposed closing/sealing lid seal 26o with canister seal 25d and closing/sealing lid seal 26x with bottle plug seal 65 (not shown). Compression of the plug 65, lid 26, canister 25, bottle 20(19), bottle holder 30 has been accomplished to the extent sufficient to contain reduced pressure and form a vacuum draw path which is capable of ingressing drawn waste material from a source of collection material into bottle 20(19) conditioning and transforming bottle 20(19) into a waste ingressing container. Figure 37 also shows lid pillars and canister pillars juxtaposed closing/sealing 26o and 25d and closing and sealing 26x and 65a (not shown) by compression by respective motion along radians/arcs by force counter-force. Figure 37 also shows juxtaposed lid and canister pillars.

Turning to Figure 38. Figure 38 is a top isometric view of a bottle docking embodiment system showing cap 27a pressed down locking rotational movement between canister 25 and lid 26. Also seen at 65 showing the plug suction tubing connection for creating a conduit flow control connection between a source of material to be collected and the ingressing of material to be drawn into bottle 20/22. Figure 38 shows lid pillars and canister pillars juxtaposed by force/counterforce along radians/arcs. Figure 38 also shows pillars of lid 26 and pillars of canister 25 move counter-respectively along radians/arcs. Figure 38 also shows lid pillars and canister pillars juxtaposed for sealing canister 25 to lid 26 and sealing lid 26 to plug 65a (not shown).

Turning to Figure 39. Figure 39 is a top plan cutaway view along the arrows of lid 26 and canister 25 operating at a certain rotational orientation as depicted in Figure 40.

Turning to Figure 40. Figure 40 is a top isometric view of the cutaway of canister 25 and lid 26 assembly of Figure 39. Lid 26 motion force is shown in the counterclockwise direction. Canister 25 motion force is shown in the clockwise direction. ff defines a space/gap between lid 25 and canister 25 based on the rotational orientation between lid 26 and canister 25. Lid pillar 26a3 is shown rotationally abutted up against the counterclockwise facing side of canister pillar 25b3 and canister pillar 25b3 is abutted up against the clockwise facing edge of lid aperture 26h1 at 26e1. It is understood that lid 26 and canister 25 may be rotationally oriented in at least four separate orientations leaving the orientations of lid and canister features available to be in up to four possible spatial rotational arrangements. Also shown is lid aperture counterclockwise facing edges 26r1 and 26r2 have has been urged up canister ramps 25c1, 2, 3, and/or 4 to effect ramp height as send in Figure 26 for unsealing the vacuum draw path that has contained the reduced pressure forces. The orientation of lid 26 and canister 25 in Figure 40 produces the gap between lid 26 and canister 25 as shown by ff. Also shown is the orientation of lid seal 26o and canister seal 25d. Figure 40 also shows lid pillars and canister pillars counter rotationally urges along radians/arcs. Figure 40 also shows lid pillars and canister pillars allowed to separate counter-rotationally along radians/arcs.

Turning to Figure 41. Figure 41 is a top plan cutaway view along the arrows of lid 26 and canister 25 showing operation at certain rotational orientation respectively between lid 26 and canister 25 as depicted in Figure 42.

Turning to Figure 42. Figure 42 is a top isometric cutaway along the arrows shown in Figure 41 depicting the orientation of lid 26 and canister 25. Lid 26 is shown moving in a clockwise orientation and canister 25 is shown respectively resisting such a clockwise motion. Space/gap ff1 is shown as smaller than space/gap ff of Figure 40 whereas the rotational orientation between lid 26 and canister 25 shows counterclockwise facing lid aperture edge at the bottom of lid pillar surfaces 26q1 and 26q2 are located at an intermediate portion of canister ramps 25c1, 2, 3, and or 4. Figure 42 shows lid pillars and canister pillars allowed to separate counter-rotationally along radians/arcs by a force of a first direction. Figure 42 also shows lid pillars and canister pillars counter-rotationally urged closer along radians/arcs by a force of a second direction.

Turning to Figure 43. Figure 43 is a top plan cutaway view along the arrows of lid 26 and canister 25 showing operation at certain rotational orientation respectively between lid 26 and canister 25 as depicted in Figure 44.

Turning to Figure 44. Figure 44 is a top isometric cutaway view of lid 26 and canister 25 operation as seen in Figure 43. Figure 44 shows space/gap ff2 being smaller than that of ff1 as shown in Figure 42. Canister seal 25d and lid seal 26o are shown sealed to a greater extent than that shown in Figure 42. The bottom of lid pillar surface 26q1 and 26q2 which represent the counter clockwise facing edge of lid apertures 26h4, and 26h2 are seen further down the canister ramps 25c1, 25c2, 25c3 and or 25c4 than as shown in Figure 42 depending upon which rotational orientation the lid 25 and canister 25 are oriented in with respect to each others respective rotational orientation. Figure 44 also shows lid pillars ad canister pillars allowed to separate counter-rotationally along radians/arcs by a first force. Figure 44 also shows lid pillars and canister pillars counter-rotationally urged closer together along radians/arcs by a second force. Figure 44 also shows lid 26 in first motion which is a motion opposed to a counter force. Figure 44 also shows canister 25 in second motion which is a motion opposed to a separate counter force.

Turning to Figure 45. Figure 45 is a top plan cutaway view along the arrows of lid 26 and canister 25 showing operation at certain rotational orientation respectively between lid 26 and canister 25 as depicted in Figure 46.

Turning to Figure 46. Figure 46 is a top isometric cutaway view along the arrows shown in Figure 45. Figure 46 shows space/gap ff3 as being closed between lid 26 and canister 25 which results in lid seal 26o and canister seal 25d fully sealed by rotational orientation between lid 26 and canister 25. Figure 46 shows how lid pillars 26 and canister pillars 25 may be moved respectively along radians/arcs. Figure 46 also shows how juxtaposed lid pillars 26 and canister pillars 25 may be moved respectively along radians/arcs. Figure 46 also shows canister pillar bottoms 25 b1h, 25b2h, 25b3h and 25b4h are positioned on lid ramps 26g1, 26g2, 26g3 and 26g4.

Turning to Figure 47. Figure 47 shows container 19a positioned within a container holder 30a1. Indicia markings of container 19a can be seen at 19e. Holder 30a1 has in four places 30j which are shown in Figure 47 having cross hatches which represent container volume markings of the volume of fluid collected in container 19a and a canister as a sum of fluid volume. The four holder standard surfaces 30j are positioned on a holder away from bottle 19a outwardly towards the inside wall of a canister as shown at 25i in two places of Figure 17 to correlate the visual markings of 30j are visually associated with the canister plus bottle volume measurements. Holder 30a1 also shows indicia markings 30b which depict the amount of material collected in bottle 19a. Holder markings 30b are commensurate with the container markings 19e and shows similar fluid volume markings as container 19a as shown by 19e whereas the marking of 30b match the marking of bottle 19 in a volume measurement capacity. Holder 30a1 has a step 30c which is commensurate with the canister step as shown at 25k in Figure 26. The bottom of holder 30a1 is shown at 30d and one leaf of the holder is hidden behind the bottle 19a. The holder 30a1 embodies a bottle rest at 30f. 30f is embodied in each of the four leafs of holder 30a1 and functions as a counter thrust surface to support bottle 19a at assist with the formation of the sealing action as depicted in Figure 34 through Figure 46. The bottom of 19a is depicted at 19ad. The four upright leaf standards of holder 30a1 each have a z configuration which is depicted 30il in four places (although only one is marked). This z shape creates a dimensional space between bottle 19a and the inside canister wall 25i as shown in Figure 17. The structure of the four z shaped leaf standards of holder 30a1 provides alignment of bottle 19a with respect to canister 25 to assist in the registration of bottle 19a, plug sealing rim 66l and/or 67l and lid plug seal 26s of lid 26 as shown in Figure 24 and also as is depicted in the assembly views shown in Figure 17, and Figures 34 through 46 as well as Figure 47 through 49 and Figures 60 through Figure 62. The four z shaped leaf standards of bottle holder 30a1 provide sealing and registration by their structuration and the dimensional space created between bottle 19a and canister inside wall 25i, provide visual association of the outermost indicia 30j in closer proximity with the canister 25 at 25i shown in Figures 17 and Figures 25, and provide the four indicia 30j providing canister 25 material volume measurement plus bottle 19a material volume measurement sums added together. The four z shaped leaf standards of bottle holder 30a1 provide sealing and registration by their structuration and the dimensional space created between outside walls of bottle 19a in four places which come into registration guidance with the inside walls of the four leaf standards on the inside surfaces of 30b shown to have four locations associated with leaf standards 30il. The structuration effect of the inside surfaces of leaf standards 30il operate to guide bottle 19a so that plug lid seal 66l of Figure 67 and plug seal 67l of Figure 68 will register in sealing engagement with lid seal 26x when canister 25 and lid 26 are engaged as shown in Figures 36, 37 and 38, and when a bottle is docked in the collection system of the instant case in the event the operational elements of Figures 39 through Figure 46 when a bottle 19a is docked within the systems shown in such Figures of the instant case.

Turning to Figure 48. Figure 48 is similar to Figure 47 except that bottle 19b is smaller than bottle 19a of Figure 47 and holder 30b1 is sized and shaped to accommodate a smaller bottle yet maintain the functional and operational spatial and temporal embodiments and aspects of the instant case.

Turning to Figure 49. Figure 49 is similar to Figure 47 and Figure 48 except that bottle 19c is smaller than bottle 19c and holder 30c1 is sized and shaped to accommodate bottle 19c yet maintain the functional and operational spatial and temporal embodiments and aspects of the instant case.

It is also understood as shown in Figure 47 at 30h of leaf standard 30il in four places, Figure 48 at 30h of leaf standard 30ila in four places and Figure 49 at 30h of leaf standard 30ilb in four places that the upper top inside edge of holders at 30h in each of Figures 47, 48 and 49 embody a chamfer guide to better guide bottles 19a, 19b and 19c for the registration of seals 66l and 67l with lid seal 26x and lid seal 26o with canister seal 25d.

Turning to Figure 50. Figure 50 is a top isometric view of a bottle having a fluid label 19f and having measurement markings 30e and pour spout top rim 19c1. The bottle of Figure 50 is depicted with a label showing an initial predetermined indicia providing contents ascertainment.

Turning to Figure 51. Figure 51 is a top isometric view of a bottle having a fluid label 19f and having measurement markings 30e and pour spout top rim 19c1. The bottle of Figure 51 is depicted with a label showing an initial predetermined indicia providing contents ascertainment.

Turning to Figure 52. Figure 52 is a top isometric view of a bottle having a fluid label 19f and having measurement markings 30e and pour spout top rim 19c1. The bottle of Figure 52 is depicted with a label showing an initial predetermined indicia providing contents ascertainment.

It is understood that is Figures 50, 51 ad 52 bottle 19a, 19b and 19c is shown in each Figure which means that the bottle may represent any container capable of creating NuChain Enterprise Resource Planning by NuPurposing containers as taught in the instant case.

Turning to Figure 53. Figure 53 is a top isometric view of a container of Figure 50 showing a blank label 19g for re-labeling the container depicted in Figure 50. The blank label is provided for the end user to determine the appropriate indicia that would properly condition a container for NuPurposing by altering the indicia to provide the NuPurposing of choice as best determined by the NuPurposing consumer.

Turning to Figure 54. Figure 54 is a top isometric view of a container of Figure 51 showing a blank label19g for re-labeling the container depicted in Figure 51. The blank label is provided for the end user to determine the appropriate indicia that would properly condition a container for NuPurposing by altering the indicia to provide the NuPurposing of choice as best determined by the NuPurposing consumer.

Turning to Figure 55. Figure 55 is a top isometric view of a container of Figure 52 showing a blank label 19g for re-labeling the container depicted in Figure 52. The blank label is provided for the end user to determine the appropriate indicia that would properly condition a container for NuPurposing by altering the indicia to provide the NuPurposing of choice as best determined by the NuPurposing consumer.

It is understood that the re-label conditioning of a container as depicted in Figures 50-55 may be practiced by any NuPurposing of any suitable container for the creation of NuChain enterprise resource planning supply chain and disposal chain apparatus.

Turning to Figure 56. Figure 56 shows the re-label NuPurpose conditioning of container 19a changing the indicia of an initial predetermined indicia 19f to a NuPurposing indicia 19g during the practice of creating NuChain enterprise resource planning supply chain and disposal chain apparatus. In this Figure container 19a is NuPurposed conditioned into container 19a1 creating a different NuChain supply chain and disposal chain apparatus than those apparatus depicted in Figures 57, 58 and 59.

Turning to Figure 57. Figure 57 shows the re-label conditioning of container 19b changing the indicia of an initial predetermined indicia 19f to a NuPurposing indicia 19g during the practice of creating NuChain enterprise resource planning supply chain and disposal chain apparatus. In this Figure container 19b is NuPurposed into container 19b1. In this Figure container 19b is NuPurposed conditioned into container 19b1 creating a different NuChain supply chain and disposal chain apparatus than those apparatus depicted in Figures 56, 58 and 59.

Turning to Figure 58. Figure 58 shows the re-label conditioning of container 19c changing the indicia of an initial predetermined indicia 19f to a NuPurposing indicia 19g during the practice of creating NuChain enterprise resource planning supply chain and disposal chain apparatus. In this Figure container 19c is NuPurposed conditioned into container 19c1 creating a different NuChain apparatus than those depicted in Figures 56, 57 and 59.

Turning to Figure 59. Figure 59 shows the re-label conditioning of container 19d changing the indicia of an initial predetermined indicia 19f to a NuPurposing indicia 19g during the practice of creating NuChain enterprise resource planning supply chain and disposal chain apparatus. In this Figure container 19d is NuPurposed into container 19d1. In this Figure container 19c is NuPurposed conditioned into container 19c1 creating a different NuChain apparatus than those depicted in Figures 56, 57 and 59.

It is understood that Figures 50-59 depict one aspect of conditioning containers as an aspect of creating a NuChain enterprise resource planning supply chain and disposal chain apparatus by container NuPurposing. NuPurposing may have an effect between departments of a facility or may have an effect between separate facilities, departments of facilities of separate entities and persons.

Turning to Figure 60. is a top side elevation cutaway view of a container 19x, plug 71, cap 23x. 28x1 depicts the top of plug sealing surface of plug 71 (which is similar to the top sealing surface of plugs 66 and 67 of Figures 67 and 68 shown at 66c and 67c respectively.) in a sealing contact with cap 23 when cap 23x is fully engaged with plug 71 is assembly with container 19x.

Turning to Figure 61. Figure 61 is similar to Figure 60 except bottle 19y is smaller than bottle 19x of Figure 60 and as shown at 28b1 plug 71 is captured by cap 23y by only a single thread on thread 28b of cap 23y. as cap 23y may be rotated counterclockwise off of container 19y, cap 23y may be lifted, after thread 28 has disengaged the threads of bottle neck 19y, but before thread 28b of cap 23y has disengaged the single thread of plug 71 thereby cap 23y may be used as a tool to remove plug 71 from bottle 19y. It is important to provide at tool for a operator to remove plug 71 from bottle 19y such that no contact is made with a contaminated plug by an operator discharged with the duty of removal of contaminated plugs from a bottle filled with contaminated waste. The combination of plug having a single cap capture tread and the dimensional relationship between the plug capture thread (as may be seen in Figures 63-68) in structuration with the internal cap threads 28b and the bottle neck threads allows for the tool to be inherent in a cap (23x, y & z) as taught by the instant case without requiring a separate removal tool that would otherwise be required to prevent the operators being in contact physically with a contaminated plug. Cap inside threads may be completely disengaged from bottle neck threads yet still engaged with a single plug cap retaining thread allowing the cap which was delivered as the original seal for the container to also to function as a tool disclosed herein during the disposal chain apparatus of a NuChain enterprise resource planning supply chain and disposal chain apparatus by NuPurposing of containers. This also prevents loose gloves from making such a plug removal operation from being cumbersome.

Turning to Figure 62. Figure is similar to Figures 60 and 61 however the upper view of Figure 62 shows the plug 71 disengaged at single plug thread 71b from cap 23z and that the outermost internal cap thread depicted by 23xa, ya and za. This allows the separation of plug 71 and cap 23z. It is understood that the plug 66 of Figures 63, 65 and 67 and plug 67 of Figures 64, 66 and 68 may also be deployed in similar functional, spatial and temporal arrangements with cap 23x of Figure 60, cap 23y of Figure 61 and cap 23z o Figure 62. It also understood that plug 71 of Figures 60-62, and plugs 66 of Figures 63, 65 and 67 as well as plug 67 of Figures 64, 66 and 68 may be deployed in the container NuPurposing as taught by Figures 36-46 of the instant case.

Turning to Figure 63. Figure 63 is a bottom plan view of plug 66 of Figure 65. 66k depicts the outside diameter of plug 66. 66b depicts the single cap capture thread of plug 66. 66e depicts one of six internal support struts of plug 66a depicts the reduced pressure aperture of plug 66. 6i depicts the internal ring o the reduced plug aperture.

Turning to Figure 64. Figure 64 is a bottom plan view of plug 67 as shown in Figure 66. Figure 67 is similar to Figure except the reduced pressure aperture 66i is smaller than that of plug 66 of Figure 63.

Turning to Figure 65. Figure 65 is a side elevation view of plug 66. 66h shows the starting and ending aspects of single thread 66b as it annularly circumvents the uppermost outside diameter of plug 66. 66a is a patient tubing connection port for the ingress of vacuum forces and for ingress of materials drawn into a container by such forces. 66c shows the top sealing surface of plug 66. 66b shows a cap capture member of plug 66. 66f shows a first diameter of plug 66 that is sized ad shaped to fit into the neck of a container which is disposed to assist in the registration and sealing of a lid 26 and canister 25 for the creation of a vacuum draw path involving the interior of a container such as the container 19 depicted in the instant case. 66k depicts the underside surface of the top diameter of plug 66 whereby the compression forces of the lid and canister sealing operations defined by

Figures 36-46 seals the top rim of a container 19c1 as shown in Figures 50-55, and forms a seal with bottom surface 66k of plug 66. 66g depicts a second diameter of plug 66. 66h depicts a third diameter of plug 66 and depicts the continuation of reduced pressure aperture 66i which is unitary with the patient suction tubing ingress port connection 65a(or patient suction tubing ingressing connection port 65 as shown in Figure 37).

Turning to Figure 66. Figure 66 is a side elevation view of plug 67 which is similar to the plug 66 shown in Figure 65 except that the reduced pressure aperture 67i of patient tubing ingress connection port and patient suction tubing connection port 67a of plug 67 is smaller than that of similar features of plug 66 of Figure 65.

Turning to Figure 67. Figure 67 is a top plan view of plug 66 of Figure 65. 66c shows a top sealing surface of plug 66 which may seal against the internal annular cap sealing rim as shown at 28x1 of Figure 60. 66b shows the cap capture member as seen in Figure 63 and 65. 66d shows one of six structural support struts spanning the outside of plug 76 and joining the sealing rim 66l and internal structures that support and keep open the 6 annularly spaced reduced pressure egress apertures 66j. 66h shows the beginning and end of cap capture member. 66j shows one of six annularly spaced reduced pressure egress apertures separated by six structural struts 66d. 66a depicts the patient suction tubing reduced pressure ingress connection port.

Turning to Figure 68. Figure 68 is a top plan view of plug 67 of Figure 66 which is similar to plug 66 of Figure 67 except that reduced pressure aperture 67i or patient tubing ingress port connection and patient tubing ingress connection port 67a as shown in Figure 66 is smaller that than to 66a of Figure 65 and 66i of Figures 56 and 76.

It is understood that plugs 71 of Figures 60-62, plug 66 of Figures 63, 65 and 67 as well as plug 67 of Figures 64, 66 and 68 maybe deployed to function similarly to the elements recited “not shown” depicted as 65 and 65a of Figures 28-34 as taught by the instant case where a container is intended to be used to create NuChain supply chain and disposal chain apparatus by container NuPurposing.

What is claimed is,

1 (New) A supply chain method comprising,

a) egressing a material from a container said material being received for consumption prior to said egress,

b) establishing a reduced pressure force, said force being adapted to be egressed from said container, said force being adapted to be drawn away from said container by a source, said force being contained to form a reduced pressure path at least in part by sealing of a lid and housing.

2) (New) A method of claim 1 comprising,

a) applying said force on the inside of said housing.

3) (New) A method of claim 1 comprising

a) applying said force on the outside of said container.

4) (New) A method of claim 1 comprising,

a) applying said force on the inside of said container and the inside of said housing.

5) (New) A method of claim 1 comprising

a) applying said force on the inside of said housing, outside of said container and the inside of said container.

6) (New) A method of claim 1 comprising

a) drawing said force along the inside of said housing.

7) (New) A method of claim 1 comprising

a) drawing said force along the outside of said container.

8) (New) A method of claim 1 comprising

a) drawing said force along the inside of said container.

9) (New) A method of claim 1 wherein rotational engagement between said housing and said lid in part provides said seal.

10) (New) A method of claim 1 comprising

a) connecting a conduit to said housing, said conduit being configured to egress said force from said housing said force configured to ingress air into said container.

11) (New) A method of claim 1 wherein said force includes air.

12) (New) A method of claim 11 comprising

a) ingressing said air into said container along a second conduit.

13) (New) A supply chain method of claim 12 wherein said air is contained in part by the inside of said container.

14) (New) A supply chain method comprising,

a) egressing a material from a container said material being received for consumption prior to said egress,

b) establishing a seal between a lid and a housing, said seal at least in part being configured to contain a draw force, said force being applied on the inside of said container, said force being adapted to be drawn away from said housing.

15) (New) A method of claim 14 comprising,

a) applying said force on the inside of said housing.

16) (New) A method of claim 14 comprising,

a) applying said force on the outside of said container.

17) (New) A method of claim 14 comprising,

a) applying said force on the inside of said container and the inside of said housing.

18 (New) A method of claim 14 comprising,

a) applying said force on the inside of said housing, outside of said container and the inside of said container.

19) (New) A method of claim 14 comprising,

a) drawing said force along the inside of said housing.

20) (New) A method of claim 14 comprising,

a) drawing said force along the outside of said container.

21) (New) A method of claim 14 comprising,

a) drawing said force along the inside of said container.

22) (New) A method of claim 14 comprising,

a) providing rotational engagement between said housing and said lid.

23) (New) A method of claim 14 comprising,

a) connecting a conduit to said housing, said conduit being configured to egress said force from said housing, said force being configured to ingress air into said container.

24) (New) A method of claim 14 wherein said force includes air.

25) (New) A method of claim 24 comprising,

a) ingressing said air into said container along a second conduit.

26) (New) A method of claim 25 wherein said force is configured to be contained in part by the inside of said container, said force being configured to emanate from said source.

27) (New) A supply chain method comprising,

a) egressing a material from a container said material and said container being received for consumption prior to said egress,

b) extending a draw path away from said container, a reduced pressure force being drawn along said path, a source of said pressure being configured to draw said force away from a housing, said path being at least in part being configured by a seal, said seal co-acting at least in part with said path, said container, said housing, said source and a lid to ingress said force into said container.

28) (New) A method of claim 27 comprising,

a) applying said force on the inside of said housing.

29) (New) A method of claim 27 comprising,

a) applying said force on the outside of said container.

30) (New) A method of claim 27 comprising,

a) applying said force on the inside of said container and the inside of said housing.

31) (New) A method of claim 27 comprising,

a) applying said force on the inside of said housing, outside of said container and the inside of said container.

32) (New) A method of claim 27 comprising,

a) drawing said force along the inside of said housing.

33) (New) A method of claim 27 comprising,

a) drawing said force along the outside of said container.

34) (New) A method of claim 27 comprising,

a) drawing said force along the inside of said container.

35) (New) A method of claim 27 comprising,

a) providing rotational engagement between said housing and said lid.

36) (New) A method of claim 27 comprising,

a) connecting a conduit to said housing, said conduit being configured to egress said force from said housing, said force being configured to ingress air into said container.

37) (New) A method of claim 27 wherein said force includes air.

38) (New) A method of claim 37 comprising,

a) ingressing said air into said container along a second conduit.

39) (New) A method of claim 38 wherein said force is configured to be contained in part by the inside of said container, said force being configured to emanate from said source.

