

(19) **DANMARK**

(10) **DK/EP 2536643 T3**



(12)

Oversættelse af europæisk patentskrift

Patent- og
Varemærkestyrelsen

-
- (51) Int.Cl.: **B 65 D 77/06 (2006.01)** **B 67 D 3/04 (2006.01)**
- (45) Oversættelsen bekendtgjort den: **2019-02-11**
- (80) Dato for Den Europæiske Patentmyndigheds bekendtgørelse om meddelelse af patentet: **2018-10-31**
- (86) Europæisk ansøgning nr.: **11744978.5**
- (86) Europæisk indleveringsdag: **2011-02-18**
- (87) Den europæiske ansøgnings publiceringsdag: **2012-12-26**
- (86) International ansøgning nr.: **SE2011050181**
- (87) Internationalt publikationsnr.: **WO2011102798**
- (30) Prioritet: **2010-02-19 SE 1000167**
- (84) Designerede stater: **AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**
- (73) Patenthaver: **Merner, Oscar, Lilla Skuggans väg 65, 115 42 Stockholm, Sverige**
Seidlitz, Henrik, Valhallavägen 172, 115 27 Stockholm, Sverige
- (72) Opfinder: **Merner, Oscar, Lilla Skuggans väg 65, 115 42 Stockholm, Sverige**
Seidlitz, Henrik, Valhallavägen 172, 115 27 Stockholm, Sverige
- (74) Fuldmægtig i Danmark: **Plougmann Vingtoft A/S, Strandvejen 70, 2900 Hellerup, Danmark**
- (54) Benævnelse: **INDPAKNING TIL FLYDENDE PRODUKTER**
- (56) Fremdragne publikationer:
EP-A1- 0 350 243
EP-A1- 0 365 940
EP-A1- 1 842 791
WO-A1-80/02546
WO-A1-81/00608
DE-A1-102004 040 928
DE-B1- 1 120 355
FR-A2- 2 494 228
GB-A- 1 016 017
GB-A- 2 152 019
JP-A- 6 092 353
US-A- 3 363 807
US-A- 4 355 737
US-A- 4 475 670

DESCRIPTION

Technical field

[0001] The present invention relates to a package for liquid products. In particular, the present invention relates to such a package having an air-tight bag.

Background

[0002] Packages for liquid products comprising an air-tight bag are well known. Such packages have been used for fruit juices since the fifties and for wine since the end of the sixties when the first so-called "box wine" also called "bag-in-box wine" was launched. Once a wine bottle has been opened, the content is exposed to air and the content starts to oxidize, as is well-known, rendering the wine being unpleasant to drink in a few days. "Bag-in-box" is a cardboard box having an air-tight bag provided with a tap mounted therein, which sinks in when the wine (or any other drink) is discharged when the tap is opened. In this way, the air is prevented from reaching the wine, and at the same time a user can easily tap the amount desired, for instance a glass of wine.

[0003] At the same time, as an ever increasing amount of the wine of the world was bottled in bag-in-box, an ever increasing amount of liquid products was bottled in the air-tight bags. Groceries such as ketchup, sauces, syrups, juices and oils, and milk have since long ago been delivered in such packages. The last years, the market for medical products in bag-in-box has grown, much due to the ability of the technique to secure 100 percent sterility. Food to restaurants is often delivered in bag-in-box of the same reason.

[0004] Bag-in-box packages are described in several documents such as for instance EP-A1-0350243 and EP-A1-1842791.

[0005] A disadvantage with prior art bag-in-box packages is that it is often difficult for a user to pull out the tap of the package. Normally, a number of measures and hand grips are required before the tap is in operating position. This problem also exists for other types of similar packages.

Description of the invention

[0006] The invention relates to a package according to appended claim 1.

[0007] According to an aspect of the present invention, this is provided by a package containing a bag provided with an outlet part having a tap that can be pulled out in a single

hand grip.

