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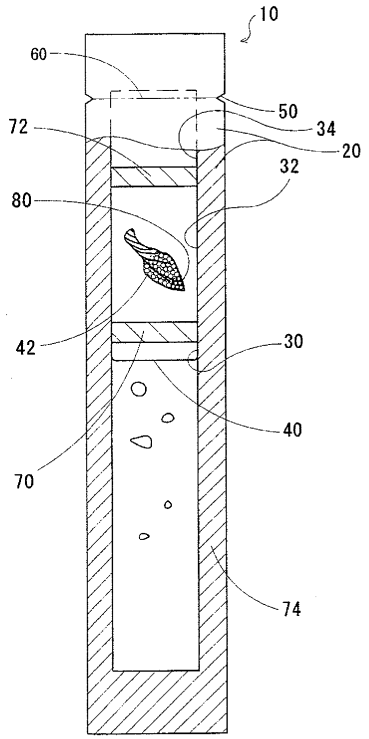
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(54) MEDICINAL COMPOSITION CONTAINER

(57) It is possible to easily swallow a pharmaceutical composition and to suppress the scattering thereof inside the mouth; furthermore, the pharmaceutical composition can be filled in easily. The pharmaceutical composition container 10 is equipped with a plurality of spaces 30 and 32. The portions 70 and 72 between two adjoining spaces are sealed. The portions 70 and 72 between two adjoining spaces open when force is applied from the outside of the pharmaceutical composition container 10. A swallowing-aid substance 40 is stored in the swallowing-aid substance storage chamber 30. An encapsulating item 42 is stored in the encapsulating-item storage chamber 32. The encapsulating item 42 contains the pharmaceutical composition 80. The sheet 20 is provided with a predetermined aperture part 60. The predetermined aperture part 60 is a portion where an aperture is to be formed. The aperture interconnects the outside of the pharmaceutical composition container 10 with the spaces 30 and 32.

Fig. 1



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Description

Technical Field

[0001] This invention relates to a pharmaceutical composition container; more specifically, to a pharmaceutical composition container so configured as to allow the reduction of the residual quantity of the pharmaceutical composition.

Background Art

[0002] In general, when ingesting a pharmaceutical composition like a powdered or granular preparation, the pharmaceutical composition is swallowed using water. However, since this pharmaceutical composition is swallowed by drinking water after having the pharmaceutical composition received on the tongue, there are problems such as that a part of the pharmaceutical composition stays inside the mouth for a long time, that there is irritation from the pharmaceutical ingredients, or that it is not possible to ingest the pharmaceutical composition while lying down, since the pharmaceutical composition is ingested with water, which is highly fluid.

[0003] Patent document 1 discloses a multi-chamber container. This multi-chamber container is so partitioned into a plurality of spaces as to enable the spaces to be interconnected with each other. The spaces are sealed in such a state that they can be interconnected with each other by means of force applied from the outside. A granular agent is stored in a tightly sealed state in any of the spaces. A thick fluid substance is stored in a tightly sealed state in one or more other spaces. After interconnecting the spaces with each other and gathering and mixing the granular agent with the thick fluid substance, it is possible to take out the mixture from a take-out port provided on any of the spaces.

[0004] According to the container disclosed in patent document 1, it is possible to ingest a granular agent by means of an extremely simple operation. Moreover, according to the multi-chamber container disclosed in patent document 1, it is possible to significantly reduce the resistance of the patient towards taking the medication.

Prior art documents

Patent documents

[0005]

Patent document 1: Japanese Patent Laid-Open No. 10-234820

Brief Summary of the Invention

Problem to Be Solved By the Invention

[0006] However, with the invention disclosed in patent document 1, there is the problem that, when the pharmaceutical composition is a powder, a powdered preparation or a granular preparation, it is highly probable that there are residues in the multi-chamber container.

[0007] The technical issue addressed by this invention was drafted to solve the abovementioned problem, and the purpose of the invention is to provide a pharmaceutical composition container that allows the reduction of the residual quantity of the pharmaceutical composition.

Means for Solving the Problem

[0008] The pharmaceutical composition container of this invention is explained in reference to the drawings. Note that the use of the reference numerals of the drawings in this column is intended to facilitate the understanding of the content of the invention and is not intended to limit the content to the scope indicated.

[0009] According to the aspects of this invention in order to achieve the abovementioned purpose, the pharmaceutical composition containers (10, 11, 12, 14, 15, 16, 18) are equipped with a plurality of spaces (30, 32, 34, 36, 38, 100, 102, 104, 106, 110, 112, 114, 116, 150). The portions (70, 72, 76) between two adjoining spaces are sealed. The portions (70, 72, 76) between two adjoining spaces open when force is applied from the outside of the pharmaceutical composition containers (10, 11, 12, 14, 15, 16, 18). A swallowing-aid substance (40) is stored in swallowing-aid substance storing chambers (30, 100, 102, 104, 106) which are at least one of the spaces. Encapsulating items (42, 120) are stored in encapsulating-item storing chambers (32, 110, 112, 114) which each are at least one of the spaces. The encapsulating items (42, 120) contain the pharmaceutical composition (80) . At least the surface of the encapsulating items (42, 120) melts in the ingredients of the swallowing-aid substance (40). The pharmaceutical composition containers (10, 11, 12, 14, 15, 16, 18) are provided with a predetermined aperture part (60) . The predetermined aperture part (60) is a portion where an aperture is to be formed. The aperture interconnects the outside of the pharmaceutical composition containers (10, 11, 12, 14, 15, 16, 18) with the spaces (30, 32, 34, 36, 38, 100, 102, 104, 106, 110, 112, 114, 116, 150).