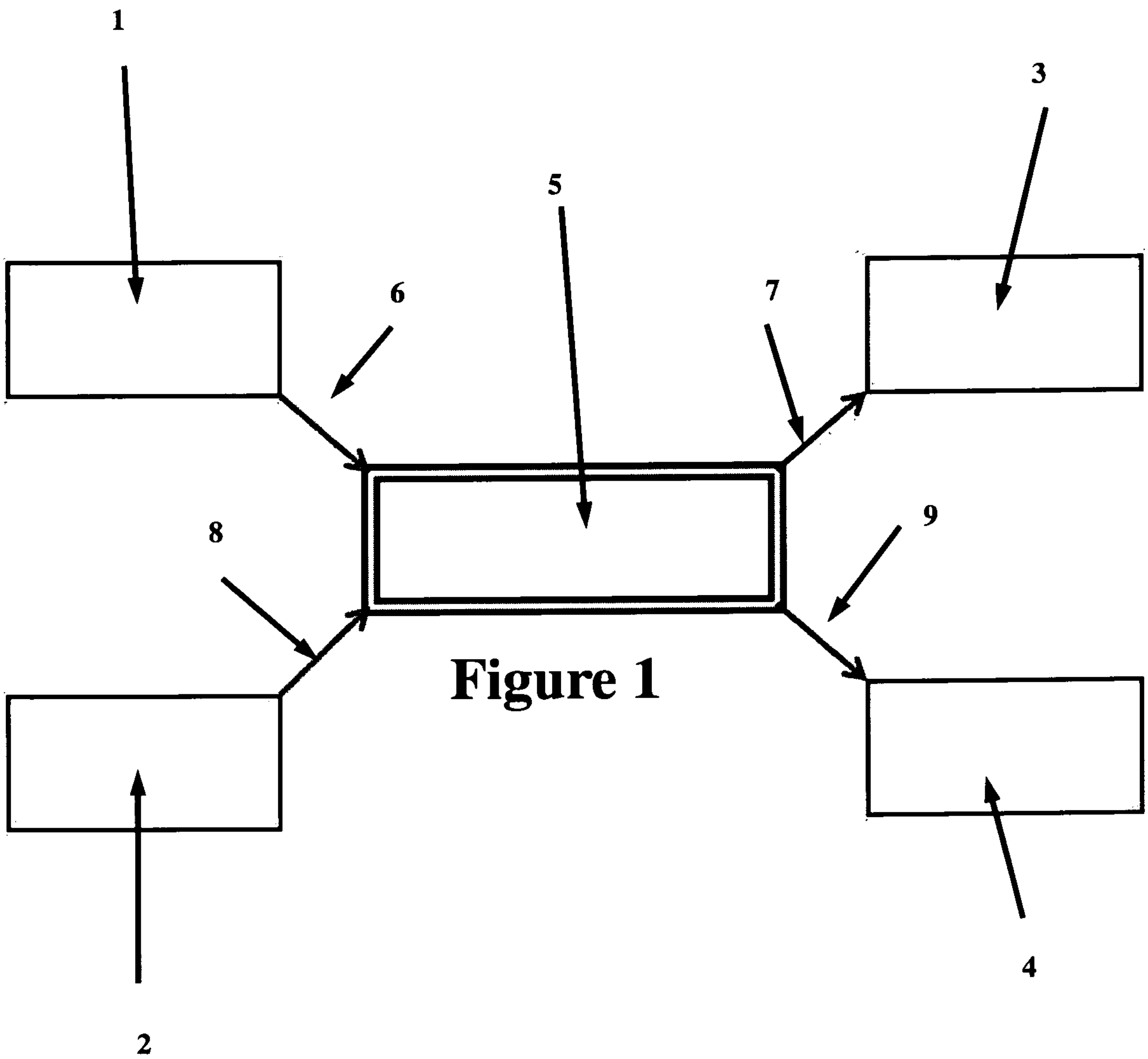


Figure 1

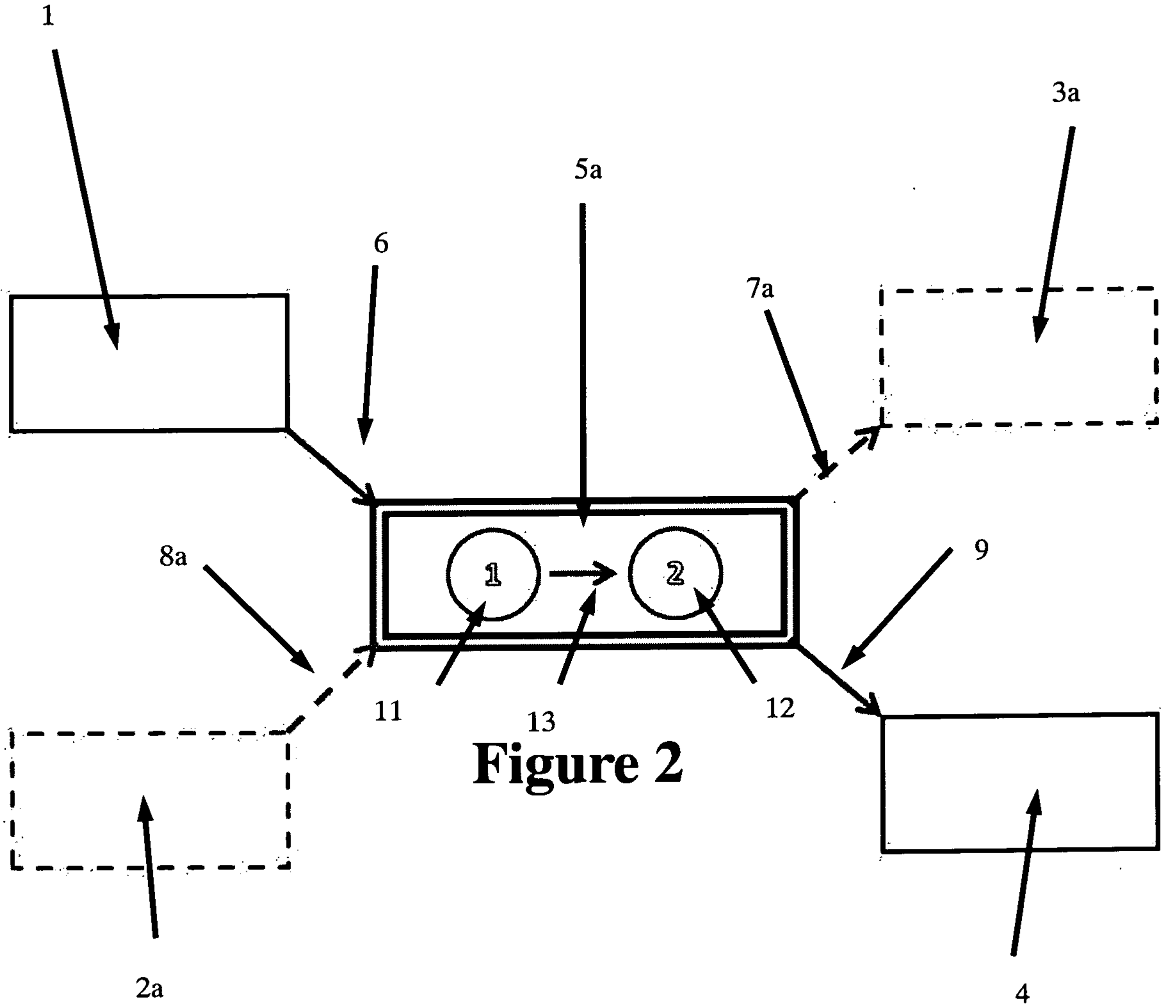


Figure 2

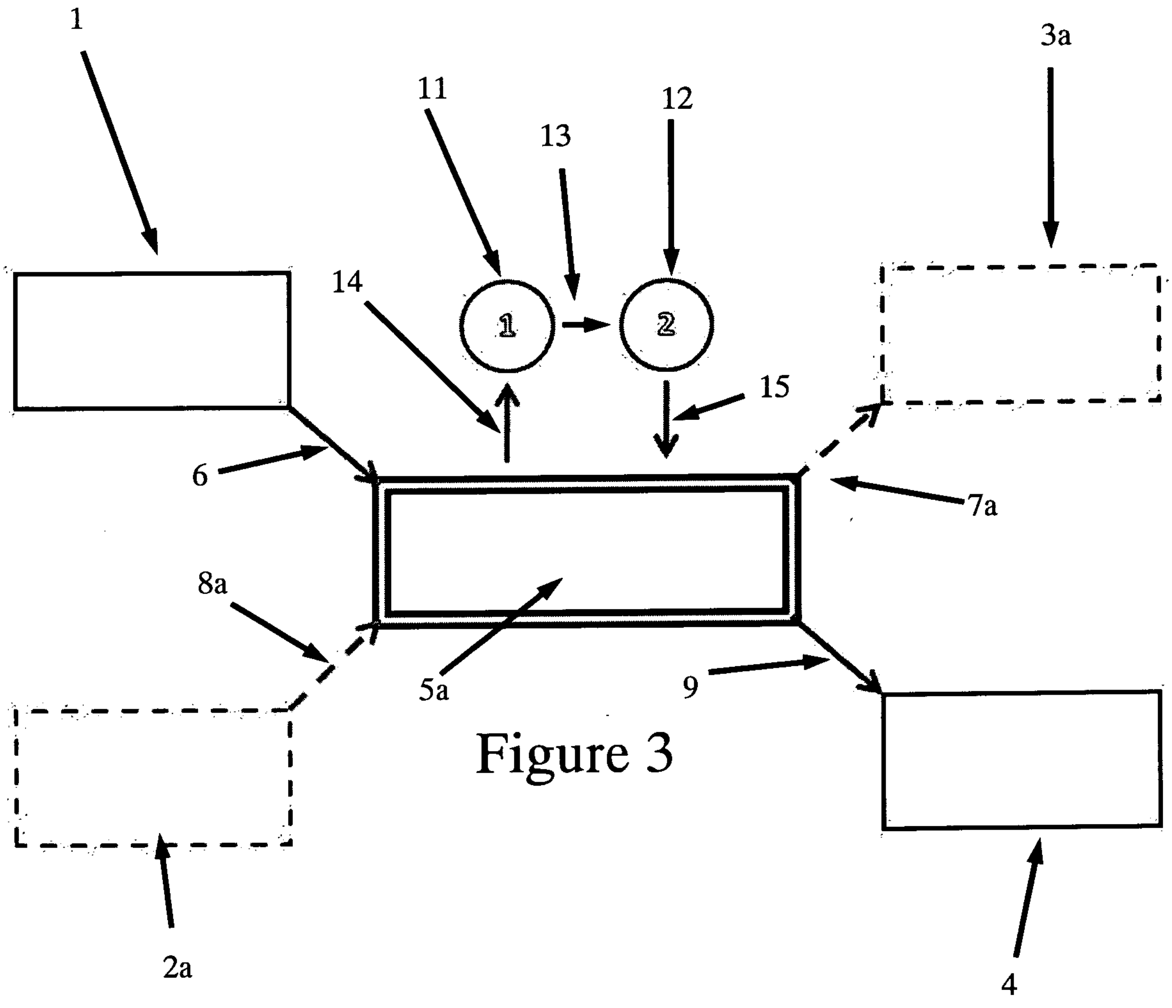


Figure 3

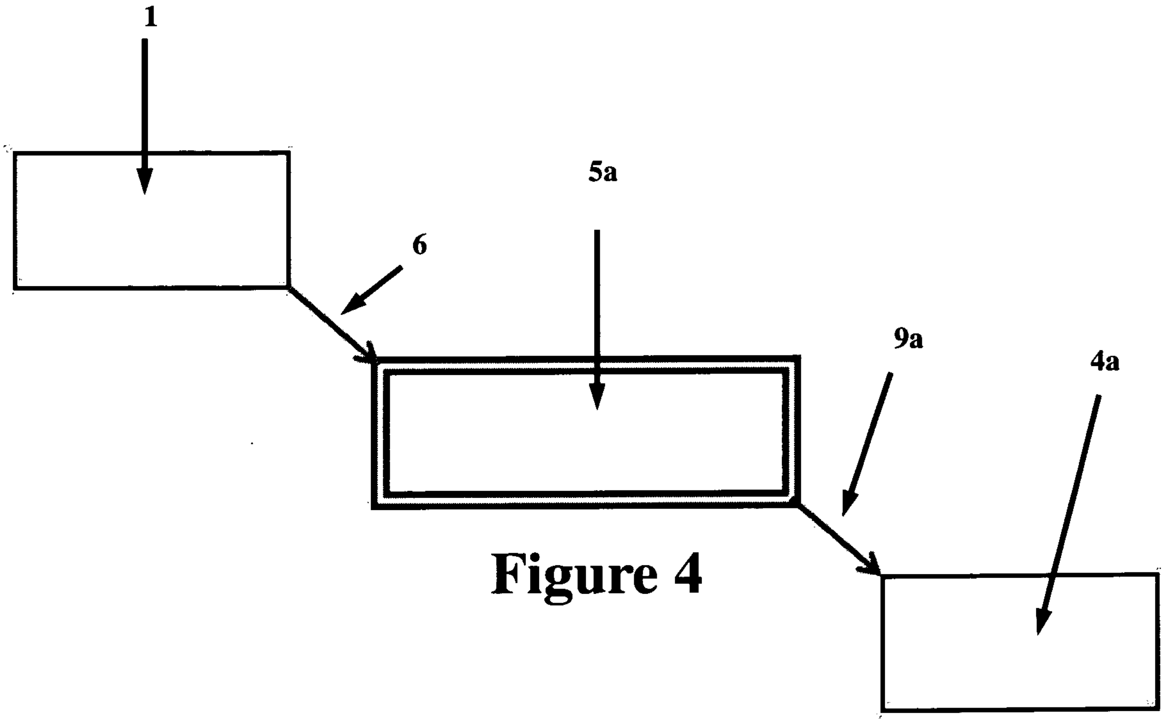


Figure 4

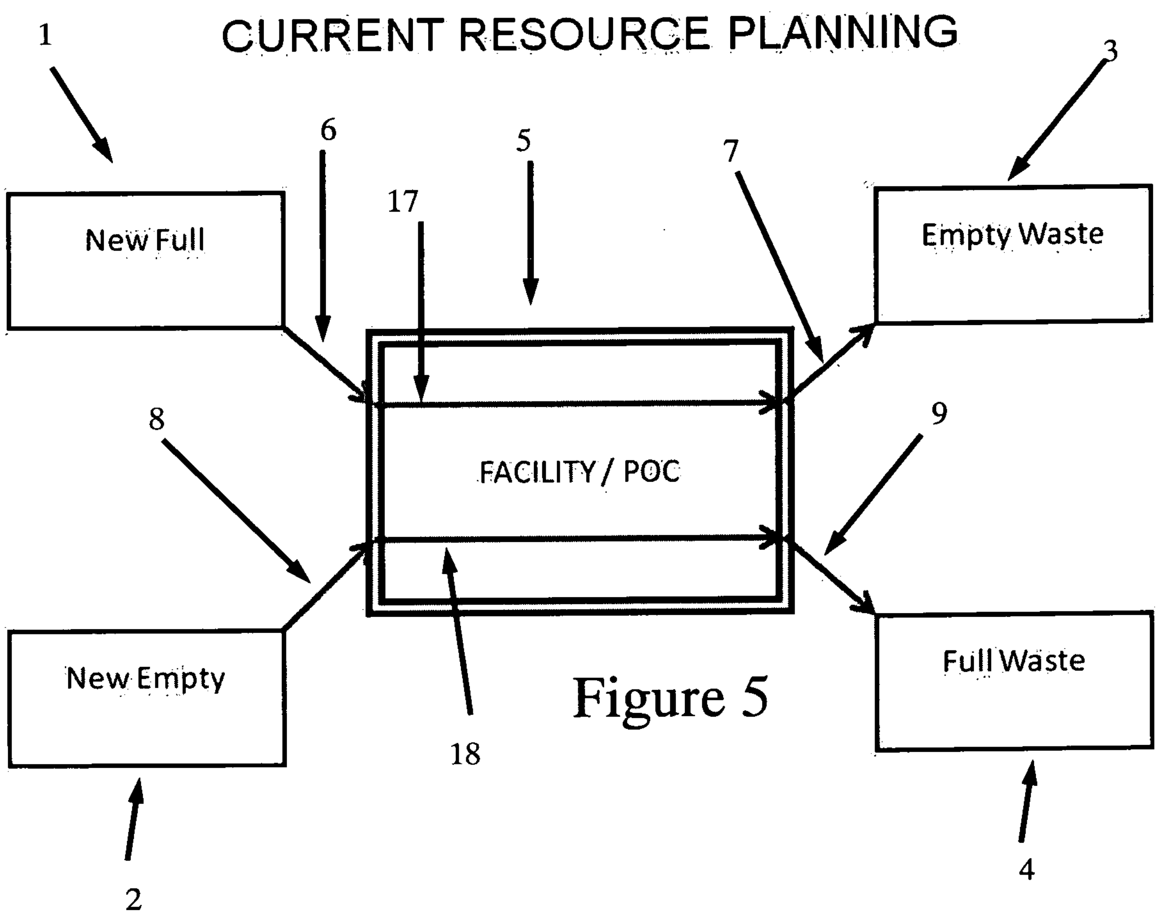

CURRENT RESOURCE PLANNING
1
6
5
7
3
17
New Full
Empty Waste
8
9
FACILITY / POC
New Empty
Full Waste
18
2
4

Figure 5

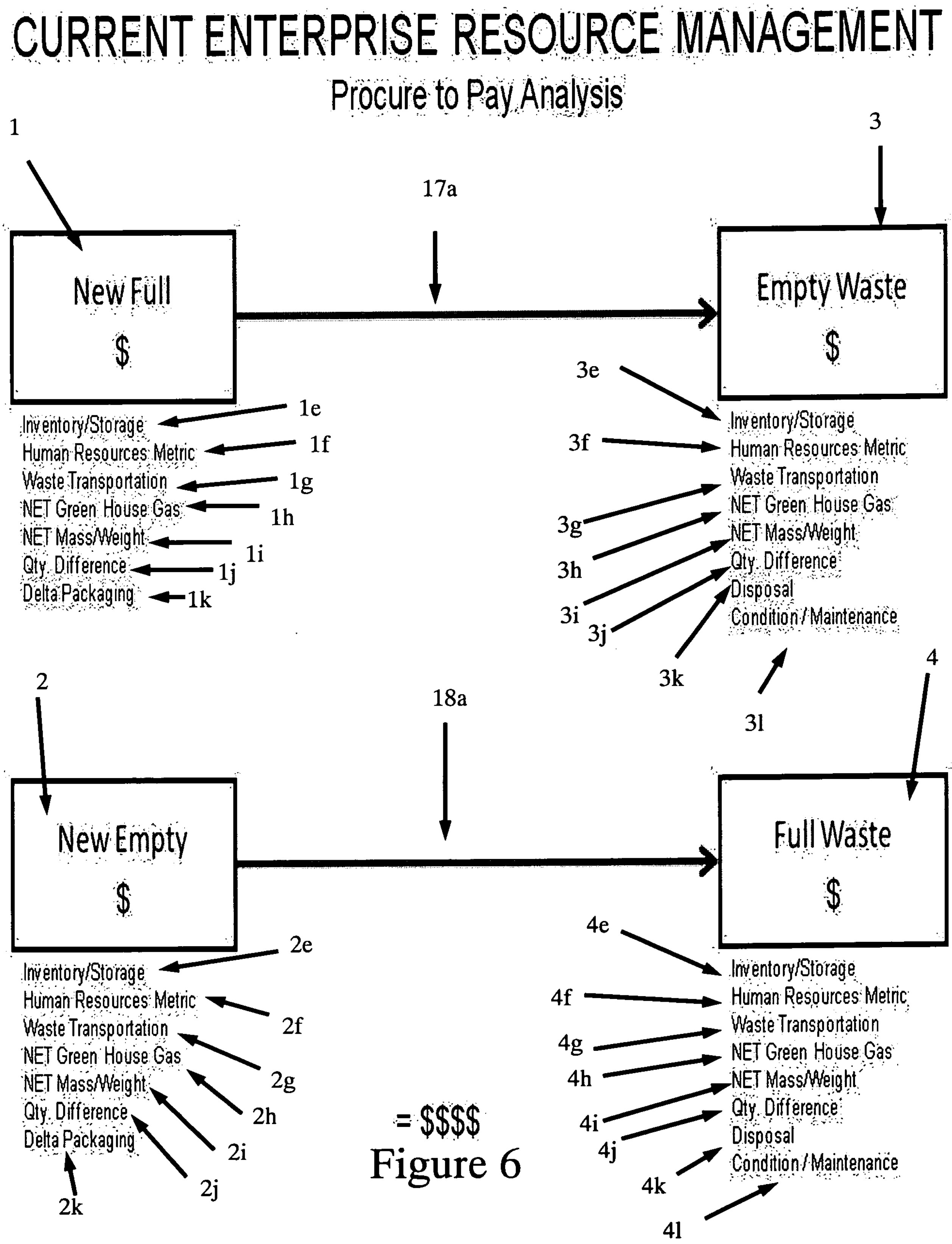

CURRENT ENTERPRISE RESOURCE MANAGEMENT
Procure to Pay Analysis
1
3
17a
New Full
$
Empty Waste
$
1e
1f
1g
1h
1i
1j
1k
Inventory/Storage
Human Resources Metric
Waste Transportation
NET Green House Gas
NET Mass/Weight
Qty. Difference
Delta Packaging
3e
3f
3g
3h
3i
3j
3k
3l
Inventory/Storage
Human Resources Metric
Waste Transportation
NET Green House Gas
NET Mass/Weight
Qty. Difference
Disposal
Condition / Maintenance
2
18a
4
New Empty
$
Full Waste
$
2e
2f
2g
2h
2i
2j
2k
Inventory/Storage
Human Resources Metric
Waste Transportation
NET Green House Gas
NET Mass/Weight
Qty. Difference
Delta Packaging
4e
4f
4g
4h
4i
4j
4k
4l
Inventory/Storage
Human Resources Metric
Waste Transportation
NET Green House Gas
NET Mass/Weight
Qty. Difference
Disposal
Condition / Maintenance
= $$$$

Figure 6

Figure 7

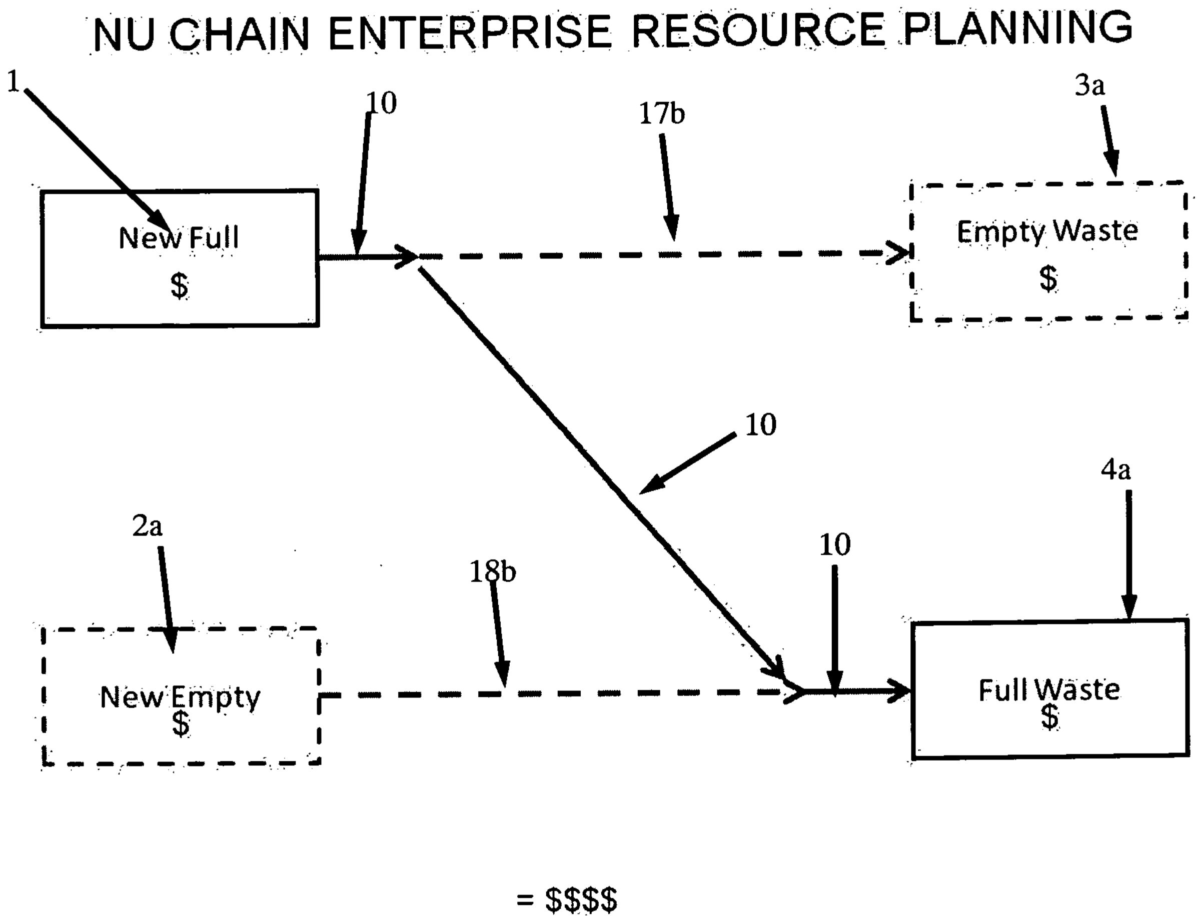

NU CHAIN ENTERPRISE RESOURCE PLANNING
1
10
17b
3a
New Full
$
Empty Waste
$
10
4a
2a
18b
10
New Empty
$
Full Waste
$
= $$$$