[0008] An object of the present invention according to a first aspect is to improve opening of the package for persons that can have difficulties with that; the package is typically more ergonomic. In a simple hand grip, the outlet part provided with the tap can be pulled out. The outlet part provided with a tap according to the present invention, different to what is known in for instance EP-A1-03 50243 and EP-A1-1842791, is located inside the package before the opening and use. This provides that the tap also can be kept clean and helps during transportation because it cannot be damaged or worn against other packages. The taps of known packages are exposed to an outer side, both during transportation and

A package according to the preamble of claim 1 is known from GB 1016017 A.

[0009] According to an embodiment of the present invention, there is provided a package for liquid products. The package contains an air-tight bag adapted to contain and discharge a liquid product. The bag further contains an outlet part provided with a tap, when opened, arranged to discharge the liquid product. The outlet part is arranged to the bag and in the package such that the entire outlet part or part thereof during operation can be pulled out, or screwed out of the package in a side thereof by means of a user providing a single hand grip to pull out, screw out or turn out the outlet part or part thereof of the side of the package to a stop position. Surrounding the outlet part, there is provided a guide part, arranged surrounding the outlet part and at an end thereof being attached to the bag and at another end thereof being attached to the side of the package.

[0010] In some embodiments the outlet part is arranged to be telescopic, or turned at a part of the wall of the package.

[0011] According to an embodiment of the present invention, the outlet part comprises an inner tube being arranged to be turned inside an outer tube by means of threads. Alternatively, the inner tube is arranged to slide inside the outer tube in guides.

[0012] Alternatively, the outlet part comprises a tube of bilge type.

[0013] According to an embodiment of the present invention, the bag is integrated with the package and the outlet part is arranged to seal the package and during use thereof arranged to be screwed a distance such as half a turn to expose an opening from which the liquid product can be discharged.

Drawing figures

[0014] All the figures show packages not according to the present invention.

FIG. 1A and B show a package for liquid products having an outlet part with threads, wherein the outlet part is surrounded by a funnel shaped part;

FIG. 2A and B show a package for liquid products having a telescopic outlet part provided with guides, wherein the outlet part is surrounded by a funnel-shaped part;

FIG. 3A and B show a package for liquid products provided with an outlet part comprising a telescopic tube, wherein the outlet part is surrounded by a funnel-shaped part;

FIG. 4A and B show a package for liquid products provided with an outlet part comprising an outlet tube, wherein the outlet part is surrounded by a funnel-shaped part; and

FIG. 5A-B show a package for liquid products provided with an outlet part, wherein outlet tap part is surrounded by a hatch-shaped part.

Description of embodiments according to the present invention

[0015] Now is referred to FIG. 1A showing a package for liquid products not according to the present invention.

[0016] FIG. 1A and B show a package 10 for liquid products. The package is particularly suitable for vines, but it can also be used for all kinds of liquid products such as ketchup, sauce, syrup, juice and cooking oil, as well as different kinds of medical products. The package 10 comprises a cardboard box 11, which contains a bag 12 being air-tight adapted to contain and discharge a liquid product (not shown). The bag 12 furthermore comprises an outlet part 16, which comprises an inner tube 16a, which is rotatable mounted inside an external tube 16b with threads 16c, typically coarse threads (only shown schematically). The outlet part 16 is arranged to during opening of a tap 17 (only shown schematically) arranged therein discharge the liquid product. In FIG. 1a, the tap 17 is shown as normally arranged in the package 10 before use, i. e. it is turned upwards in the drawing. The arrow P is intended to show how a user (not shown) by tearing away part of the wall or in some other way opening the package 10 exposes the outlet part 16 such that it can be turned or screwed out. The outlet part 16 is arranged to the bag 12 and in the package 10 such that the outlet part 16 or part thereof during use can be screwed out of the container of a side thereof by means of a user turning, typically screwing the outlet part 16 out or even more typically only part thereof, such as for instance 4 cm, out of the side of the package 10 to a stop point. Typically, the outlet part is screwed half a turn. Suitably, this is achieved by means of part of the side of the package being torn loose such the outlet part 16 is exposed and then screwed out. This is shown in FIG. 1B, showing the outlet part in position screwed out with the tap 17 pointing downwards such that the liquid product can be tapped by flowing down through the outlet orifice of the tap 17 (when a user in a conventional way opens the tap 17). The tap 17 per se and its opening-/closing operation will not be described in more detail since it is well known and does not form part of the invention. The attachment of the outlet part 16 to the bag 12 will not be described in more detail since it is of conventional type. For instance, the bag can be welded to or moulded in one piece with a conventional tap. Surrounding the outlet part 8 (in inner

position) is a guide part; herein a funnel-shaped part 19 provided surrounding the outlet part 16 and also holding it in place when a user screws out the outlet part 16. The funnel-shaped part 19 is at one of its ends 19' attached to the bag and at the other end 19" to the side 18 of the package. The funnel-shaped part 19 can be circular in a cross-section but can also be a polygon provided it is adapted according to the drawing figure and is capable to hold the outlet part in position when a user pulls out or screws out part of the outlet part 16, i. e. such that not the entire outlet part 16 is pulled out but only part thereof. The term "funnel-shaped" is in this context referred to all kinds of tapered sides, i. e. the funnel-shaped part's sides 19 do not have to be straight. In FIG. 1A and B it is evident how a tapered funnel can be embodied. Other types of means holding part of the outlet part 16 are also possible such as shown in FIG. 5.

[0017] According to an embodiment of the present invention, the outlet part 16 can comprise a telescopic outlet part 26 instead of the outlet tube 16a that can be turned having coils, comprising an inner tube 26a being arranged to slide inside an outer tube 26b having control guides (not shown) adapted to the inner tube 26a. FIG. 2A shows the outlet part in non-extended inner position a-a (see arrow P) intended to show the position the outlet part 16 has before the package has been opened by a user. In FIG. 2B there is shown the outlet part 26 in extended outer position (see arrow P) such as it looks like when a user has pulled out the inner tube 26a to its outermost position b-b and the tap 17 is in use position (discharging position). Here the tap is directed downwards. In FIG. 2B, there is shown a telescopic tube 16a having three tubing parts 26a, 26b, and 26c. This is only an example and the number of tubing parts can vary depending on use. For instance, it can be suitable to use two tubing parts 26a and 26b. FIG. 2C and 2D show the telescopic tube 16a with a suitable design.

[0018] In an embodiment, the telescopic tube 26a is arranged to be extendable in guides (not shown). These guides are not shown explicitly in detail since these are well-known per se as regards the function for a person skilled in the art. The telescopic tube 16a can alternatively according to an embodiment, which is not shown, both be screwed and pulled out simultaneously.

[0019] According to a package not covered by the claims, shown in FIG. 3A and B, the outlet part 16 comprises a telescopic tubing comprising more than one tube, in this particular embodiment three, 36a, 36b and 36c, which are arranged concentrically into each other and where the two smaller tubes 36a and 36b can be slid inside a larger tube 36c. The tap 17 is of another package, not covered by the claims, (conventional screw tap) than the one in FIG. 2A and B. The function in general corresponds to the package shown and described in relation to FIG. 2A and B. Note that the funnel-shaped part 19 of this package has straight sides. In other packages the sides can have other shapes.

[0020] According another package not covered by the present invention, the outlet part 16 can comprise a bilge shaped tube 46. In FIG. 3A, the outlet part is in inner position and intends to illustrate the position the outlet part 46 has before the package has been opened by a user.

[0021] The outlet part 16 and the tap 17 can be made of suitable material, but normally they are made of polymer material such as plastics.

[0022] The design with a tight, soft plastic bag inside a stiff cardboard box a so-called "bag-in-box" is not unique for the invention but the design of the tap having the guiding part 19. Bag-in-box vines normally come with a tap providing it easy to tap vine in glasses, because of that the invention is particularly suitable for, but not limited to such use. The package aids transportation because it weights less, does not crack and is easier to stack, since it is block-shaped. Often, there is also a handle. Since the package easier can be re-sealed and does not let any oxygen in, the durability can often be longer compared to a conventional opened bottle of vine.

[0023] FIG. 5A-B show a package not according to the present invention, wherein the guide part is not attached to the bag.