Figure 8

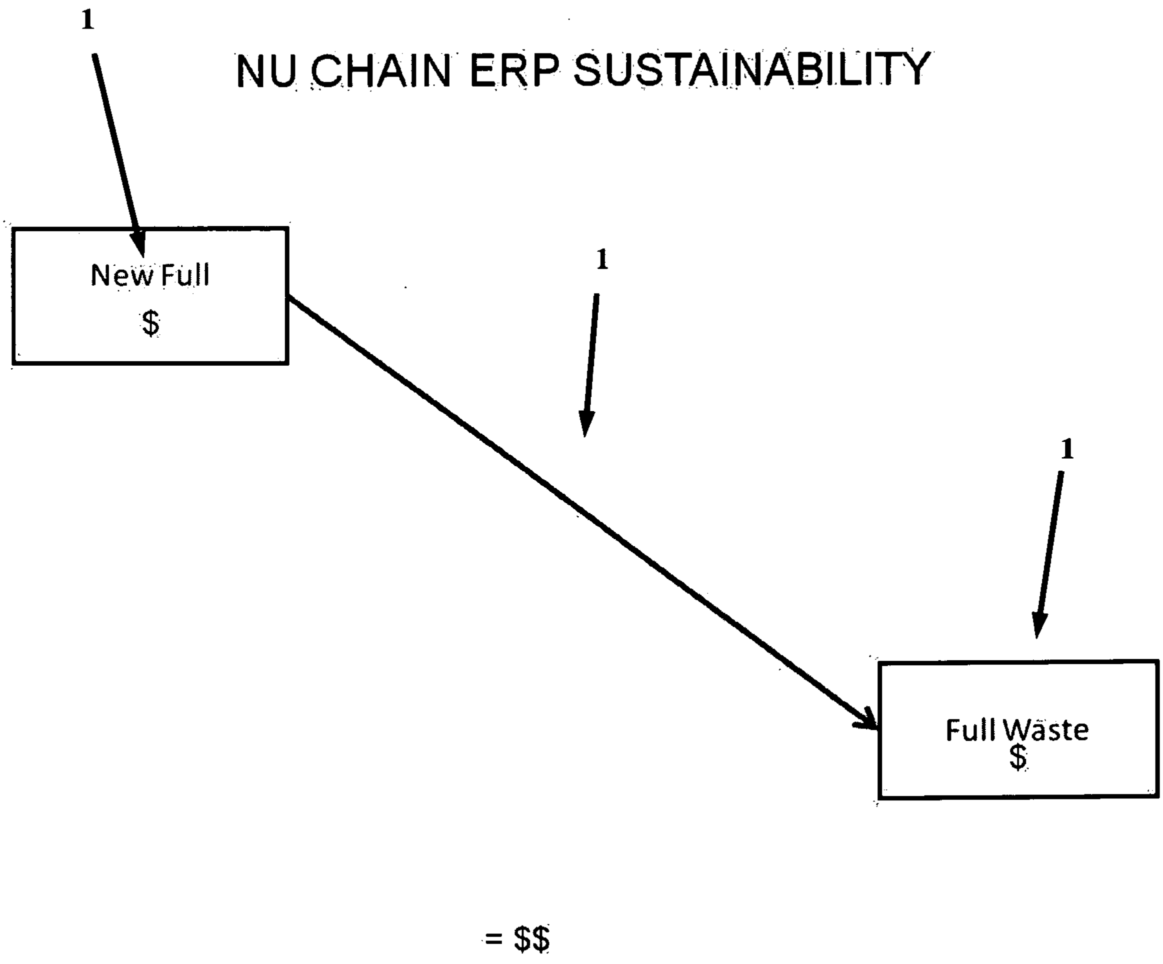


Figure 9

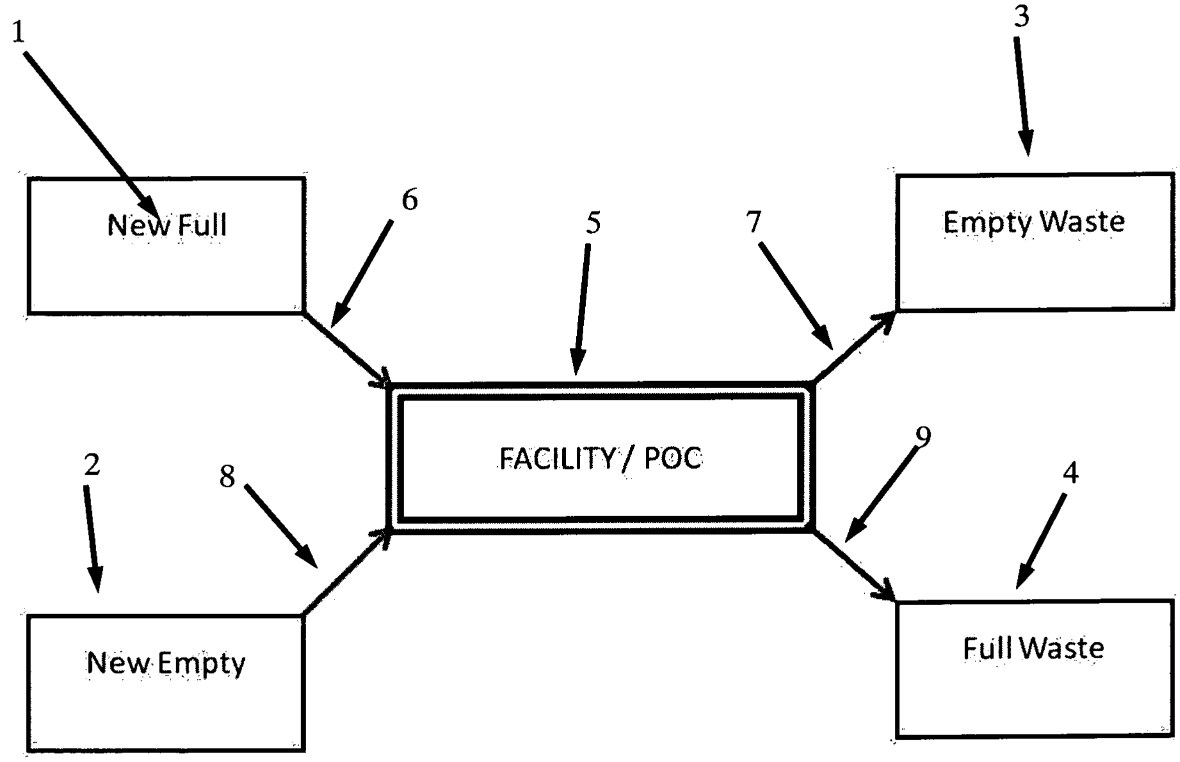

1
New Full
6
5
7
3
Empty Waste
FACILITY / POC
2
8
9
4
New Empty
Full Waste

Figure 10

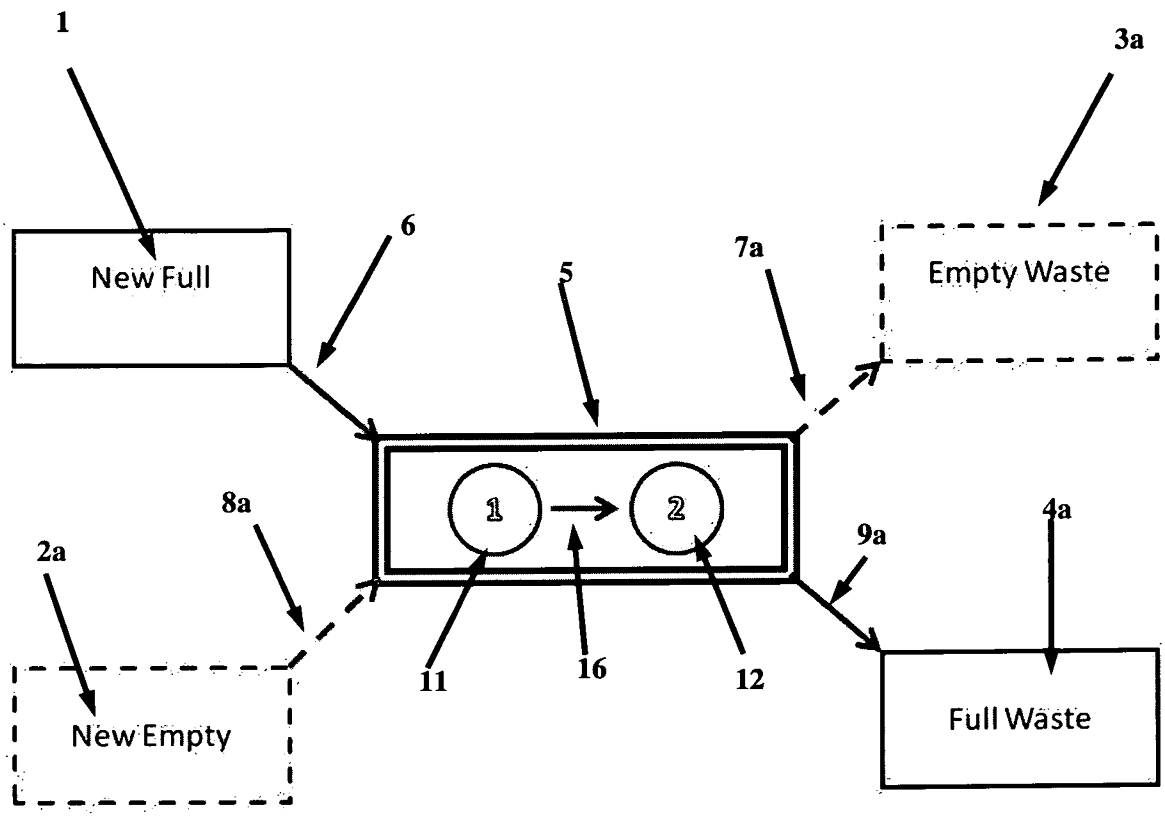

1
3a
New Full
6
5
7a
Empty Waste
8a
1
2
4a
9a
2a
11
16
12
New Empty
Full Waste

Figure 11

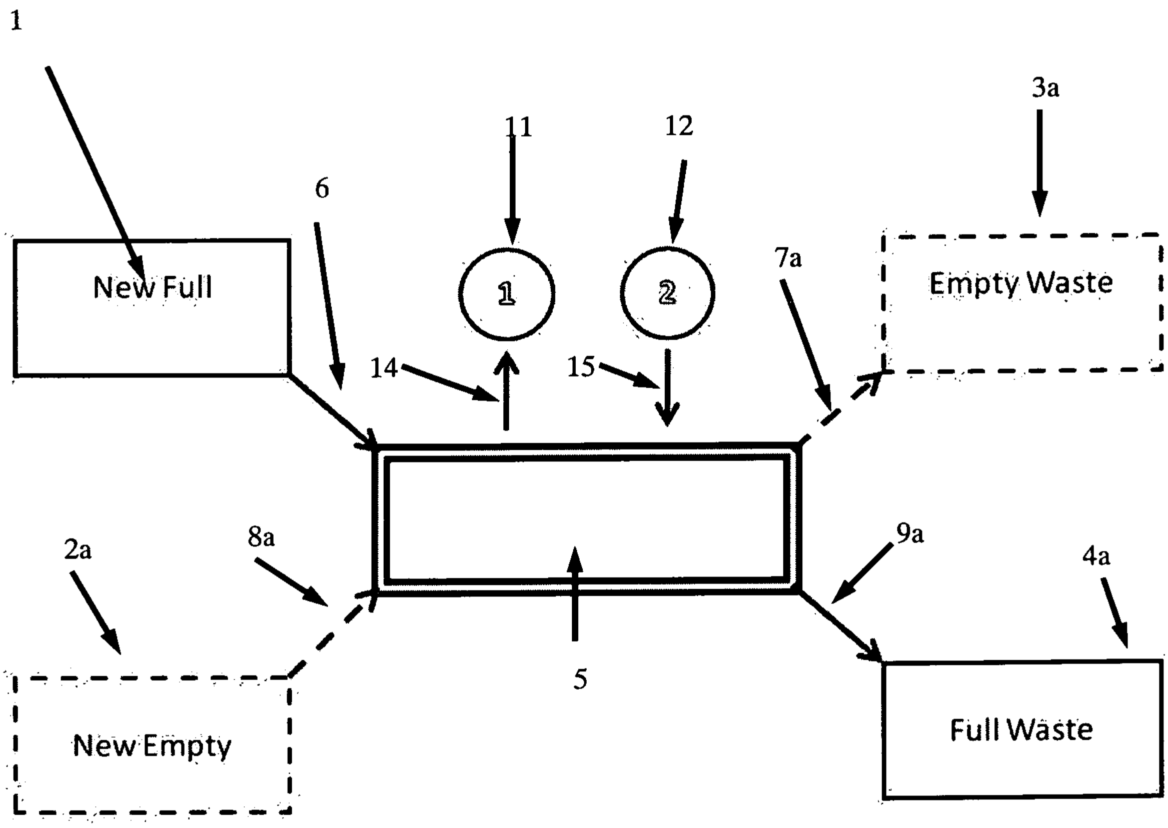
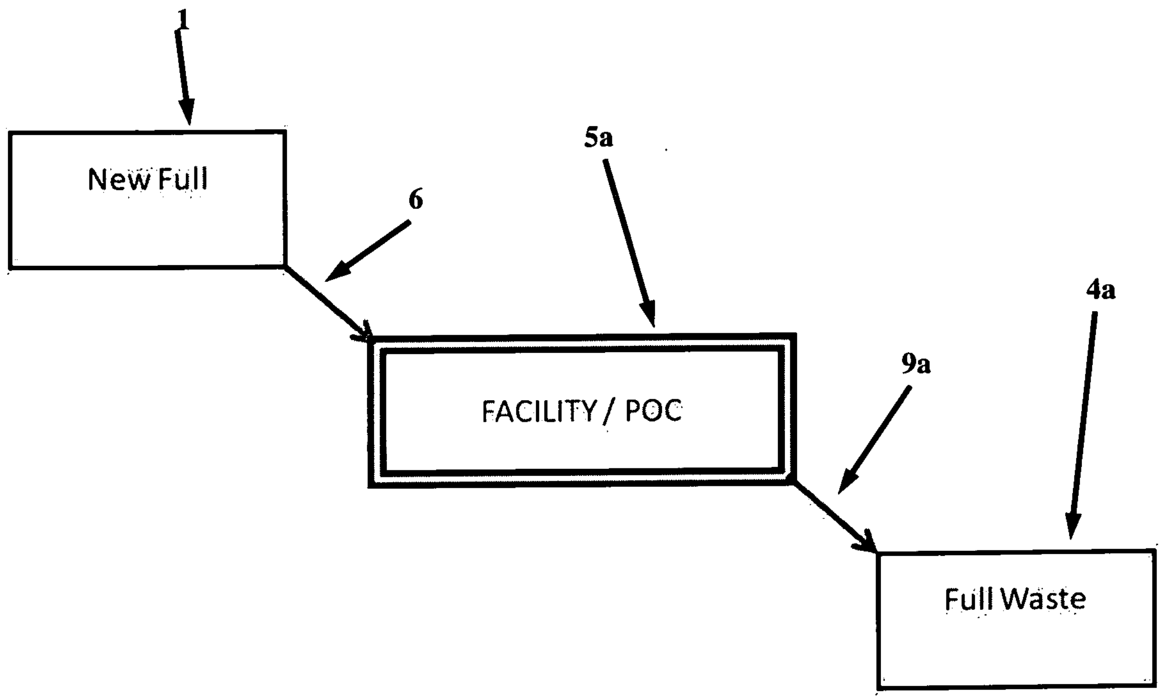

1
11
12
3a
6
7a
New Full
1
2
Empty Waste
14
15
2a
8a
9a
4a
5
New Empty
Full Waste