[0024] The package according to the present invention has a guiding part 19 embodied as a hatch. The guiding part 19 is embodied as a swing hatch 19b within a frame part 19c. When a user opens the package 10 and pulls the outlet part 16 being attached into the swing hatch 19b, the hatch 19b swings towards the plane of the frame part and is exposed outside the side 18 to a user.

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- [EP0350243A1](#) [0004] [0008]
- [EP1842791A1](#) [0004] [0008]
- [GB1016017A](#) [0008]

Patentkrav

1. Indpakning (10) til flydende produkter, hvilken indpakning (10) omfatter en
5 boks (11) og en lufttæt pose (12), hvilken boks (11) indeholder den lufttætte
pose (12) indrettet til at indeholde og udtømme et flydende produkt, hvor
indpakningen endvidere omfatter en udløbsdel (16)) indrettet til når åbning af en
hane (17) deri at udtømme det flydende produkt (14), idet udløbsdelen (16) er
indrettet til posen (12) og i boksen (11) således at hele udløbsdelen (16) eller del
10 deraf under anvendelse kan trækkes ud på en side deraf (18) af en bruger ved at
trække udløbsdelen (16) ud af siden på boksen (11) i et enkelt ryk til en
stopposition, hvor der til omslutning af udløbsdelen (16) er indrettet en føredel
(19), **kendetegnet ved, at** en ende (19') af føredelen (19) er forbundet med
posen (12), hvor føredelen (19) er tilvejebragt som en svingluge (19b) i en
15 rammedel (19c), og hvor når en bruger åbner indpakningen 10 og trækker i
udløbsdelen 16 som er forbundet med svinglugen 19b, svinger lugen 19b mod en
flade af rammedelen og bliver synlig uden for siden 18 for en bruger.

2. Indpakning (10) til flydende produkter ifølge krav 1, hvor udløbsdelen (16) er
20 tilvejebragt til at kunne forlænges eller drejes.

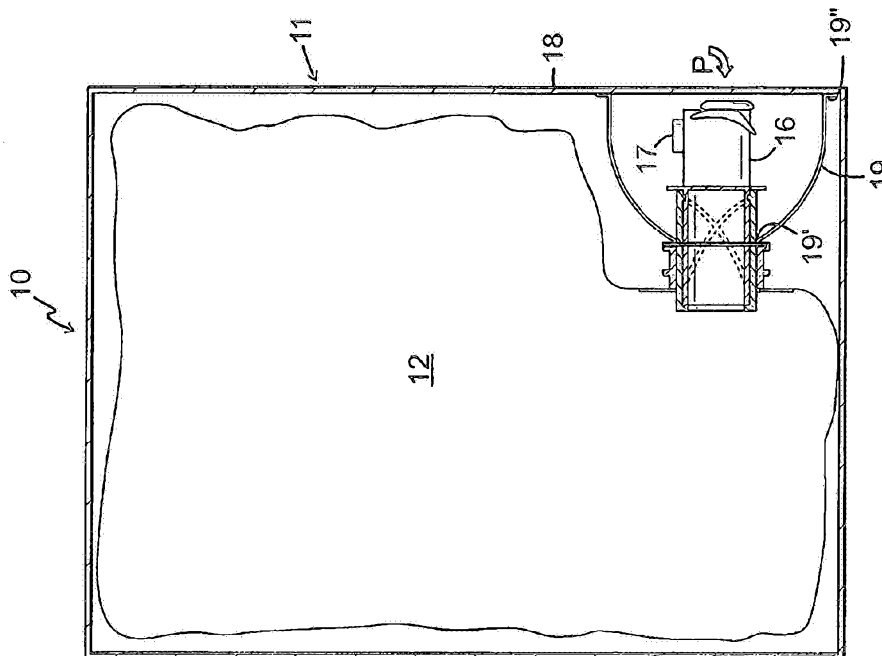
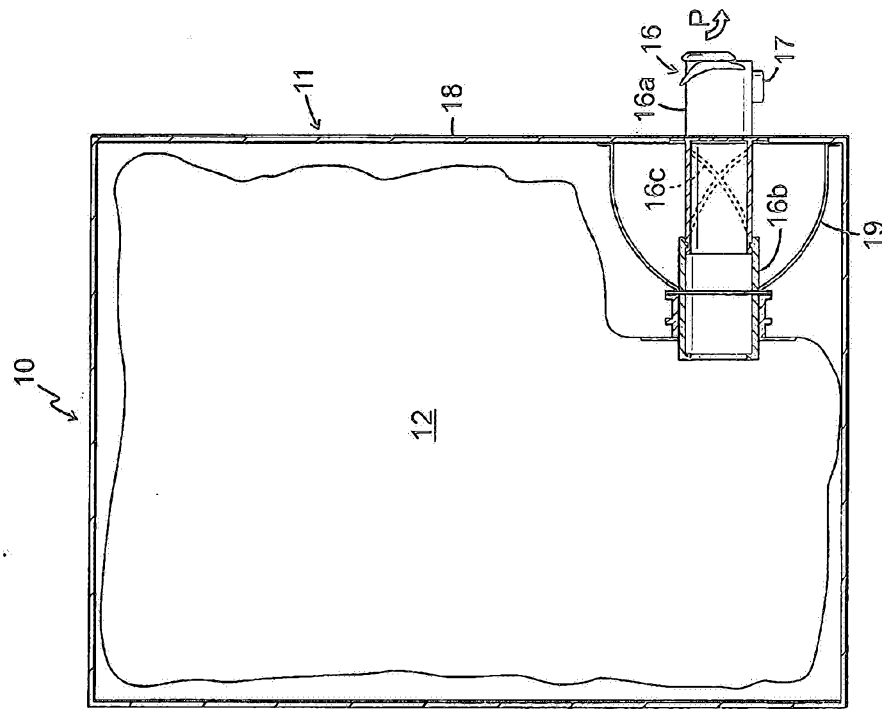
3. Indpakning (10) til flydende produkter ifølge krav 2, hvor udløbsdelen (16)
omfatter et indvendigt rør (16a) indrettet i et udvendigt rør der kan drejes ved
hjælp af gevind.