Figure 12



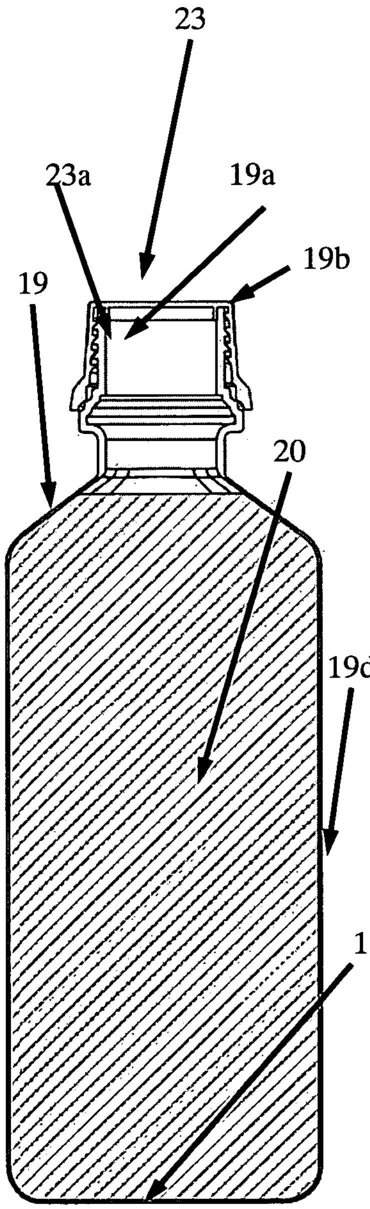


Figure 13

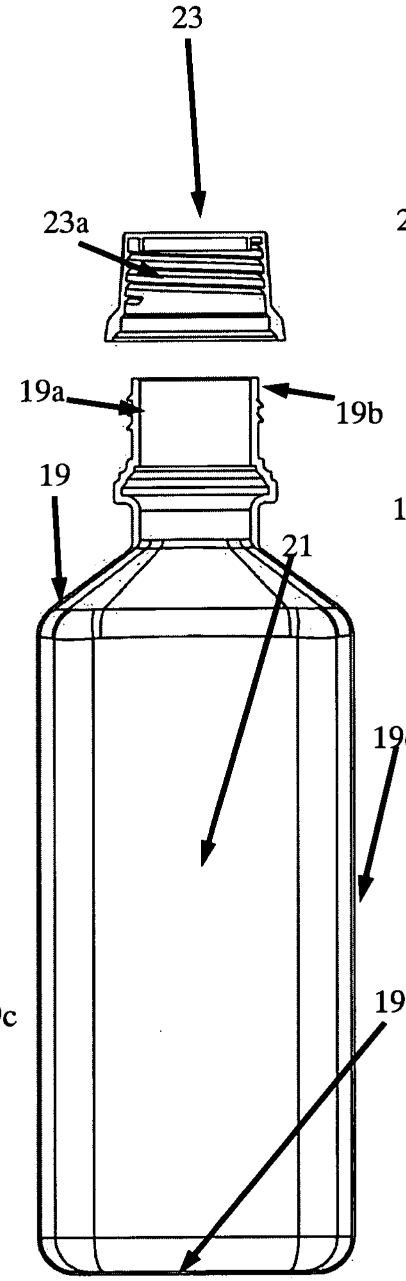


Figure 14

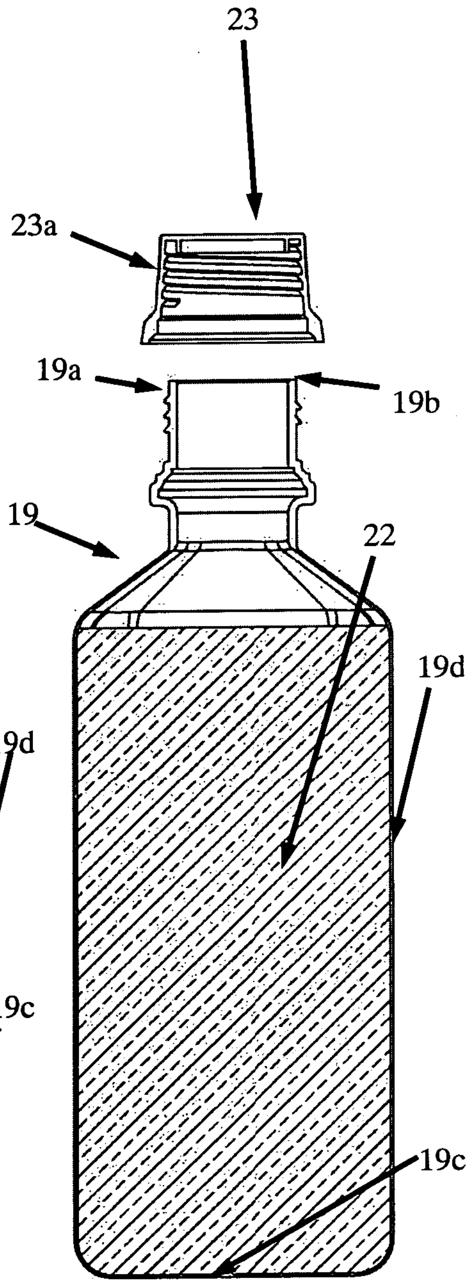


Figure 15

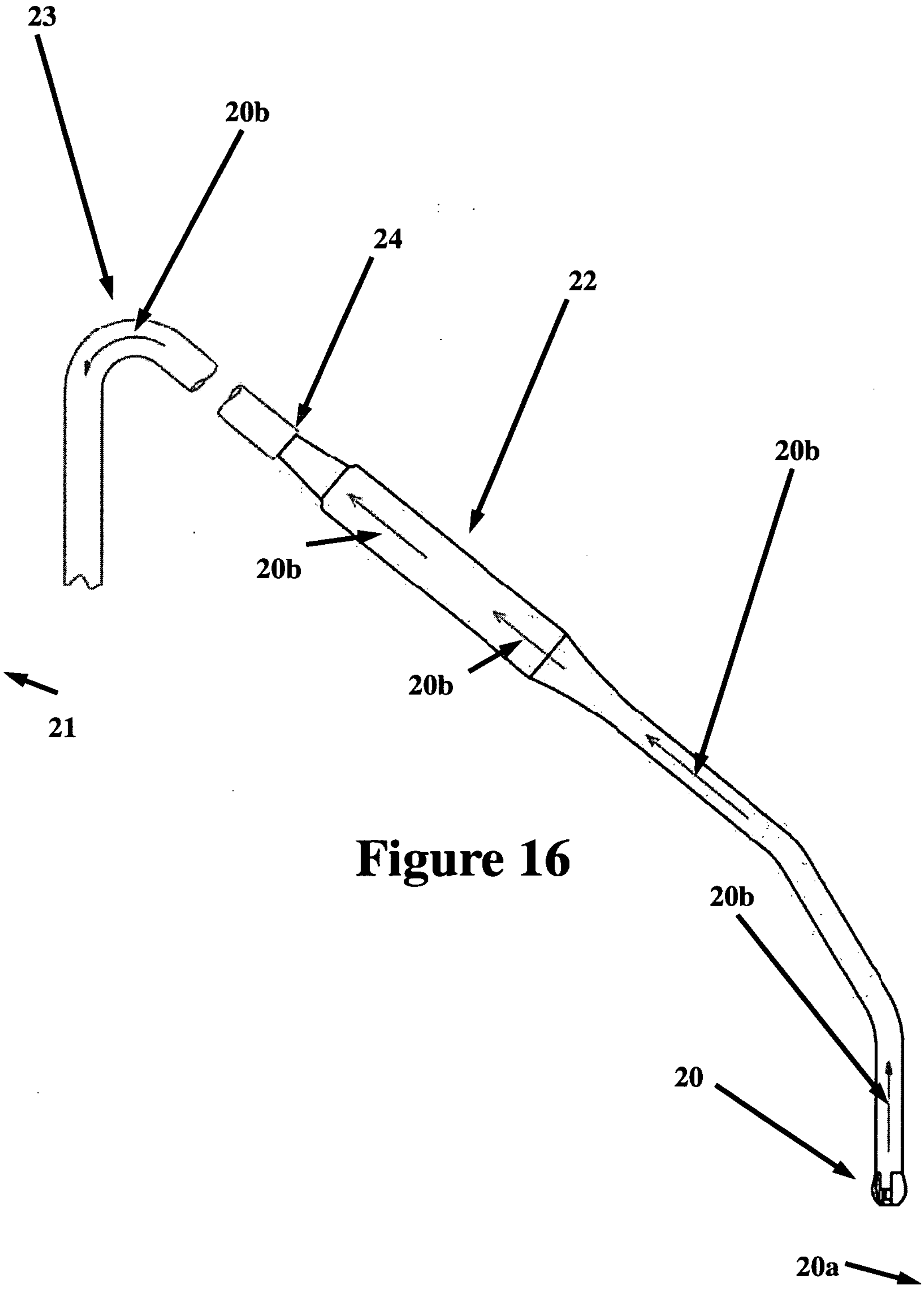


Figure 16

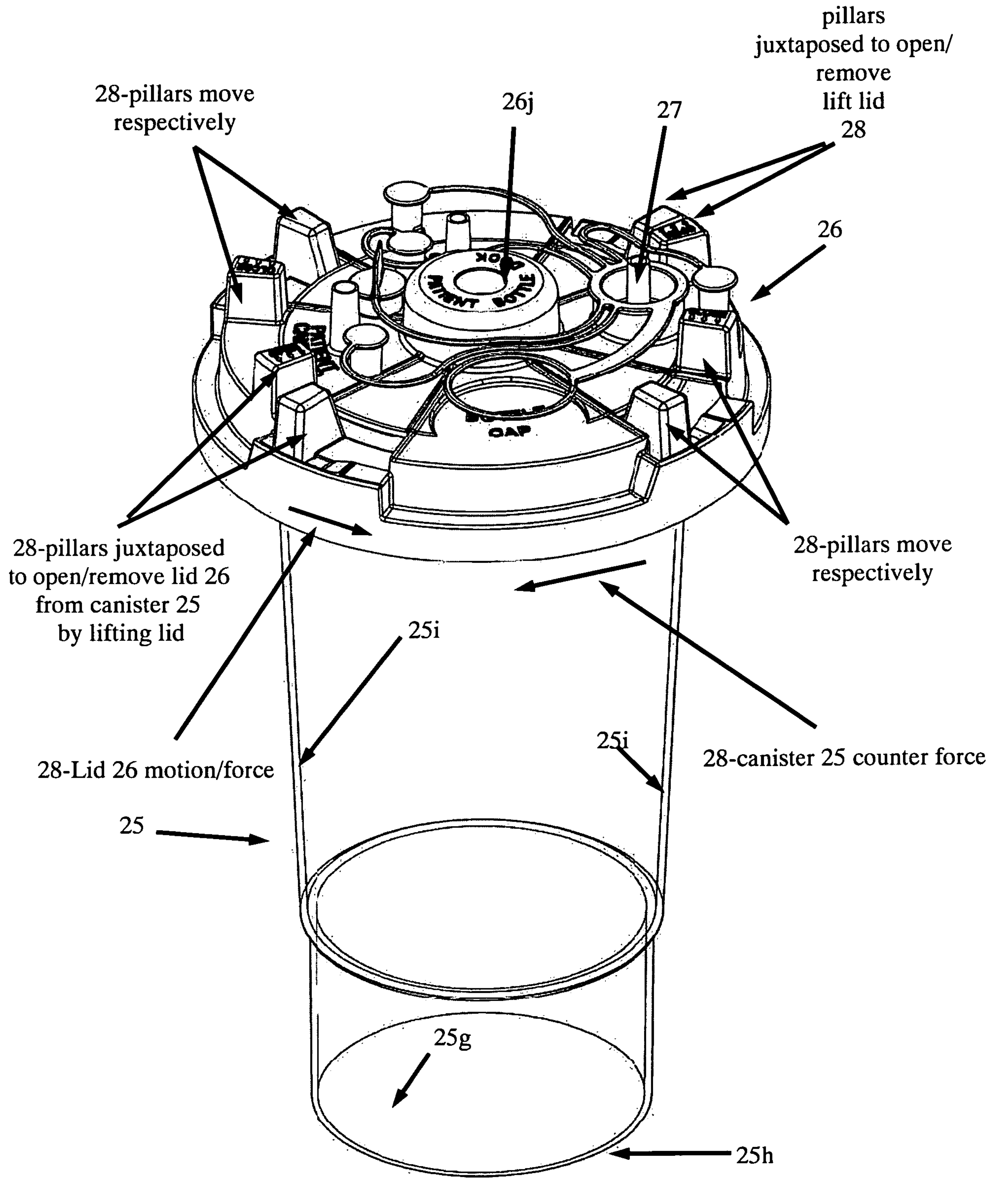

pillars
juxtaposed to open/
remove
lift lid
28
28-pillars move
respectively
26j
27
26
28-pillars juxtaposed
to open/remove lid 26
from canister 25
by lifting lid
28-pillars move
respectively
25i
25i
28-Lid 26 motion/force
28-canister 25 counter force
25
25g
25h

Figure 17

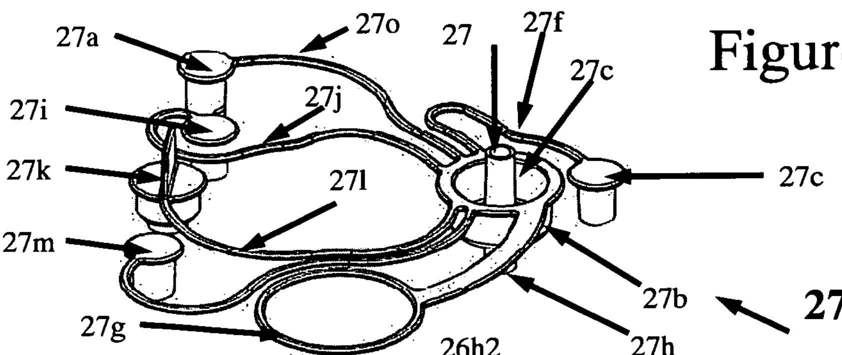


Figure 18

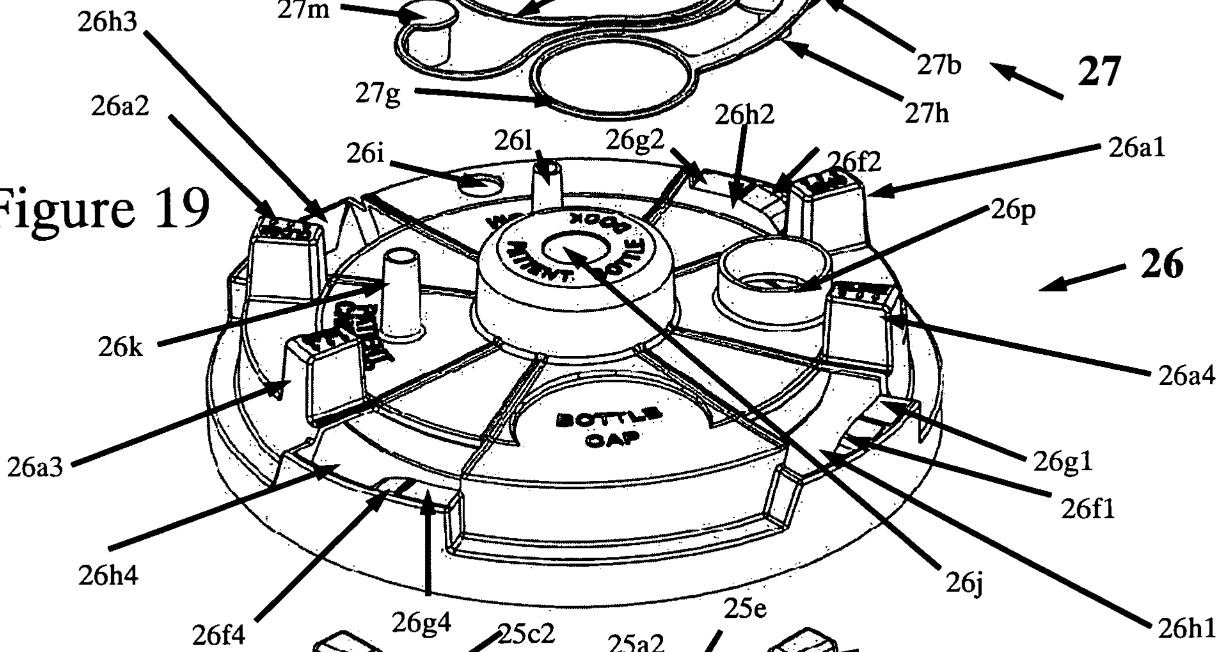


Figure 19

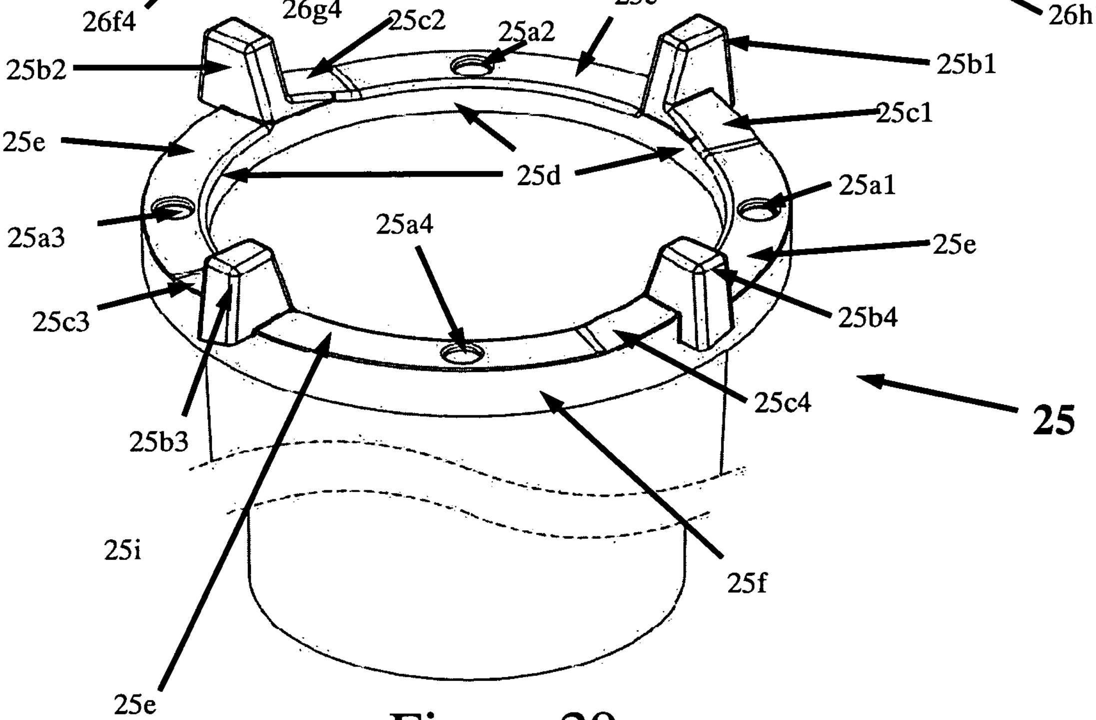


Figure 20

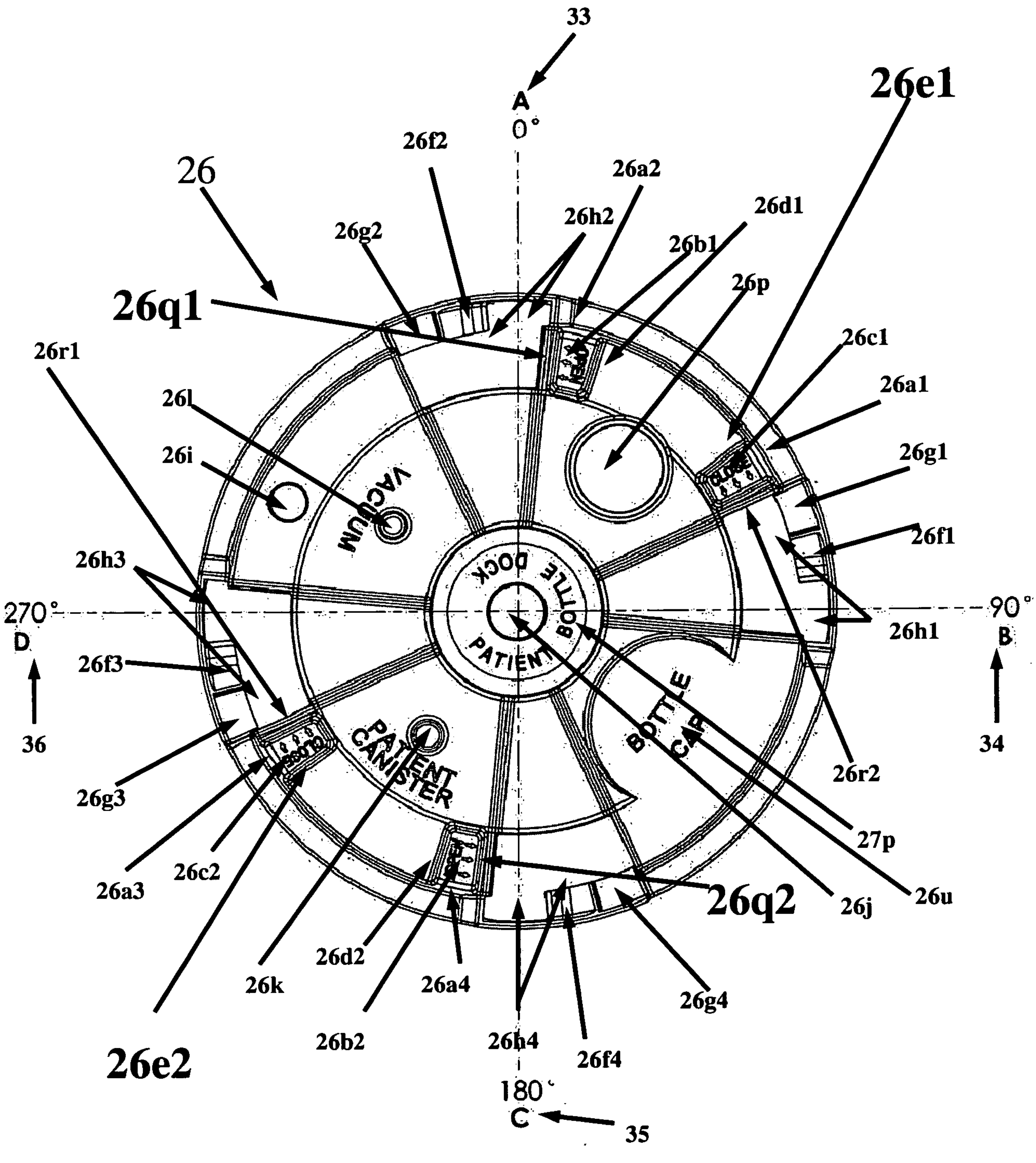

33
A
0°
26e1
26f2
26a2
26
26h2
26d1
26g2
26b1
26p
26q1
26c1
26r1
26a1
26l
26i
26g1
VACUUM
26f1
26h3
BOTTLE DOCK
270°
90°
D
B
26h1
26f3
PATIENT
36
34
BOTTLE CAP
26r2
PATIENT CANISTER
26g3
27p
26a3
26c2
26q2
26j
26u
26d2
26k
26a4
26g4
26e2
26b2
26h4
26f4
180°
C
35

Figure 21

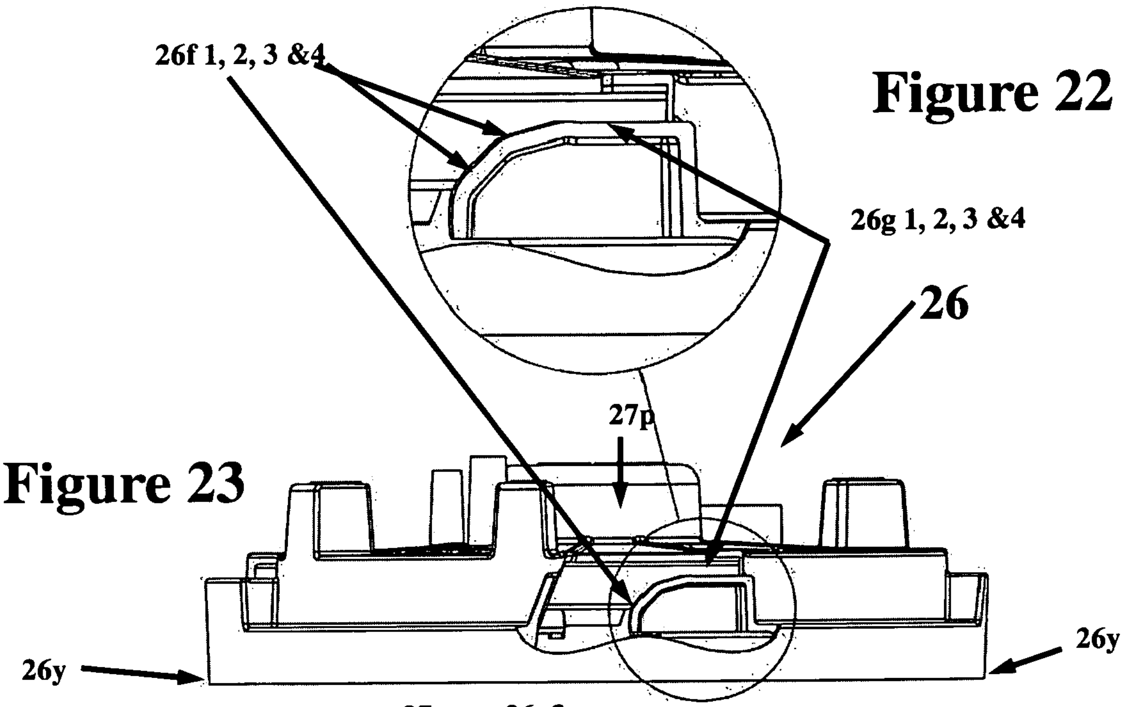


Figure 22

Figure 23

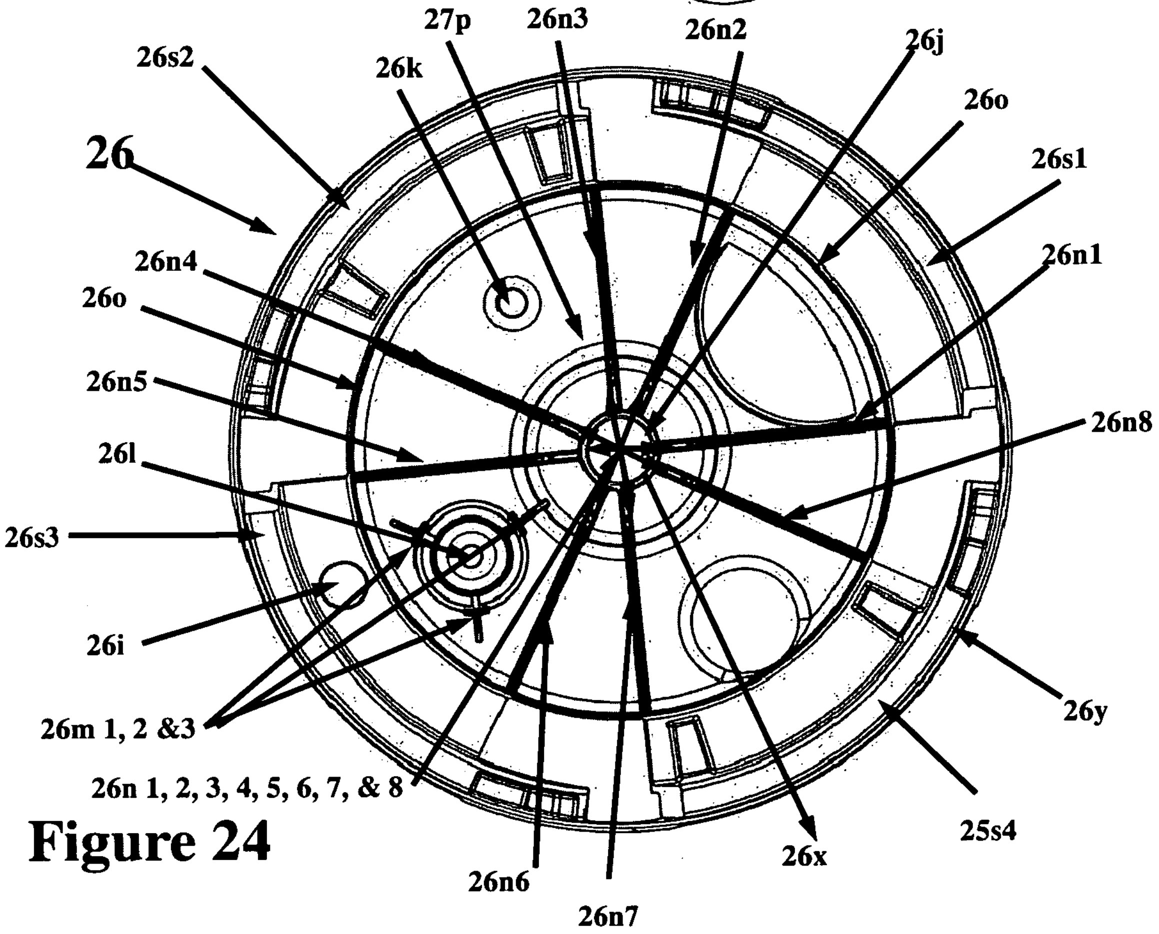


Figure 24

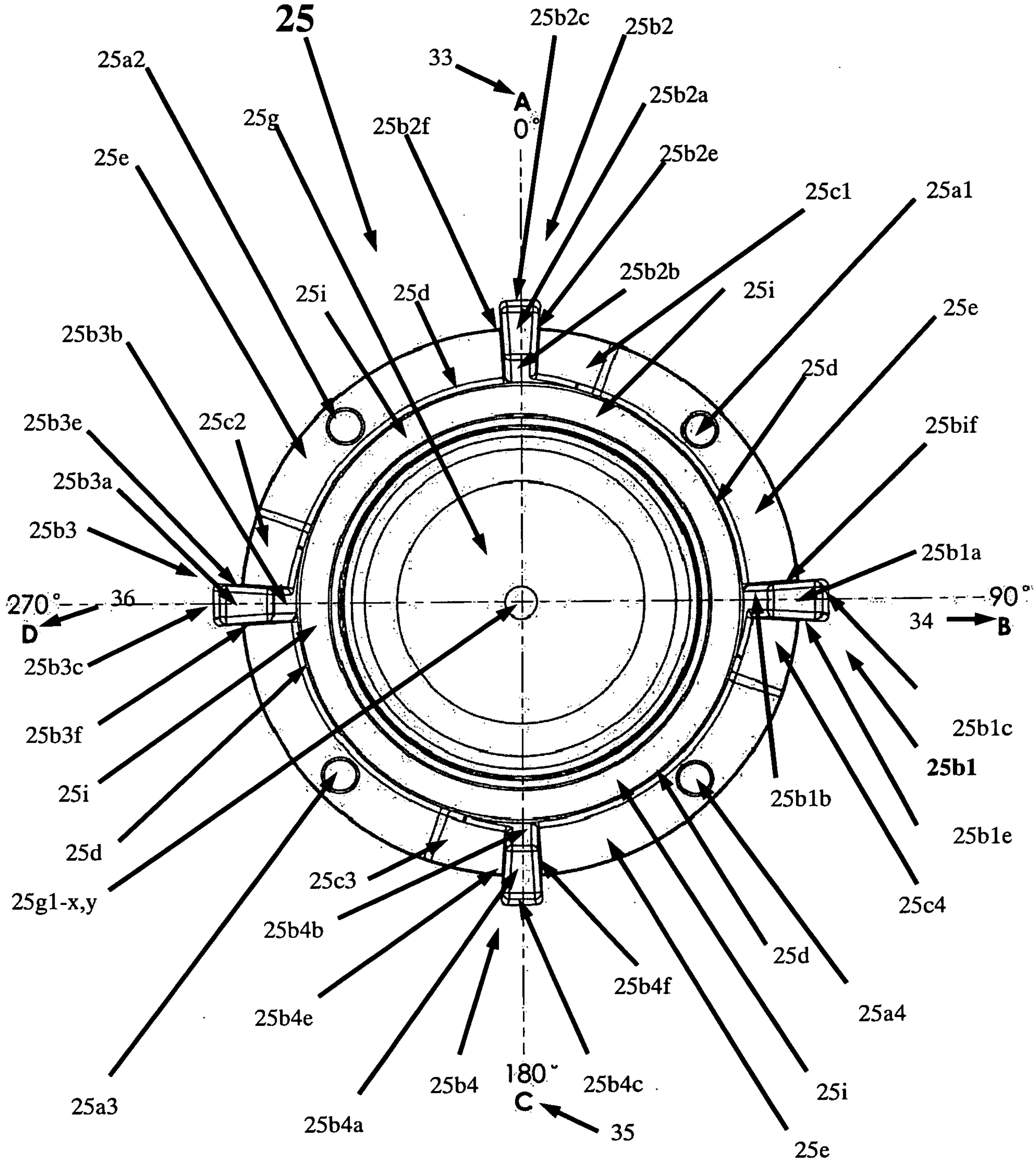

25
25b2c
25b2
33
A
0°
25a2
25b2a
25g
25b2f
25b2e
25e
25c1
25a1
25b2b
25i
25d
25i
25e
25b3b
25d
25b3e
25c2
25bif
25b3a
25b3
25b1a
270°
36
90°
D
34
B
25b3c
25b1c
25b3f
25b1
25i
25b1b
25b1e
25d
25c4
25g1-x,y
25c3
25b4b
25d
25b4f
25a4
25b4e
25a3
25b4
180°
25b4c
25i
C
25b4a
35
25e