25

4. Indpakning (10) til flydende produkter ifølge krav 3, hvor udløbsdelen (16)
omfatter et indvendigt rør (26a) der er indrettet til at kunne glide ind i et
udvendigt rør (26b) ved hjælp af styreskiner.

30 **5.** Indpakning (10) til flydende produkter ifølge et hvilket som helst af kravene 1-
3, hvor udløbsdelen (16) omfatter et bælgformet rør (46).

DRAWINGS



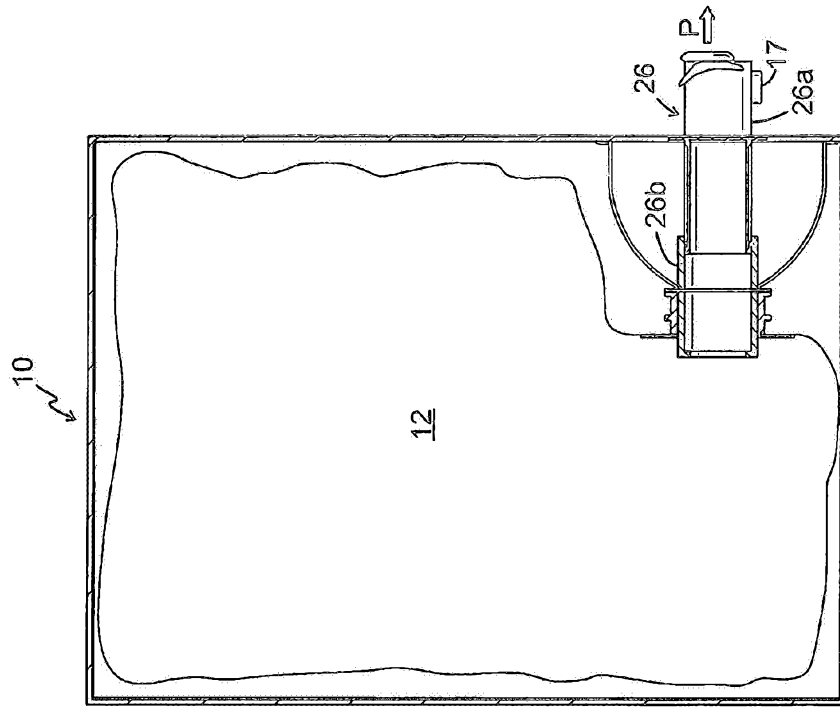


FIG. 2B