Figure 25

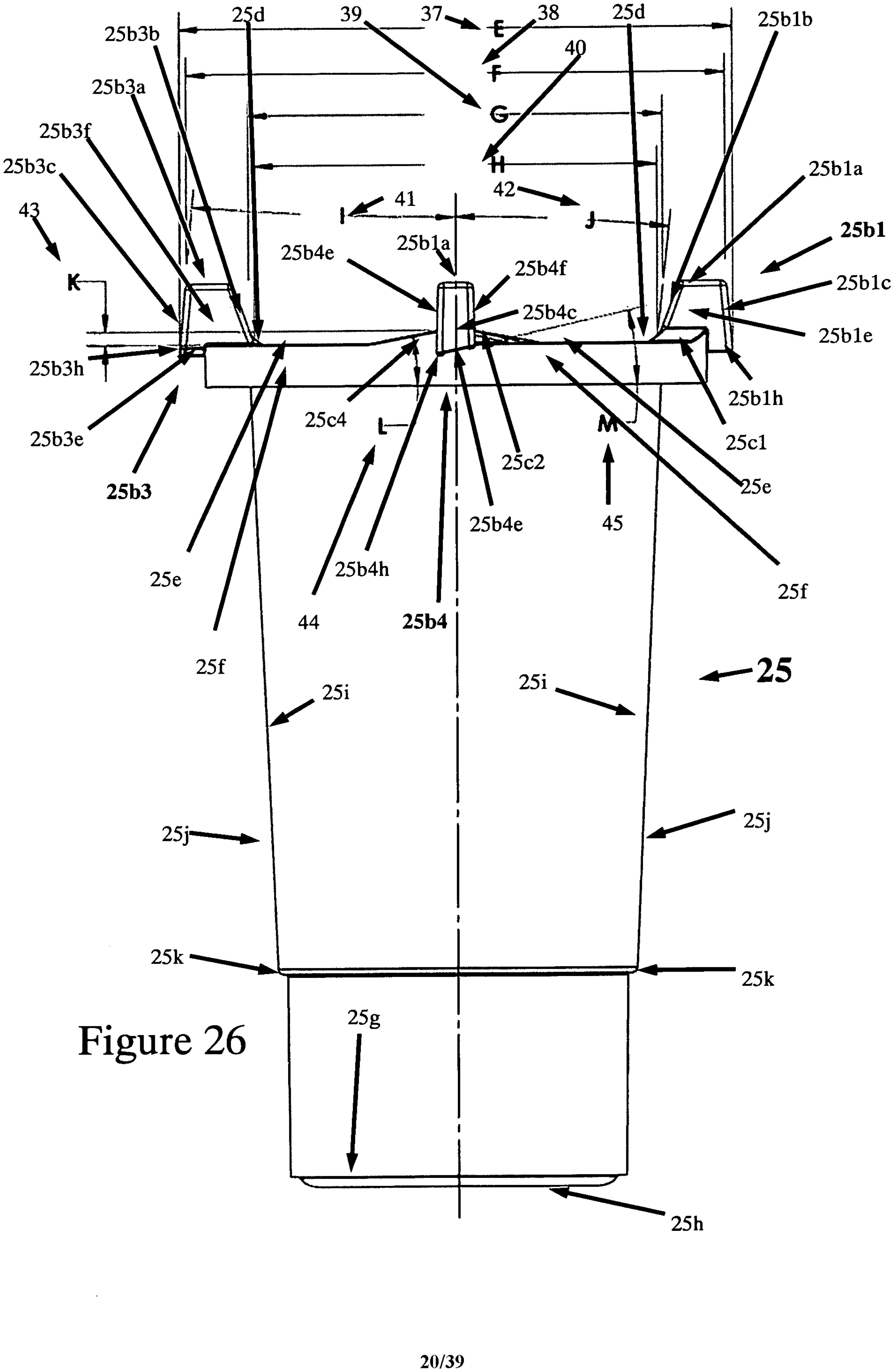
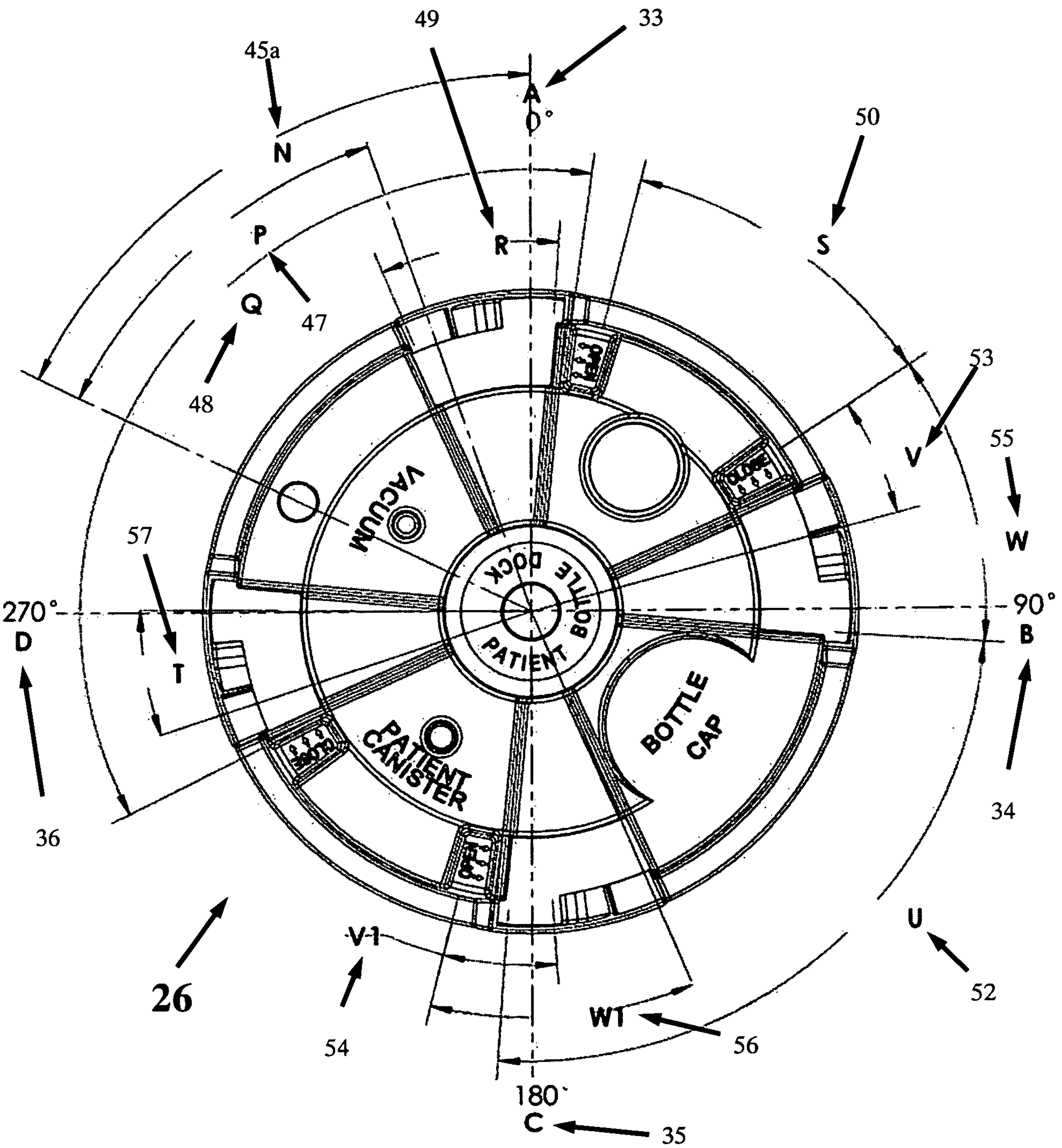

25d
39
37
E
38
25d
25b1b
25b3b
F
40
25b3a
G
25b3f
H
25b3c
25b1a
42
J
41
I
43
25b1
K
25b1a
25b4e
25b4f
25b1c
25b4c
25b1e
25b3h
25b1h
25c4
25b3e
L
M
25c1
25c2
25b3
25e
25b4e
45
25e
25b4h
25f
44
25b4
25f
25
25i
25i
25j
25j
25k
25k
25g
25h

Figure 26



49
33
45a
A
0°
N
50
R
P
S
Q
47
48
53
V
55
W
VACUUM
BOTTLE DOCK
PATIENT BOTTLE
57
270°
D
90°
B
T
BOTTLE CAP
PATIENT CANISTER
34
36
U
26
V1
52
54
W1
56
180°
C
35

Figure 27

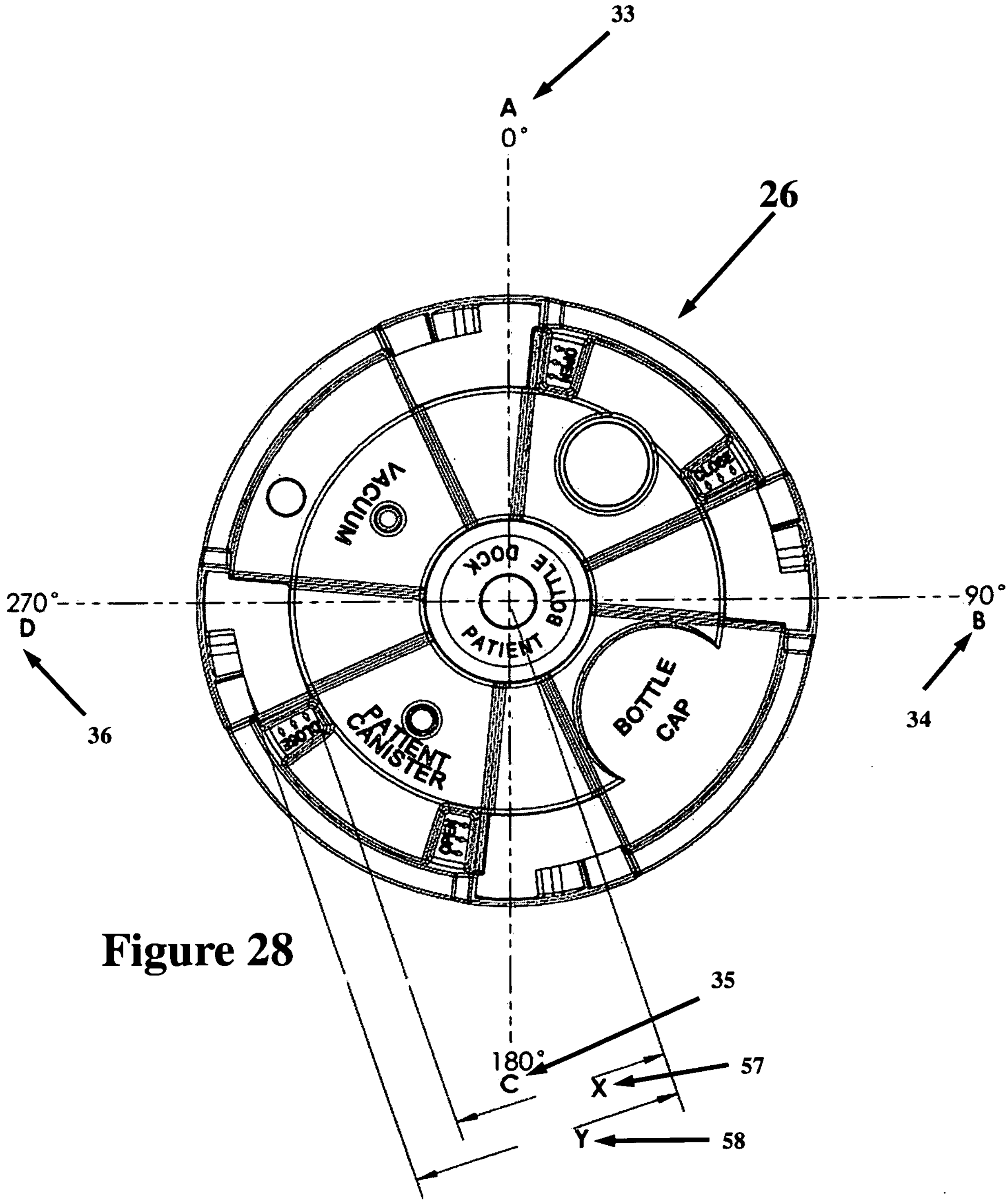

33
A
0°
26
VACUUM
BOTTLE DOCK
PATIENT
BOTTLE CAP
PATIENT CANISTER
OPEN
CLOSE
270°
D
36
90°
B
34
35
180°
C
X
57
Y
58

Figure 28

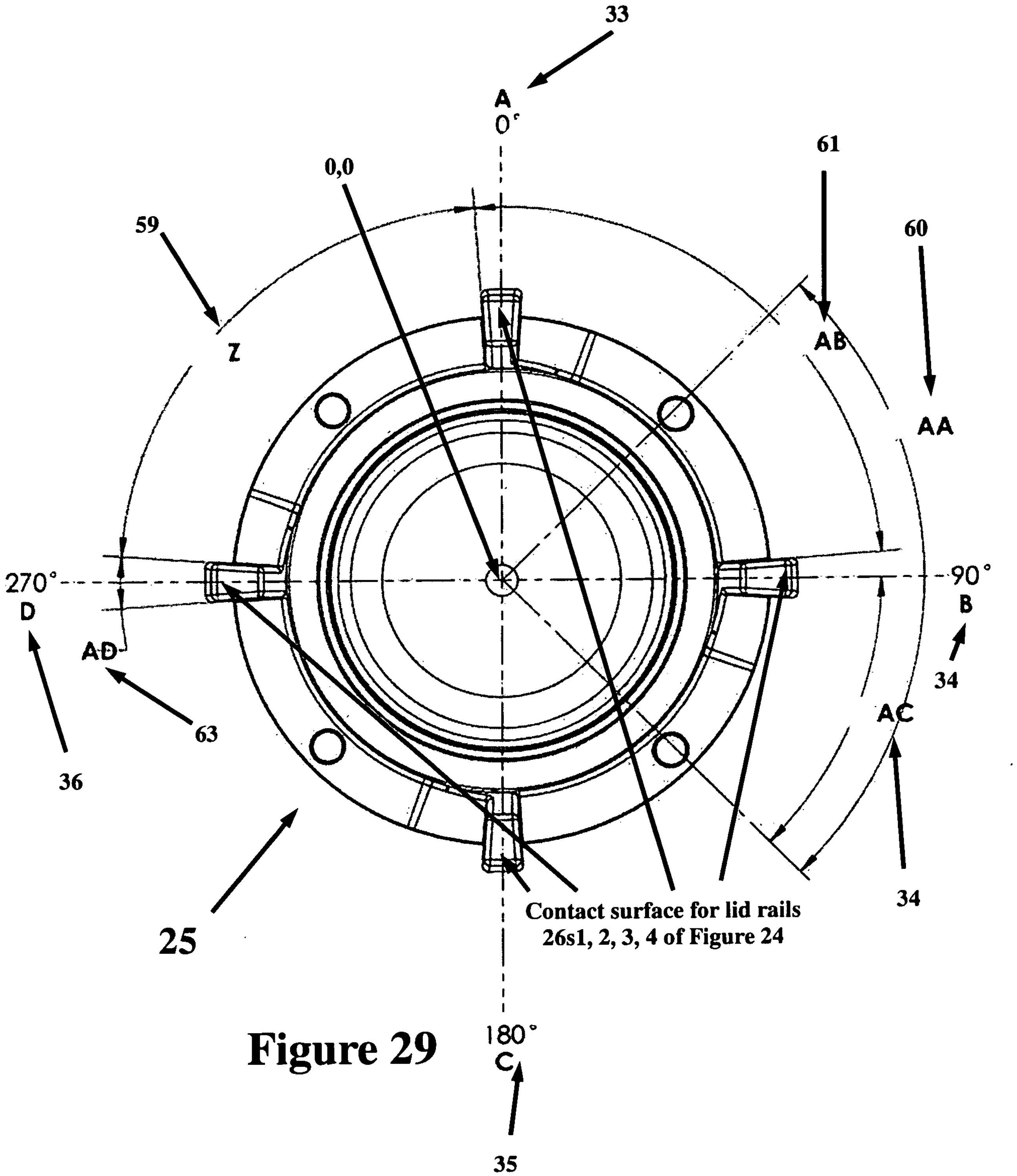

33
A
0°
61
0,0
59
60
Z
AB
AA
270°
D
AD
90°
B
34
AC
63
36
34
25
Contact surface for lid rails
26s1, 2, 3, 4 of Figure 24
180°
C
35

Figure 29

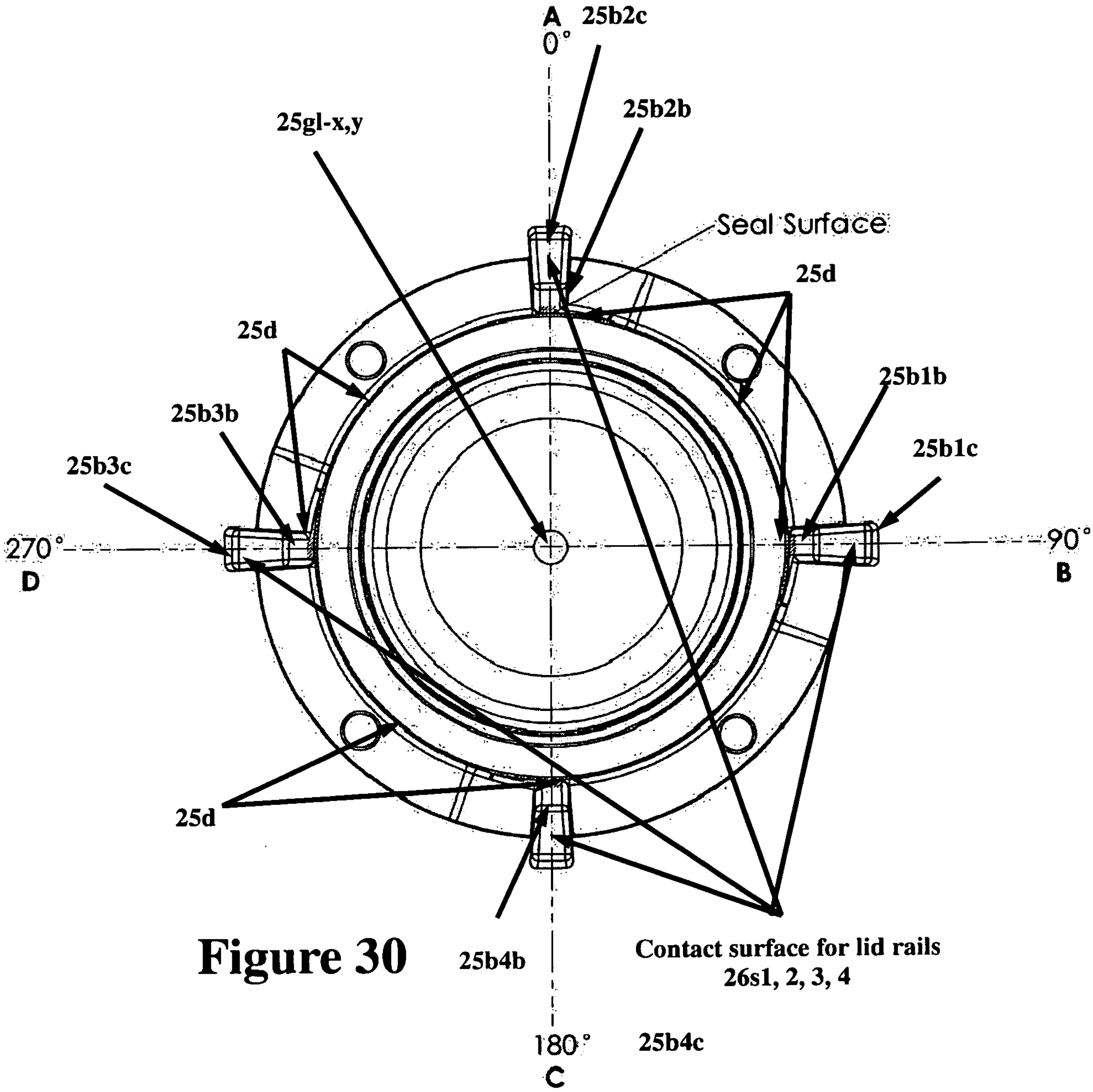

A
0°
25b2c
25gl-x,y
25b2b
Seal Surface
25d
25d
25b1b
25b3b
25b1c
25b3c
270°
D
90°
B
25d
25b4b
Contact surface for lid rails
26s1, 2, 3, 4
180°
C
25b4c

Figure 30

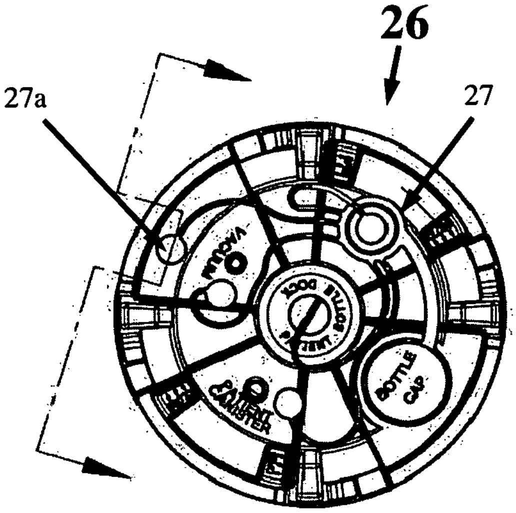
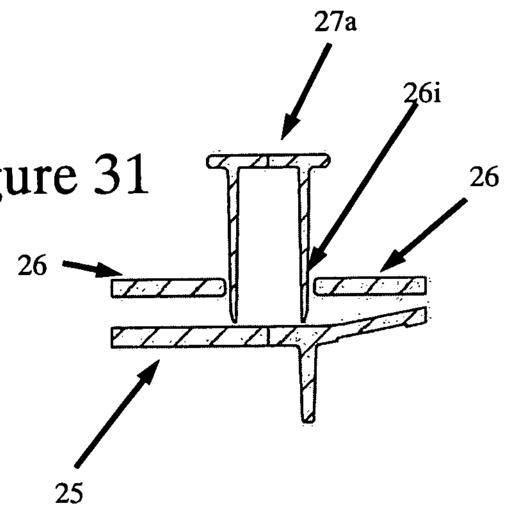


Figure 31



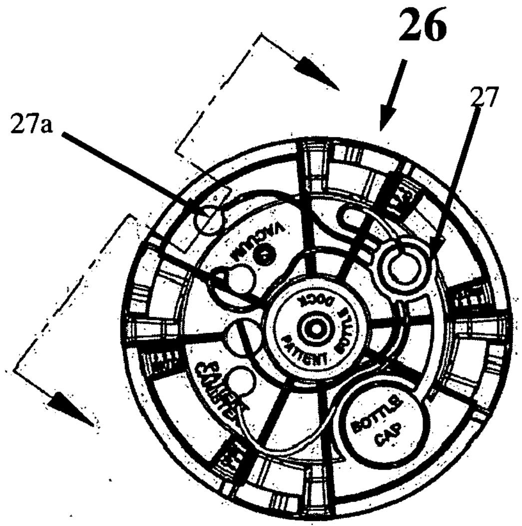
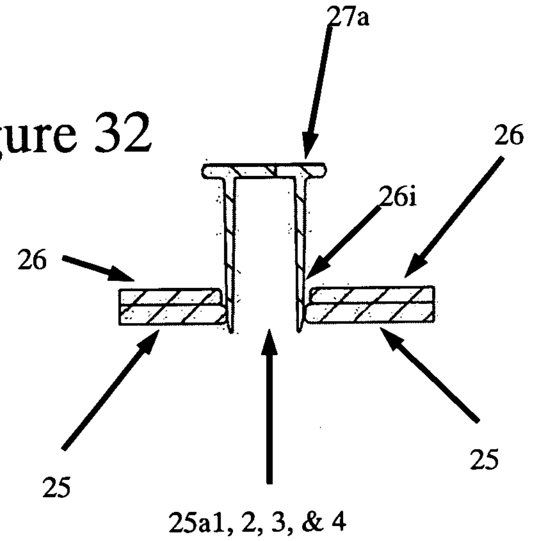