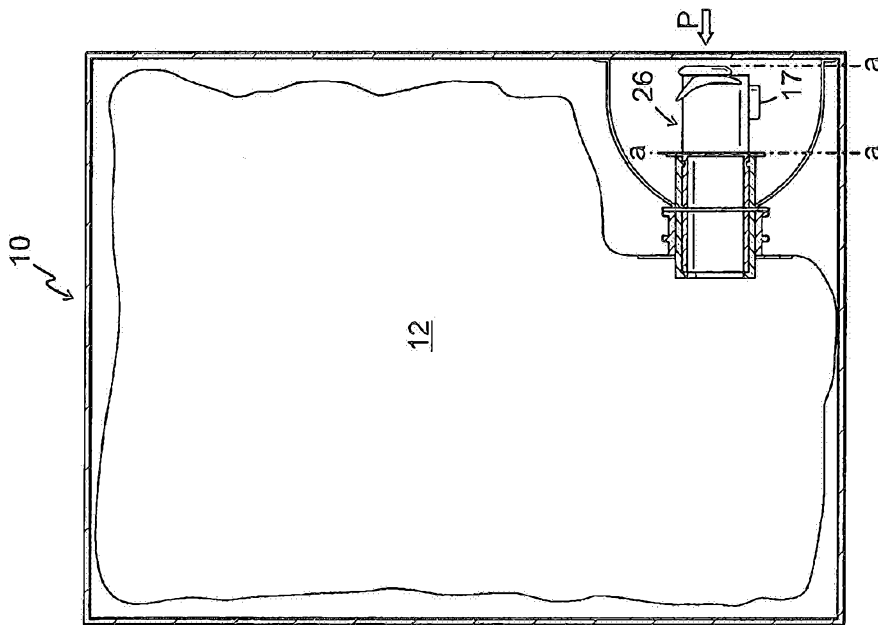


FIG. 2A

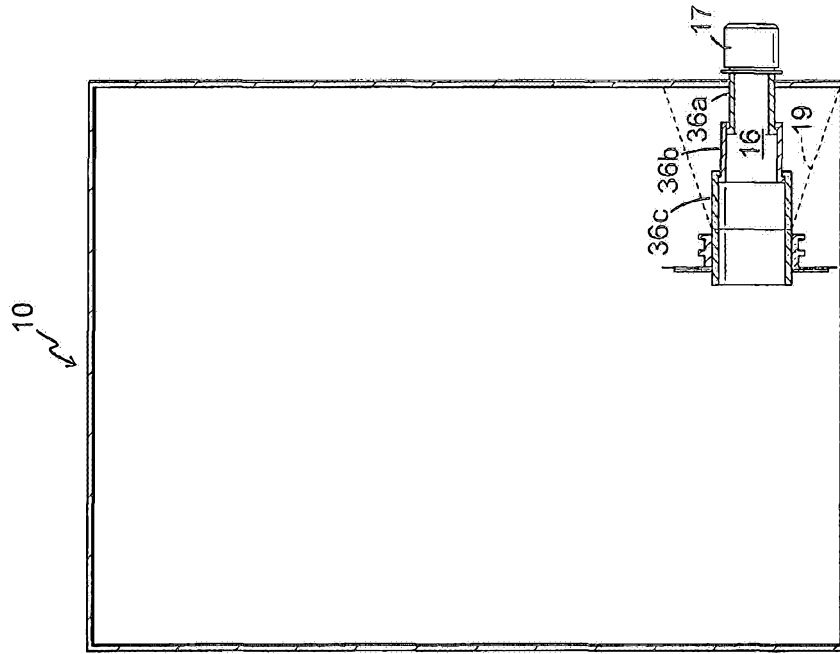


FIG. 3A

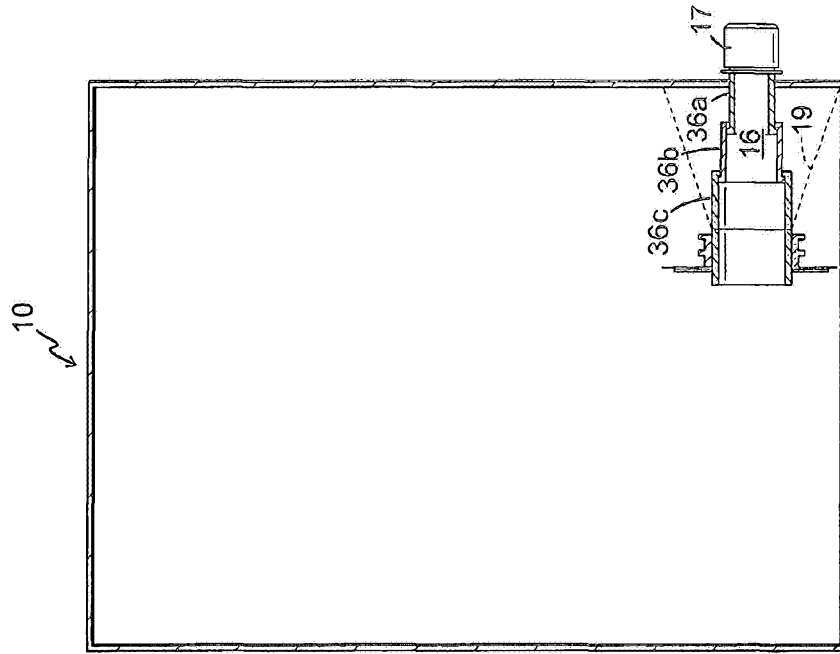


FIG. 3B

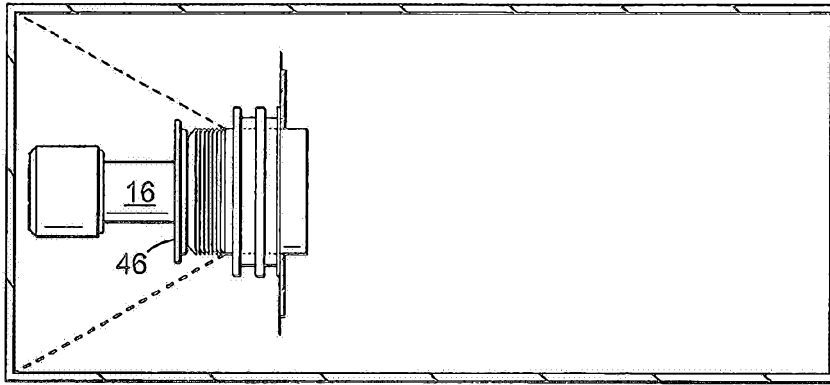


FIG. 4A