Figure 32



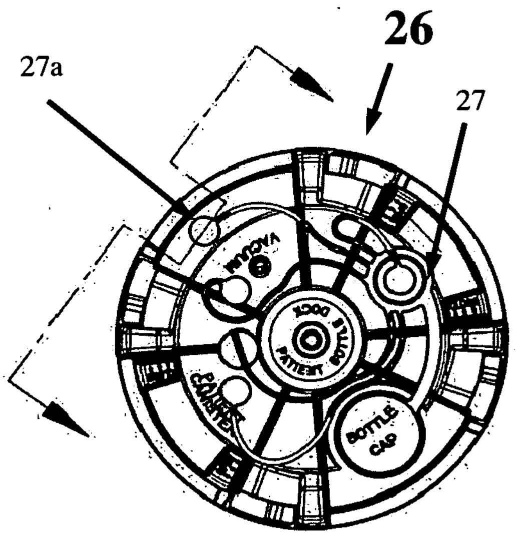
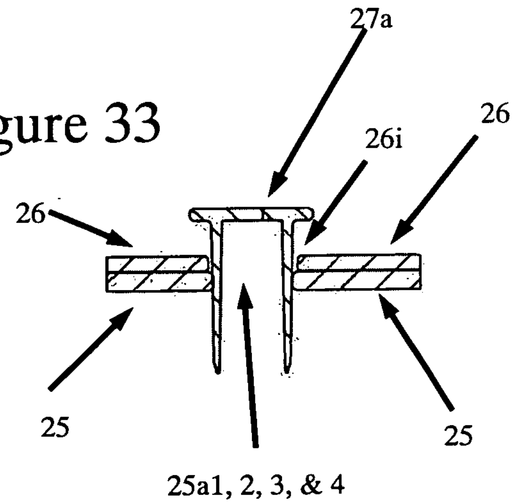
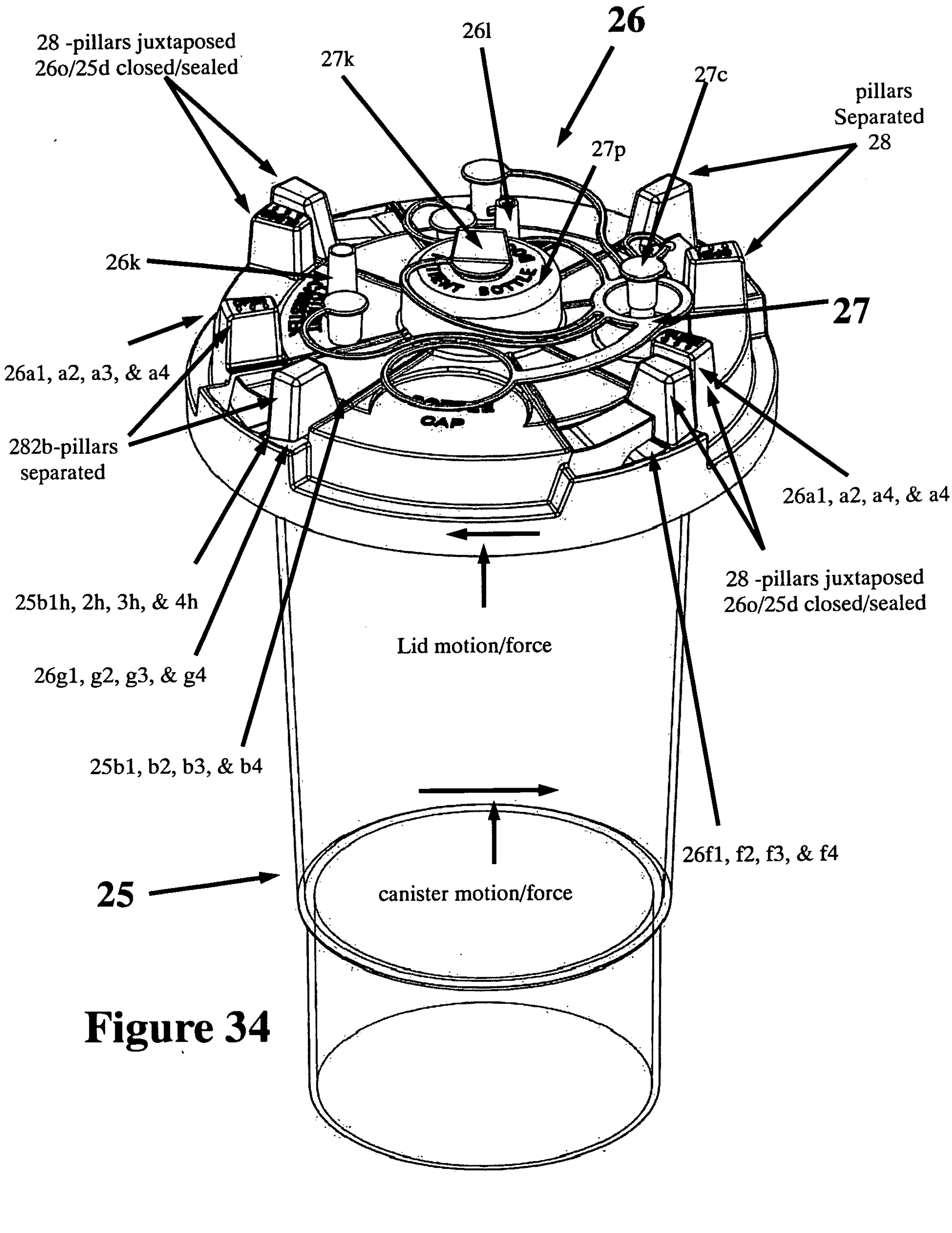


Figure 33





28 -pillars juxtaposed
26o/25d closed/sealed
27k
26l
26
27c
pillars
Separated
28
27p
26k
27
26a1, a2, a3, & a4
282b-pillars
separated
26a1, a2, a4, & a4
28 -pillars juxtaposed
26o/25d closed/sealed
25b1h, 2h, 3h, & 4h
Lid motion/force
26g1, g2, g3, & g4
25b1, b2, b3, & b4
26f1, f2, f3, & f4
25
canister motion/force

Figure 34

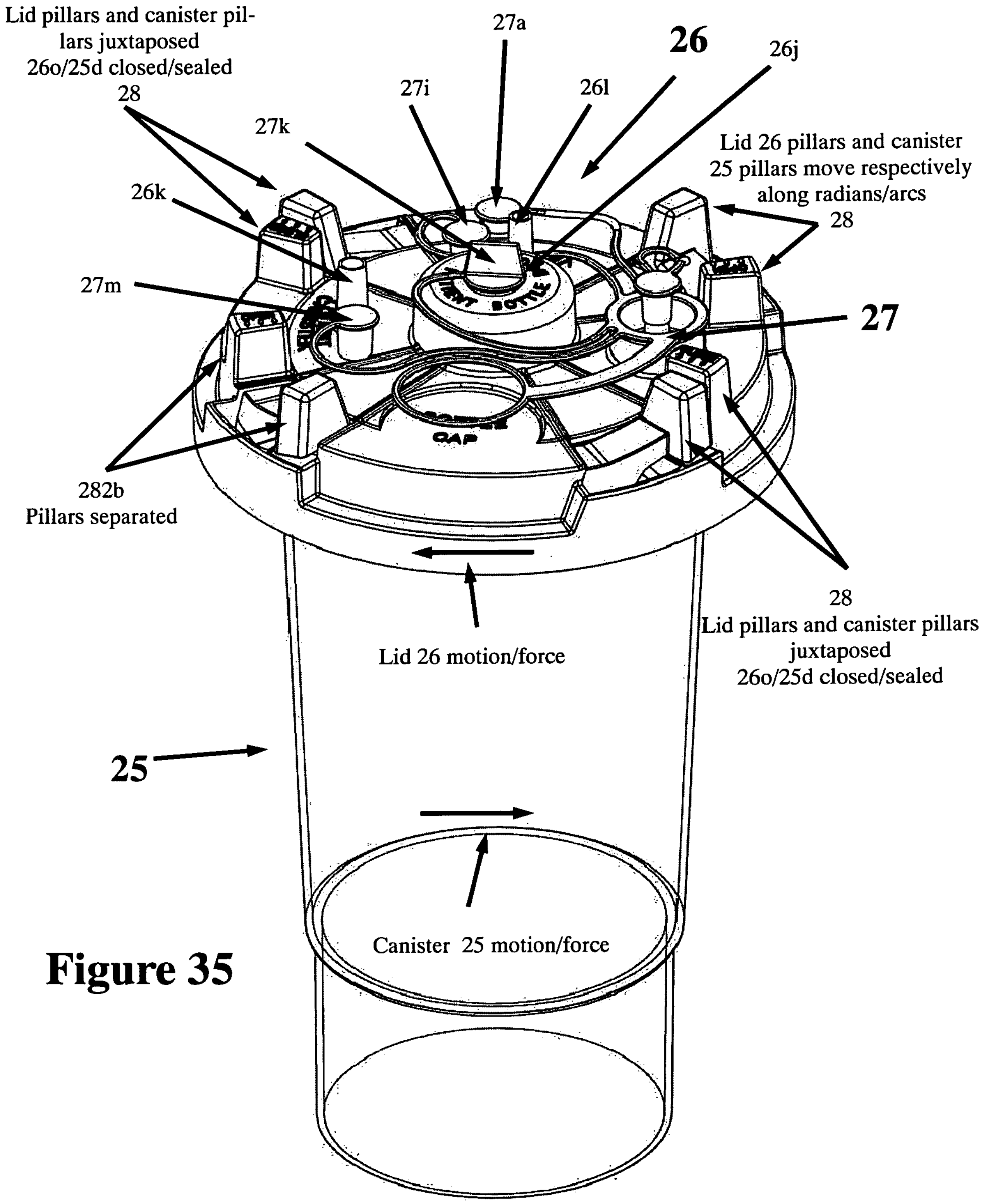

Lid pillars and canister pillars juxtaposed
26o/25d closed/sealed
28
27a
26
26j
27i
26l
27k
Lid 26 pillars and canister 25 pillars move respectively along radians/arcs
28
26k
27m
27
282b
Pillars separated
28
Lid pillars and canister pillars juxtaposed
26o/25d closed/sealed
Lid 26 motion/force
25
Canister 25 motion/force

Figure 35

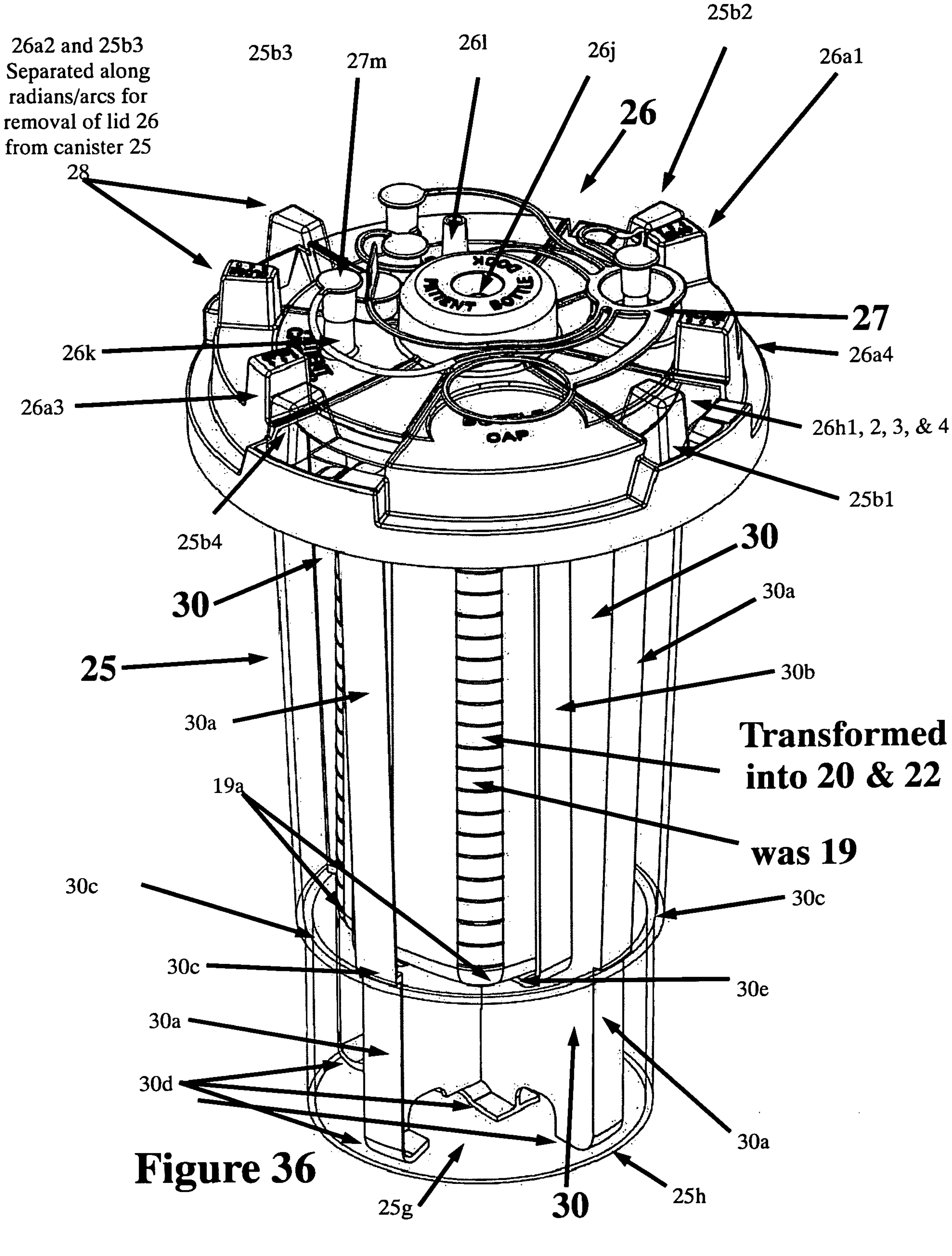

26a2 and 25b3
Separated along
radians/arcs for
removal of lid 26
from canister 25
28
25b3
27m
26l
26j
25b2
26a1
26
27
26k
26a4
26a3
26h1, 2, 3, & 4
25b1
25b4
30
30
30a
25
30b
30a
Transformed
into 20 & 22
19a
was 19
30c
30c
30c
30e
30a
30d
30a
25g
30
25h
PATIENT BOTTLE
BOTTLE CAP

Figure 36

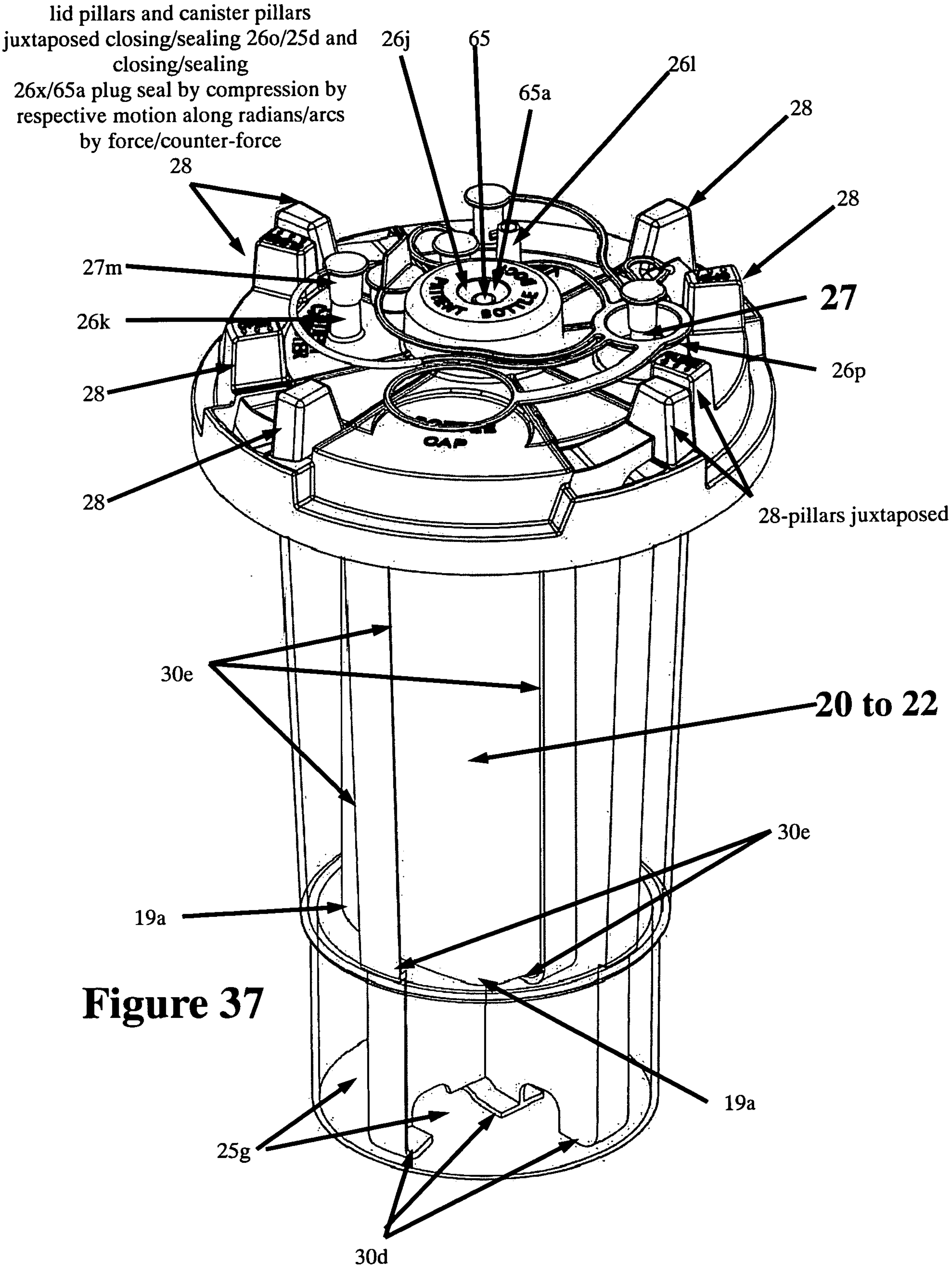

lid pillars and canister pillars
juxtaposed closing/sealing 26o/25d and
closing/sealing
26x/65a plug seal by compression by
respective motion along radians/arcs
by force/counter-force
28
26j
65
65a
26l
28
28
27m
26k
27
26p
28
28
28-pillars juxtaposed
30e
20 to 22
30e
19a
19a
25g
30d

Figure 37

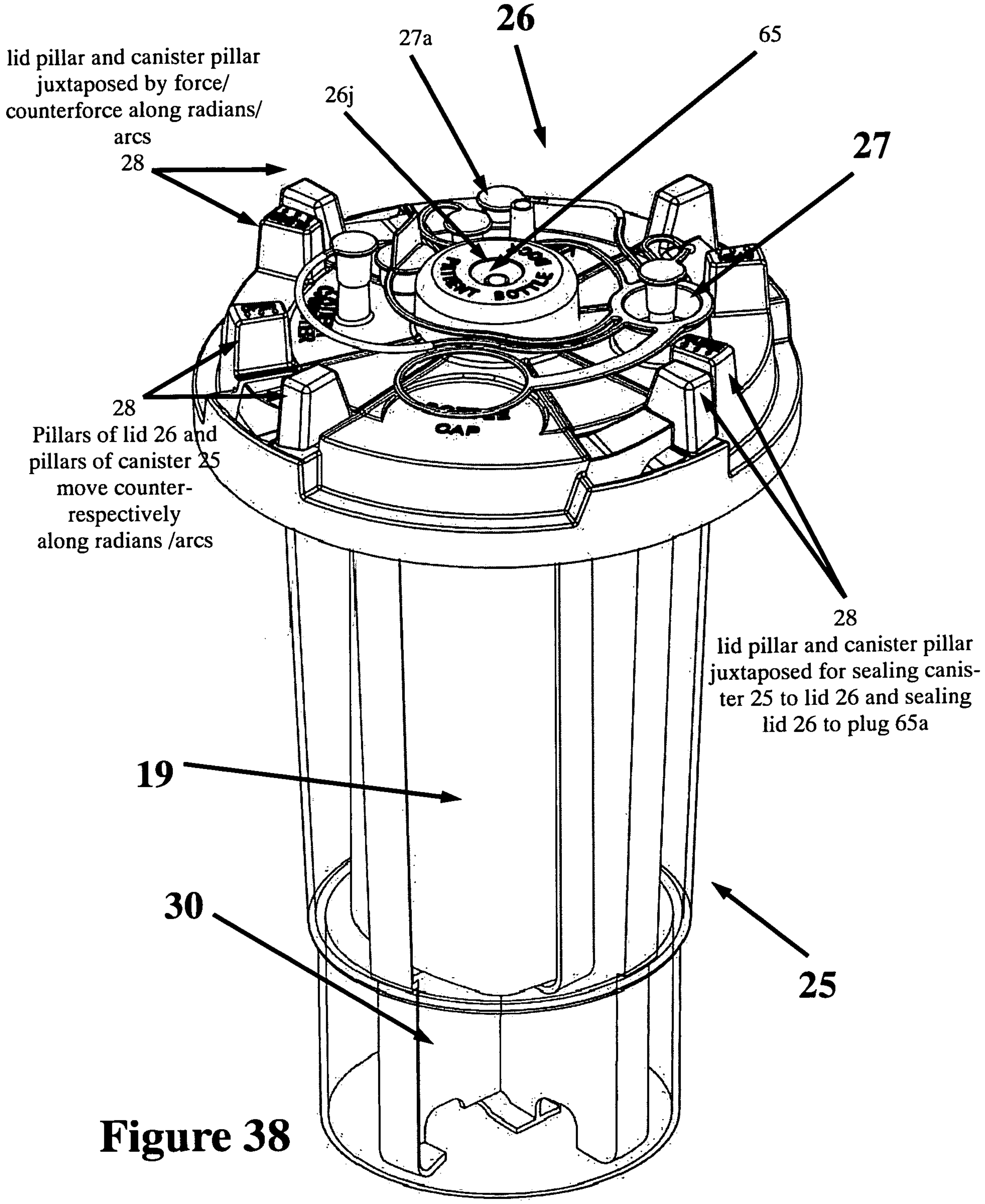

26
27a
65
lid pillar and canister pillar juxtaposed by force/ counterforce along radians/ arcs
28
26j
27
28
Pillars of lid 26 and pillars of canister 25 move counter-respectively along radians /arcs
28
lid pillar and canister pillar juxtaposed for sealing canister 25 to lid 26 and sealing lid 26 to plug 65a
19
30
25

Figure 38

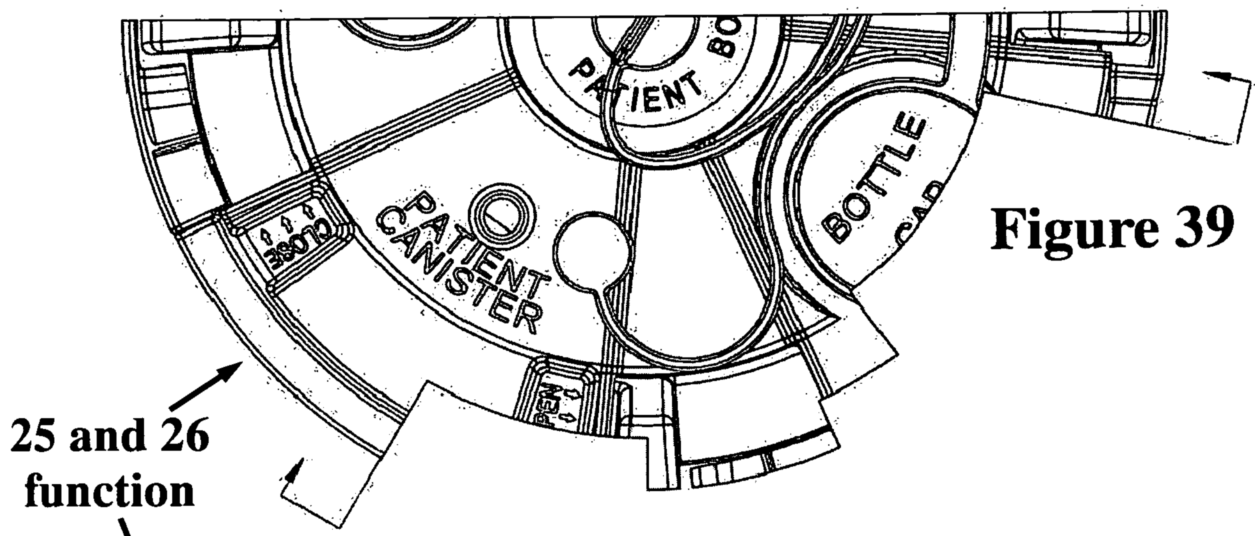


Figure 39

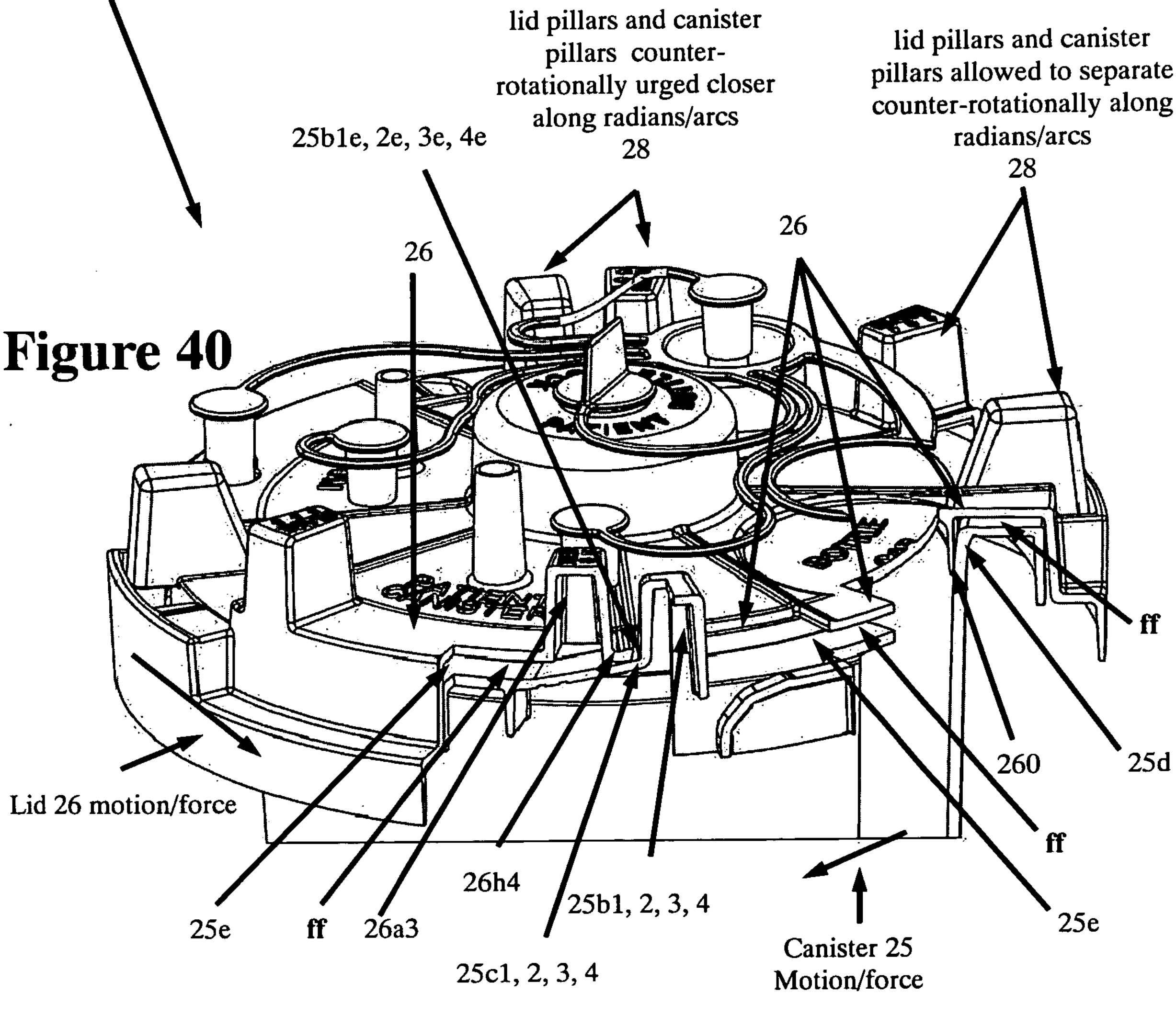


Figure 40

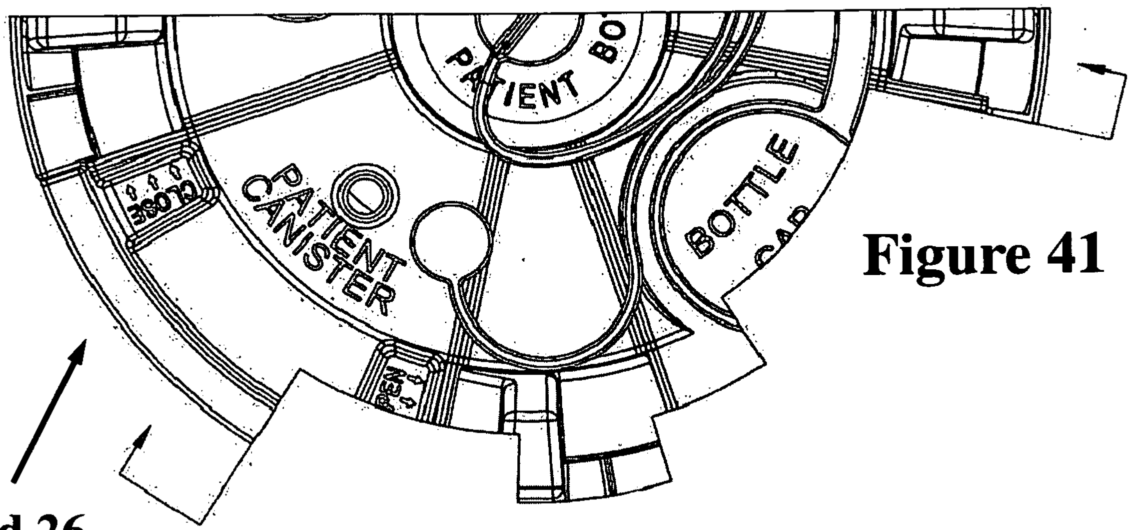


Figure 41

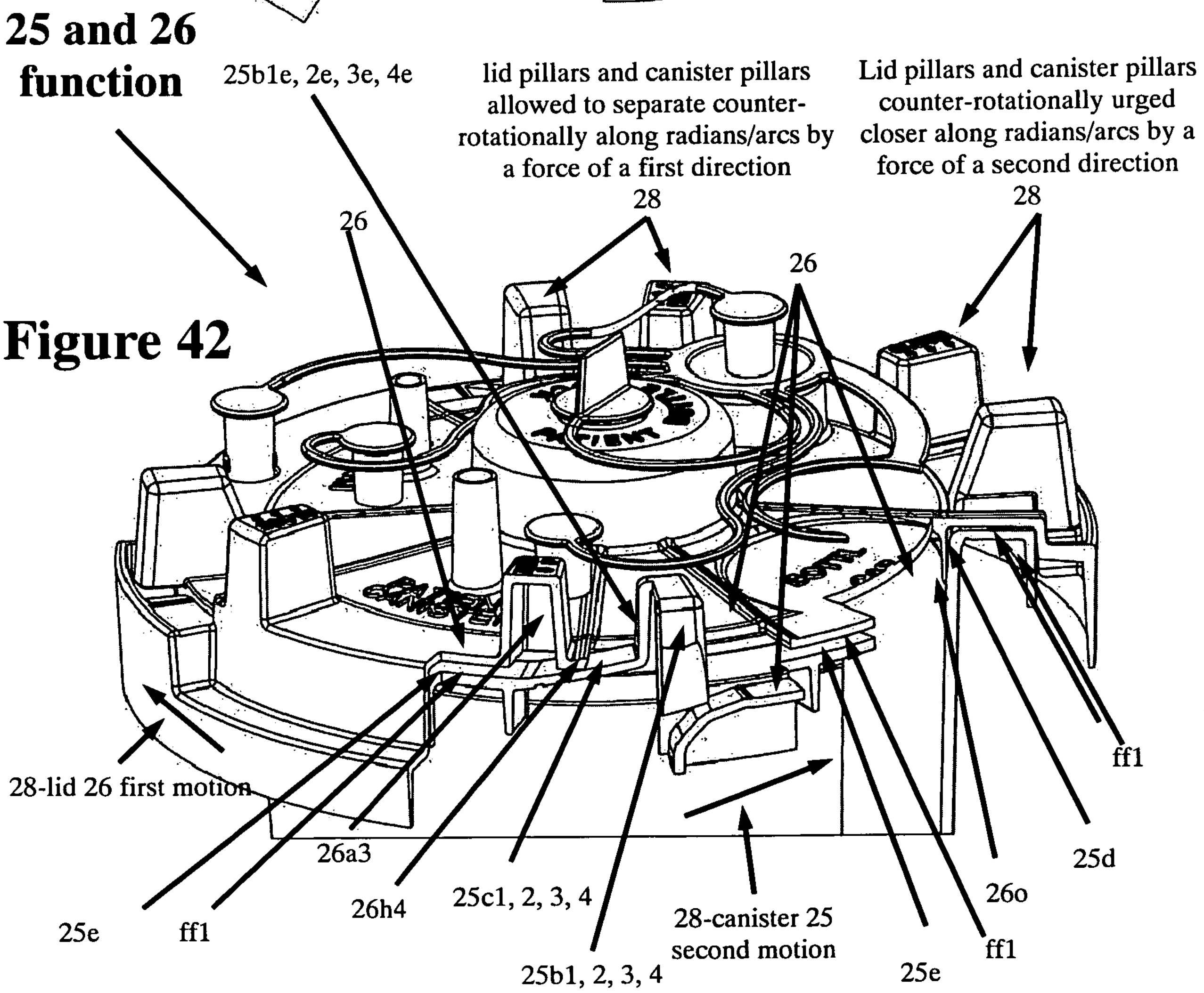


Figure 42

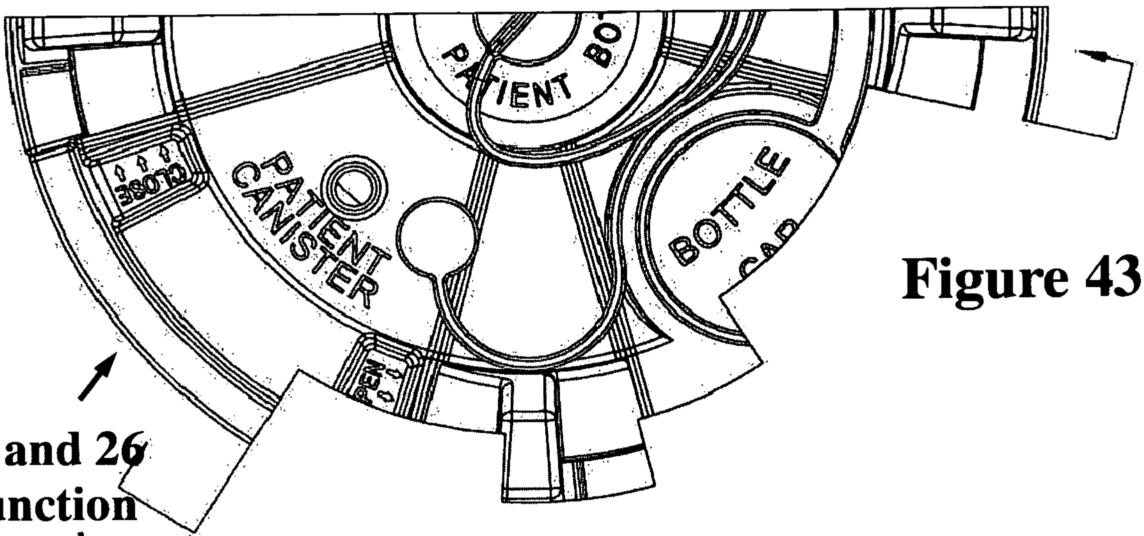


Figure 43

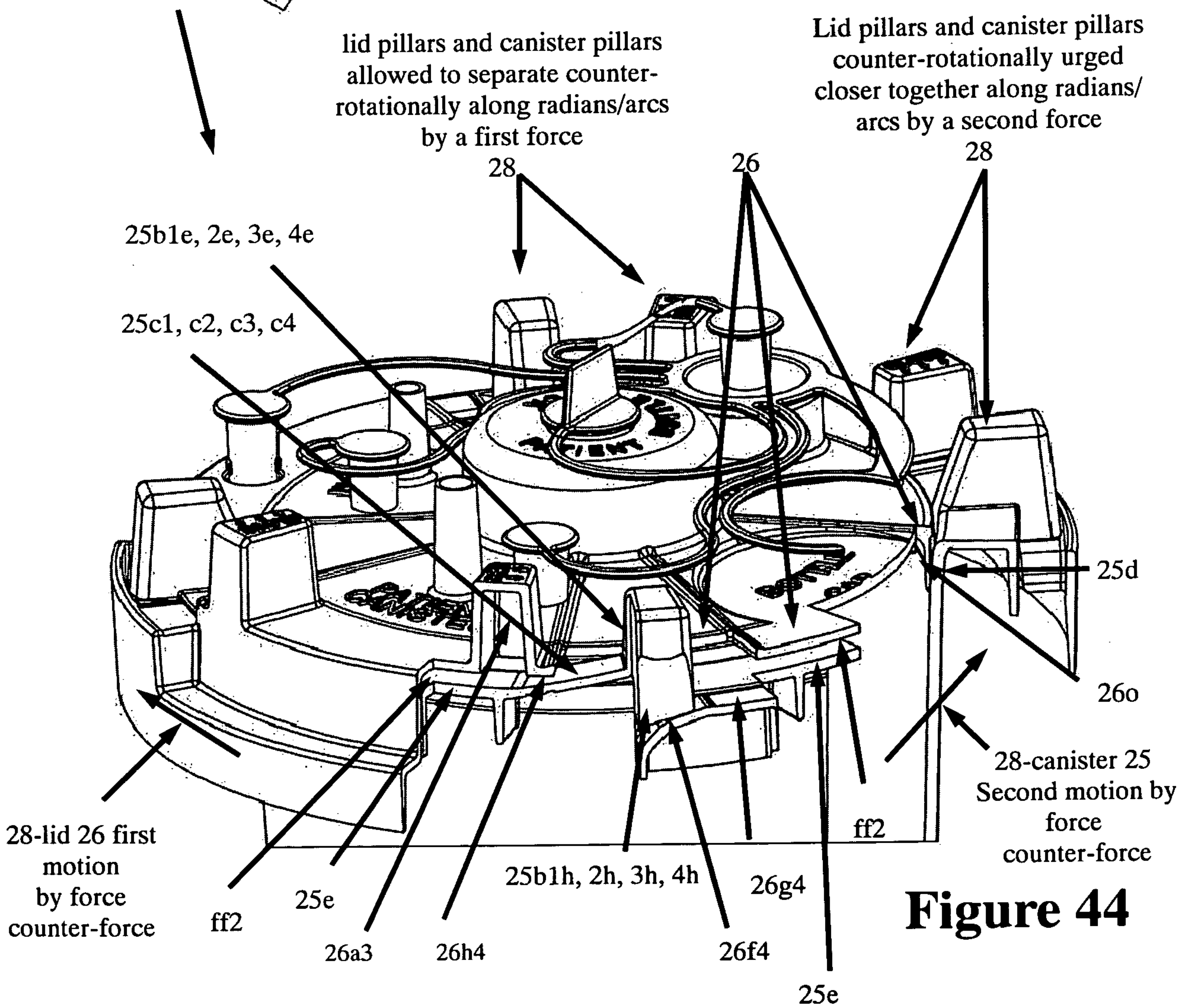


Figure 44

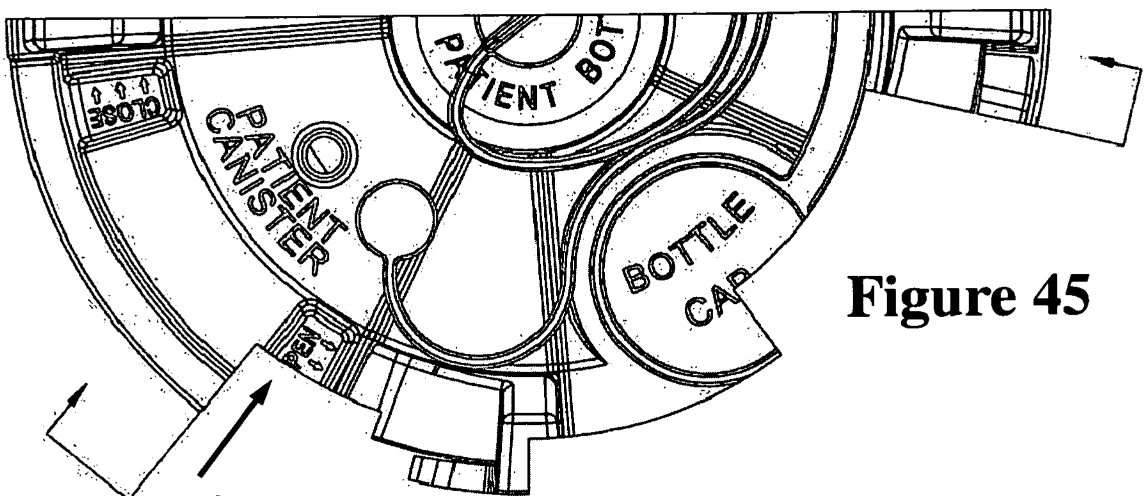


Figure 45

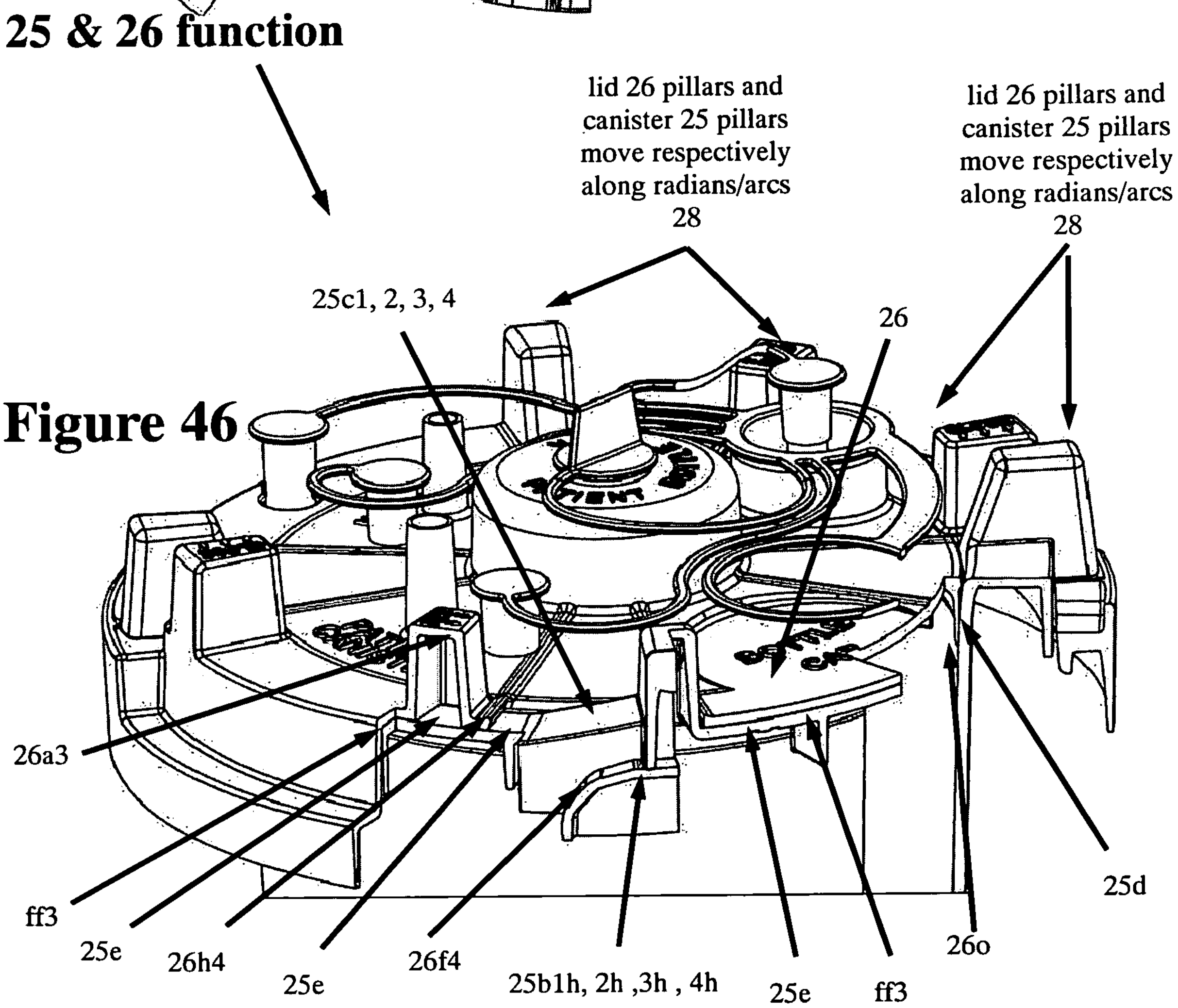


Figure 46

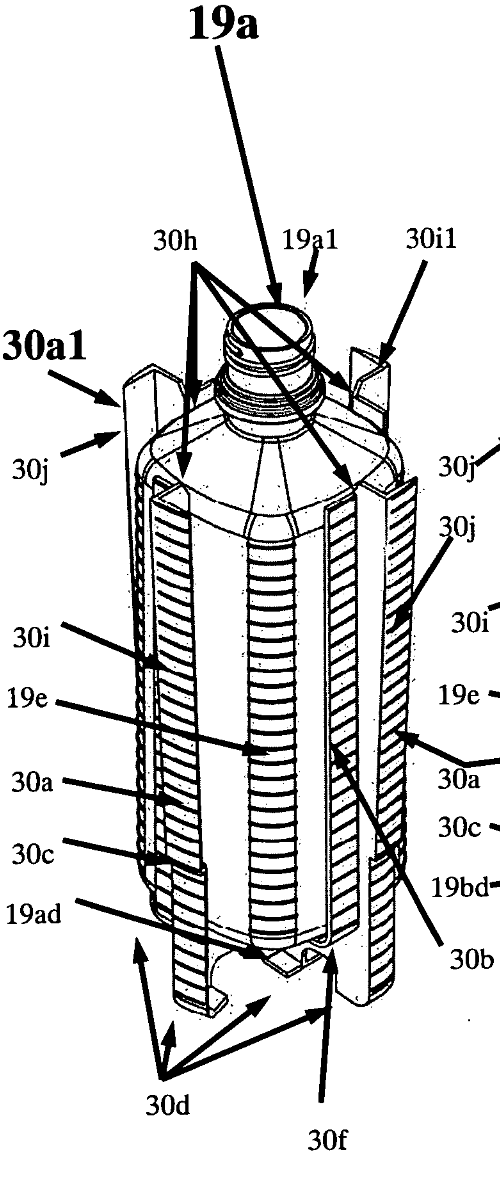


Figure 47

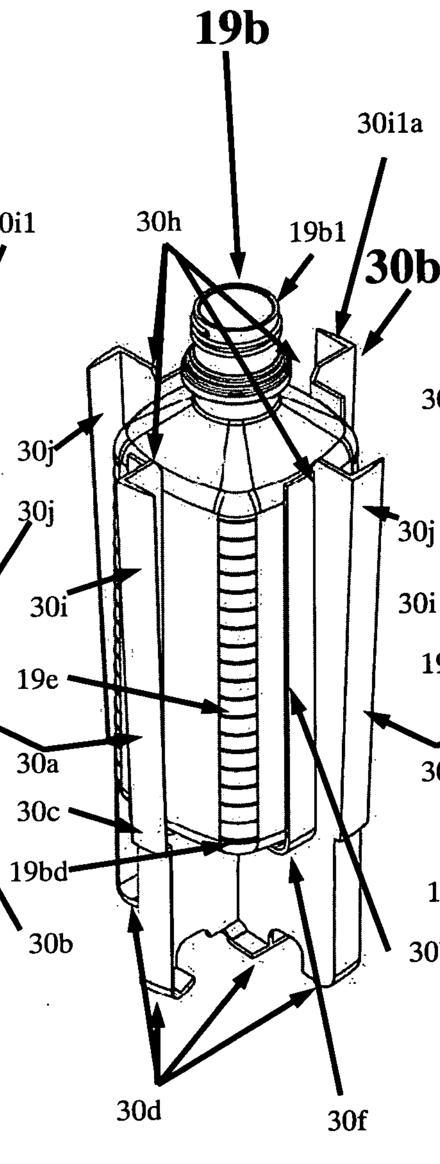


Figure 48

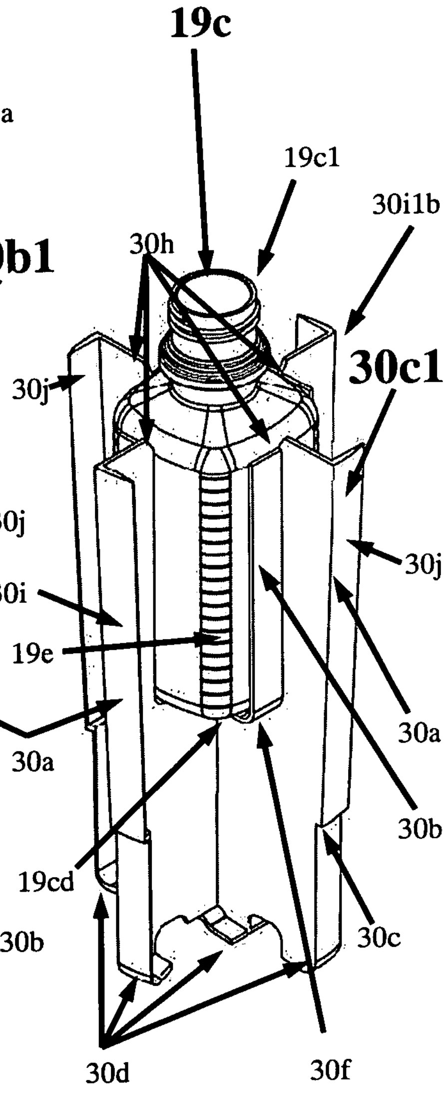


Figure 49

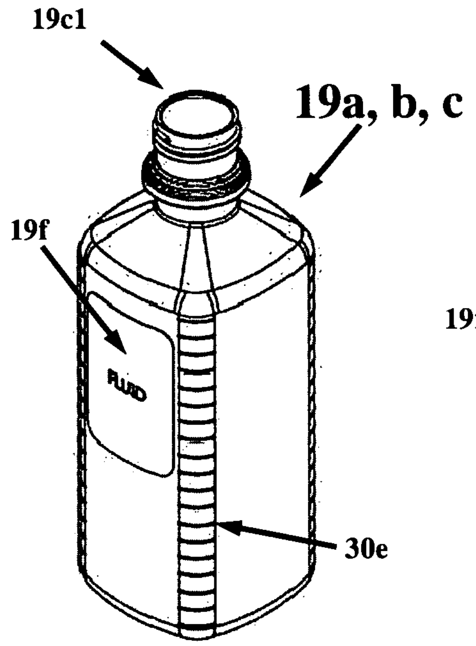


Figure 50

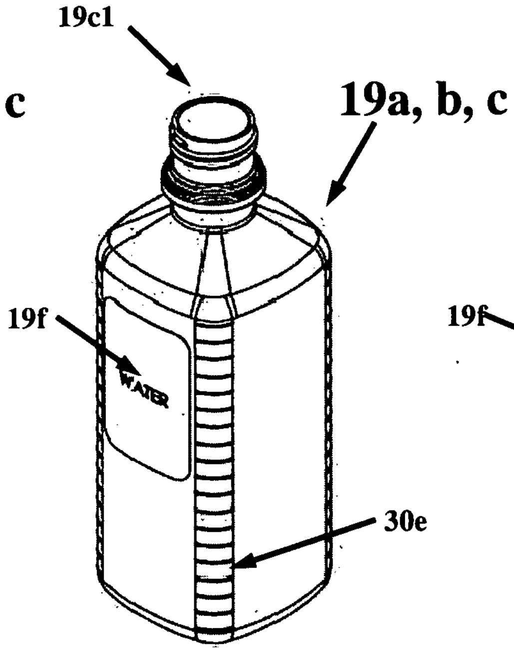


Figure 51

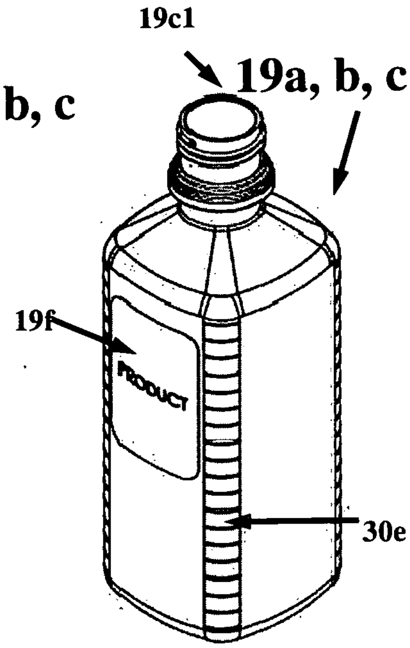


Figure 52

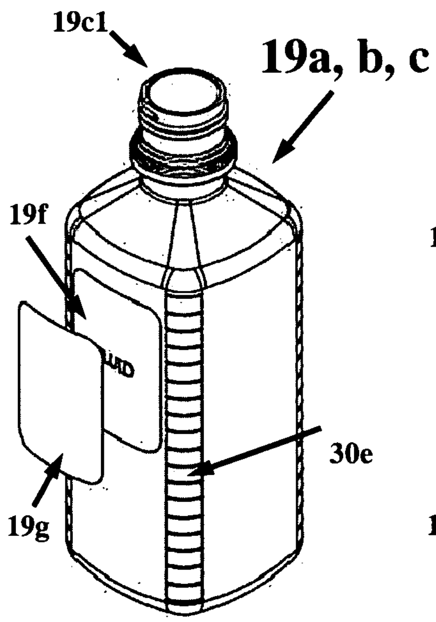


Figure 53

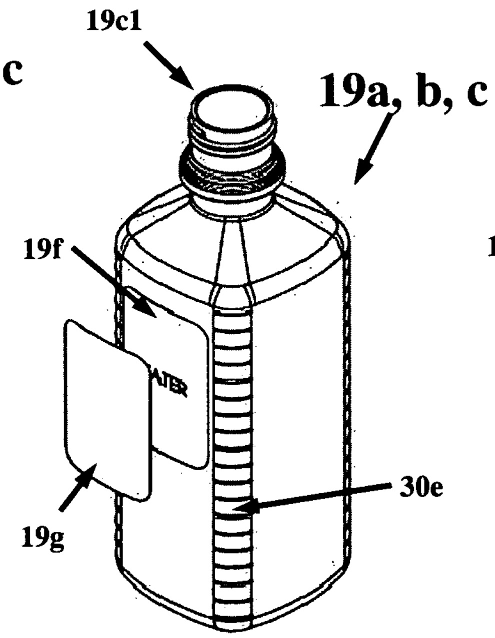


Figure 54

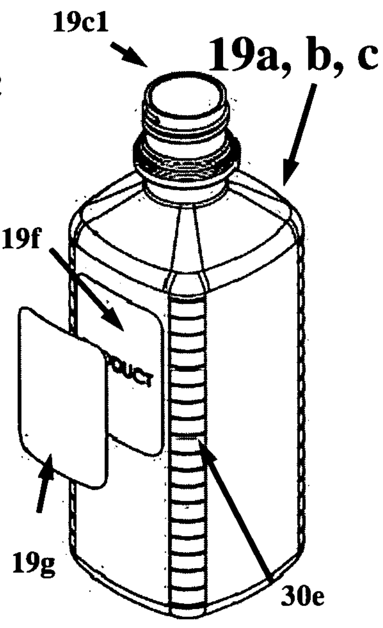


Figure 55

Figure 56

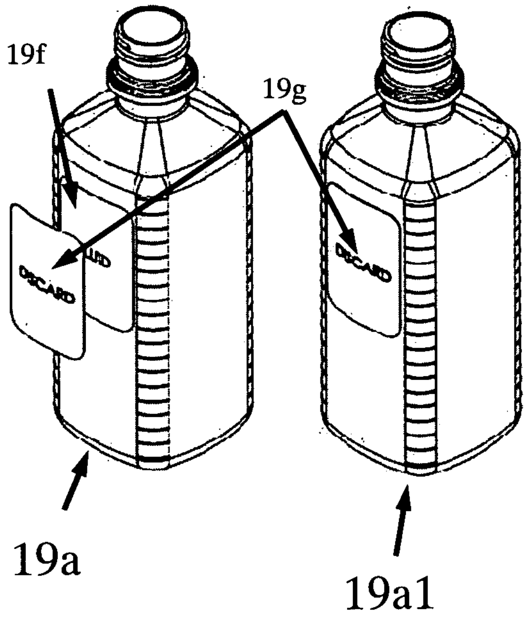


Figure 57

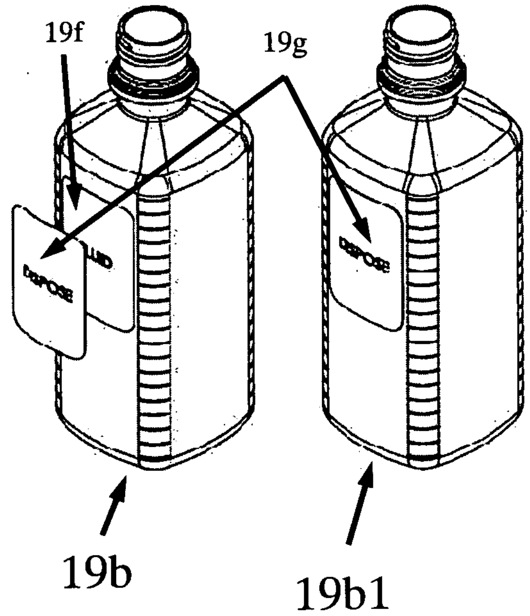


Figure 58

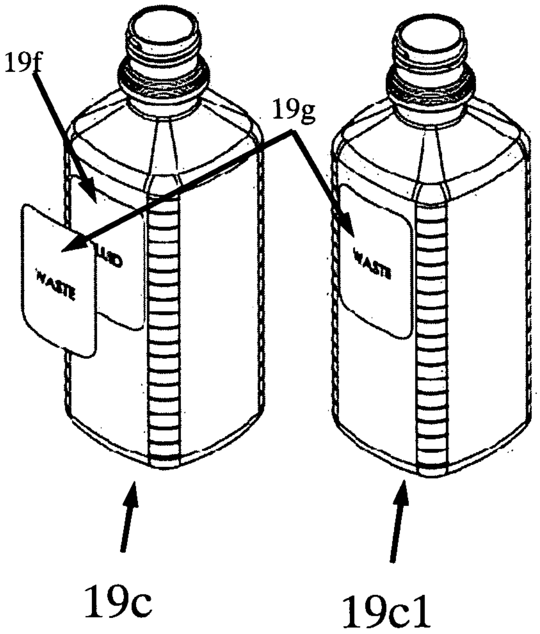
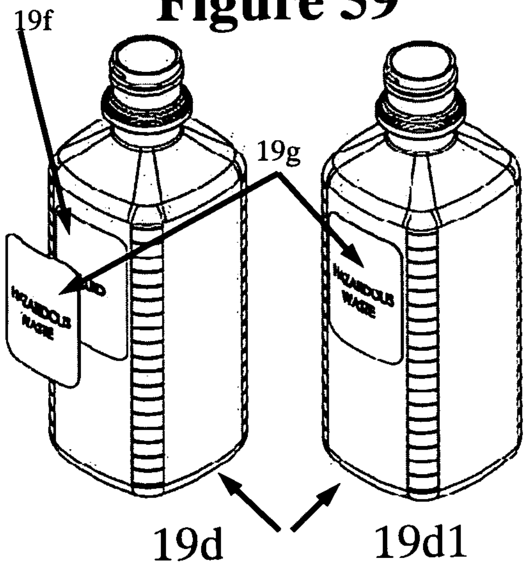


Figure 59



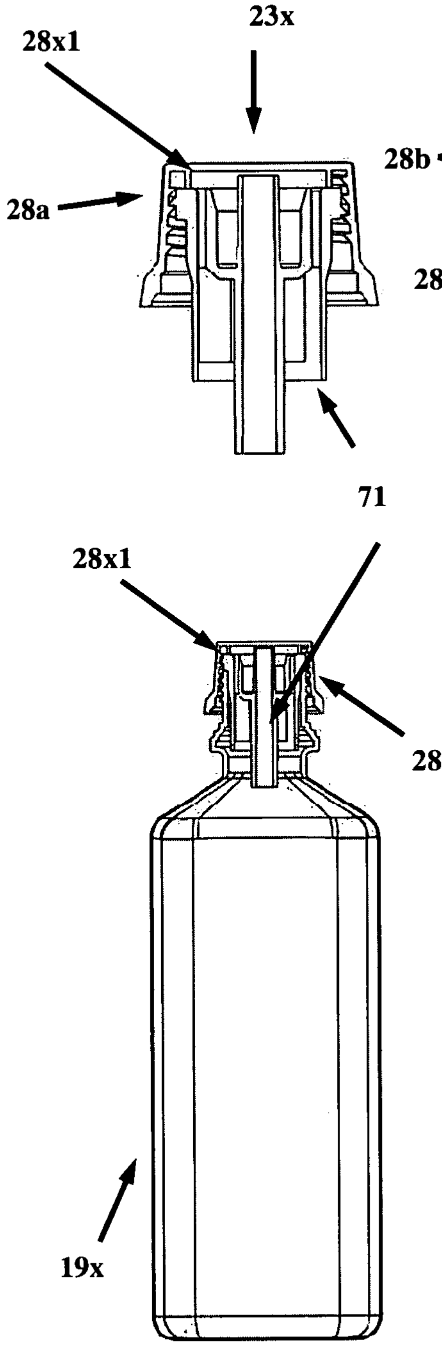


Figure 60

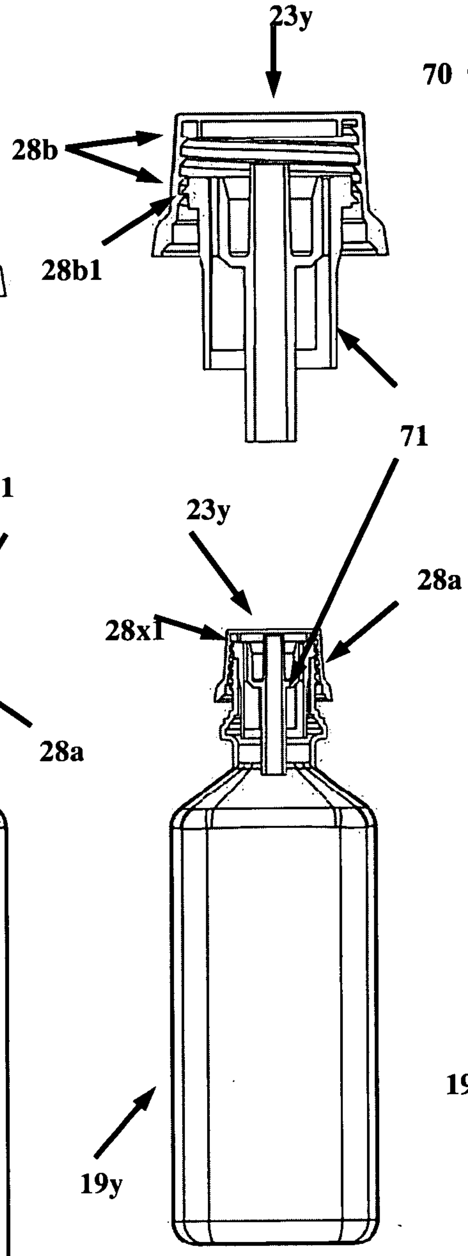


Figure 61

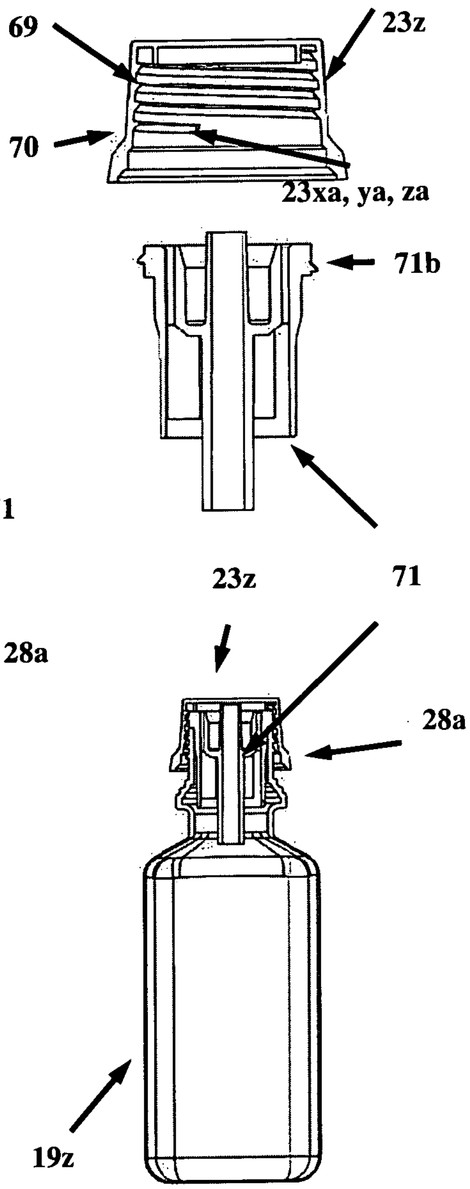


Figure 62

Figure 63

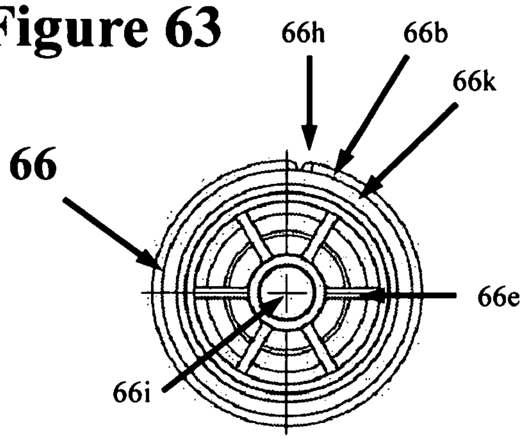
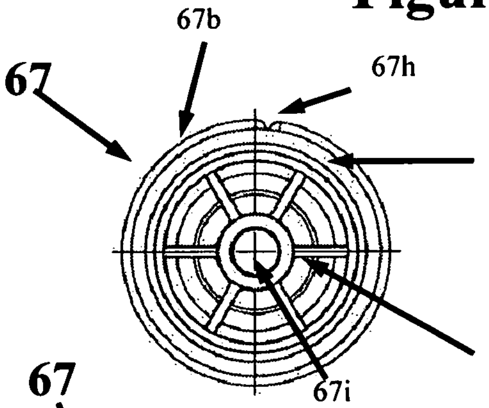


Figure 64



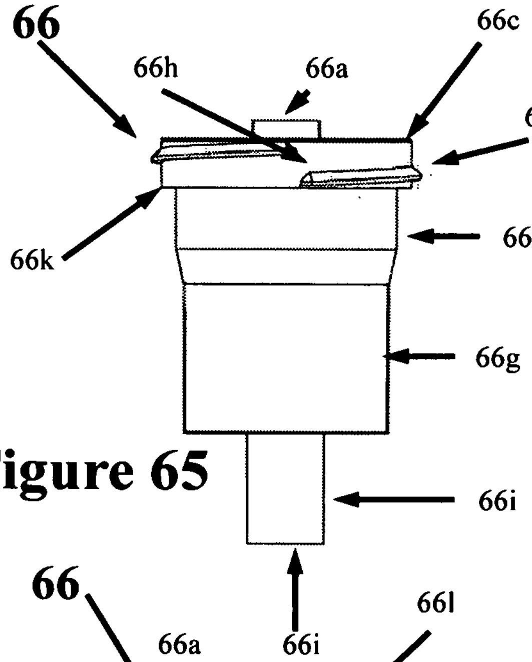


Figure 65

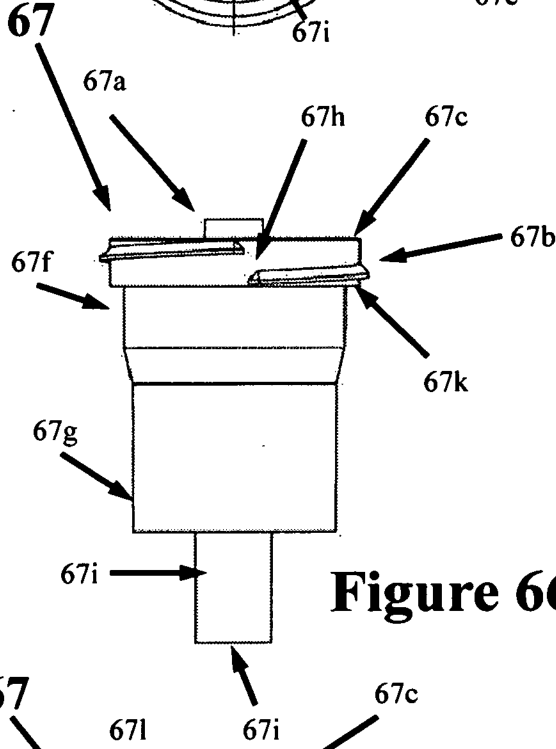


Figure 66

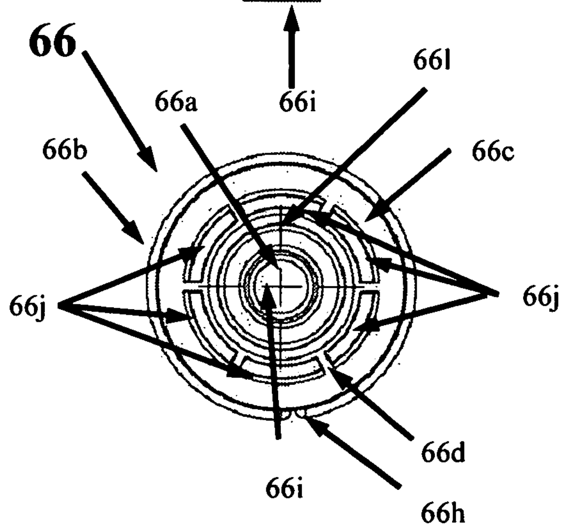


Figure 67

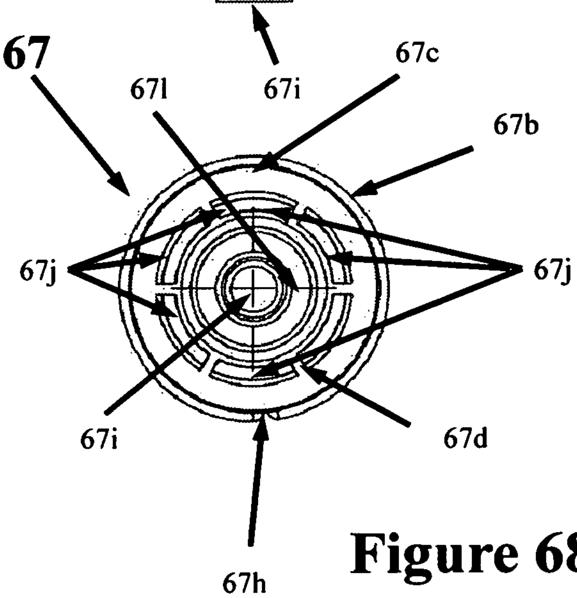


Figure 68

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 11/00755