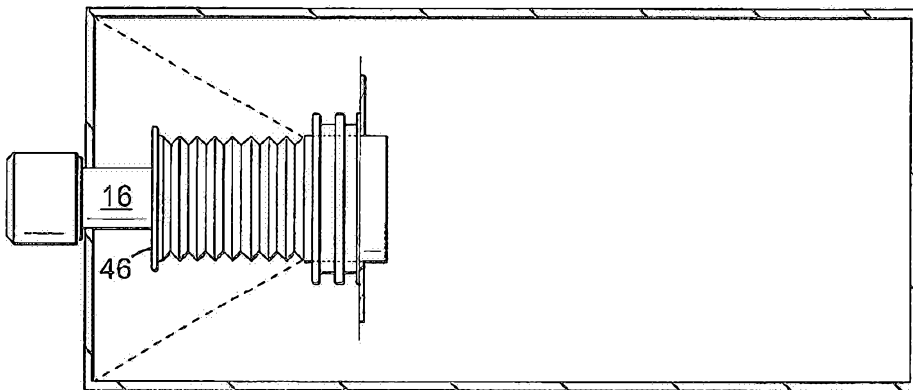


FIG. 4B

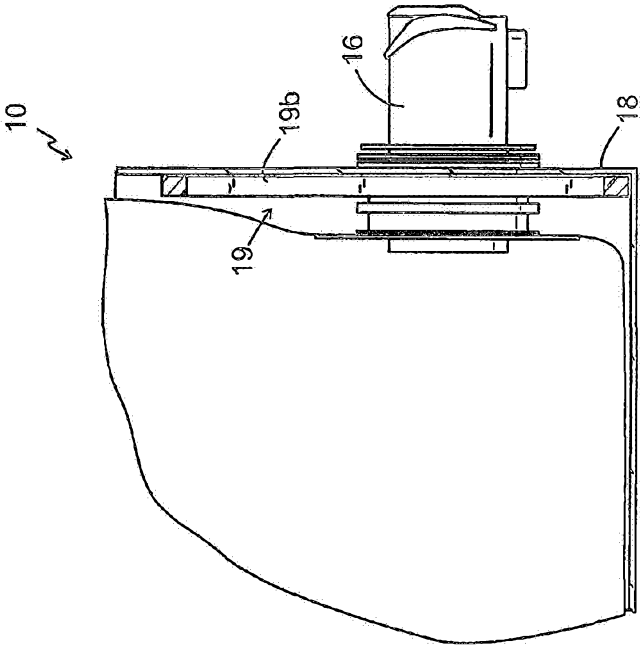


FIG. 5B

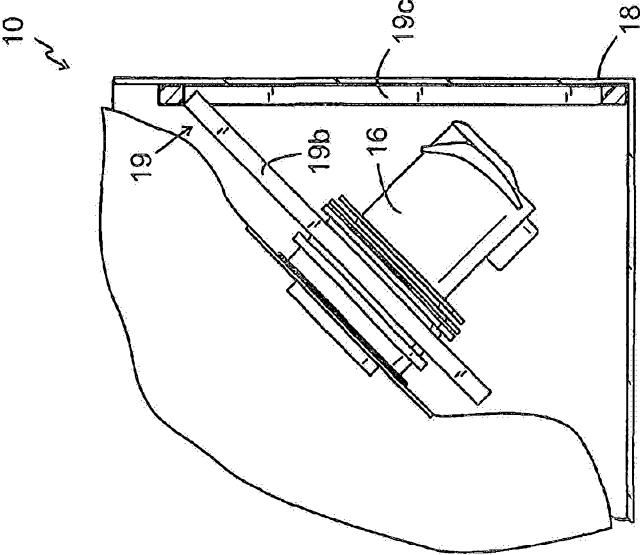


FIG. 5A

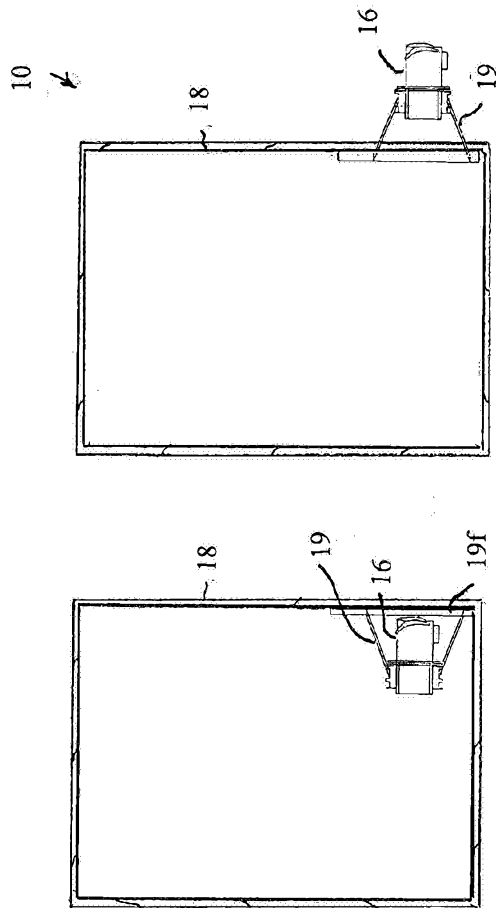


FIG. 6A

FIG. 6B