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B65B 1/04 (2011.01)
USPC - 141/9
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC:141/9

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC:141/100; 141/114; 604/416; 705/300; 700/213 (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Electronic Database Searched: PubWEST (PGPB, USPT, EPAB, JPAB), Google Scholar
Search Terms Used: egress, discharge, eject, remove, extricate, exit, emit, expel, eliminate, squirt, cast, out force, put, push, extract, displace, material, liquid, slurry, waste, trash garbage, semiliquid, cement, manure, fluid, substance,water, container, box, can

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2004/0149348 A1 (Wertenberger) 05 August 2004 (05.08.2004), see entire document para [0010]-[0012], [0029]-[0033], [0041]-[0045], [0055]-[0057], Fig. 1-2	1-4, 6-8, 11, 14-17,19-21, 24, 27-30, 32-34, 37 -------- 5, 9-10, 12-13, 18, 22-23, 25-26, 31, 35-36, 38-39
Y	US 2009/0057347 A1 (Leys et al.) 05 March 2009 (05.03.2009), see entire document para [0103]-[0104], [0128]-[0130], [0146]-[0149], Fig. 2A-2B, 7, 13-15, 28, 35	5, 9-10, 12-13, 18, 22-23, 25-26, 31, 35-36, 38-39
A	US 2010/0096040 A1 (Litto) 22 April 2010 (22.04.2010), see entire document	1-39
A	US 2009/0272460 A1 (Combrink) 05 November 2009 (05.11.2009), see entire document	1-39
A	US 2009/0261128 A1 (Williams et al.) 22 October 2009 (22.10.2009), see entire document	1-39
A	US 2006/0259195 A1 (Eliuk et al.) 16 November 2006 (16.11.2006), see entire document	1-39

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
28 June 2011 (28.06.2011)	08 JUL 2011

Name and mailing address of the ISA/US	Authorized officer:
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774