[0010] The portions (70, 71, 72, 76) between two adjoining spaces are sealed. The portions (70, 71, 72, 76) between two adjoining spaces open when force is applied from the outside of the pharmaceutical composition containers (10, 11, 12, 14, 15, 16, 18) . By the opening of the portions (70, 71, 72, 76) between two adjoining spaces, it is possible to guide the swallowing-aid substance (40) from the swallowing-aid substance storage chambers (30, 100, 102, 104, 106) to the encapsulating-item storage chambers (32, 110, 112, 114) . Thereby, when holding, after the aperture is formed on the predetermined aperture part (60), that aperture against the mouth of a person with swallowing difficulties and pushing out the swallowing-aid substance (40) and the encapsulating

items (42, 120) from that aperture, the encapsulating items (42, 120) will enter the mouth of the person with swallowing difficulties while being enclosed in swallowing-aid substance (40). The encapsulating items (42, 120) are swallowed. Since the pharmaceutical composition (80) is inside the encapsulating items (42, 120), the pharmaceutical composition (80) inside the encapsulating items (42, 120) is pushed out at the same time when the encapsulating items (42, 120) are pushed out. As a result, the residual quantity of the pharmaceutical composition (80) in the encapsulating-item storage chambers (32, 110, 112, 114) is reduced as compared to the case where the pharmaceutical composition is not inside the encapsulating items (42, 120) . When at least the surface of the encapsulating items (42, 120) melts in the ingredients of the swallowing-aid substance (40), the surface of the encapsulating items (42, 120) will melt after the swallowing-aid substance (40) is guided into the encapsulating-item storage chambers (32, 110, 112, 114). The encapsulating items (42, 120) can easily be swallowed even by a person with swallowing difficulties because the encapsulating items (42, 120) are enclosed in the swallowing-aid substance (40) and the surface of encapsulating items (42, 120) has melted. That being the case, the pharmaceutical composition (80) is also swallowed with the swallowing of the encapsulating items (42, 120).

[0011] Further, it is preferable that the abovementioned swallowing-aid substance (40) contain water. In this case, the material of the encapsulating items (42, 120) is a water-soluble substance. This reduces the probability that swallowing becomes difficult because the surfaces of the encapsulating items (42, 120) have not sufficiently melted.

[0012] Or, it is preferable that the abovementioned swallowing-aid substance (40) be a water-containing jelly. In this case, it is preferable that the water-soluble substance be starch.

[0013] Moreover, it is preferable that a chamber (116), which is at least one of the abovementioned spaces, is disposed between the swallowing-aid substance storage chamber (102) and the encapsulating-item storage chamber (114). This is because the provision of a chamber (116) reduces the probability that the swallowing-aid substance (40) comes into contact with the encapsulating item (42) when the two adjoining spaces (102, 114) are interconnected against the will of the user or handler of the pharmaceutical composition container (15). Reducing that probability also lowers the probability that the encapsulating item (42) melts before the ingestion of the pharmaceutical composition (80). As a result, the pharmaceutical composition container (15) will be easy to preserve and easy to handle.

[0014] Further, it is preferable that the abovementioned encapsulating item (42) be tightly sealed. Note that "tightly sealed" in this description means being sealed in such a manner that no gaps exist.

[0015] According to the aspects of this invention, the pharmaceutical composition containers (210, 260, 400, 500) are equipped with at least three spaces (230, 232, 234, 236, 280, 282, 284, 286, 422, 424, 426, 520, 522, 524, 526). The portions (240, 242, 244, 300, 302, 304, 440, 442, 444, 540, 542, 544) between two adjoining spaces are sealed. The portions (240, 242, 244, 300, 302, 304, 440, 442, 444, 540, 542, 544) between two adjoining spaces open when force is applied from the outside of the pharmaceutical composition containers (210, 260, 400, 500). A swallowing-aid substance (40) is stored in swallowing-aid substance storage chambers (230, 280, 520) which each are at least one of the spaces. An encapsulating item (212) is stored in encapsulating-item storage chambers (232, 234, 282, 284, 422, 424, 522, 524) which each are at least one of the spaces. The encapsulating item (212) contains the pharmaceutical composition (80). At least the surface of the encapsulating item (212) melts in the ingredients of the swallowing-aid substance (40). The aperture chambers (236, 286, 426, 526), which each are at least one of the spaces, are equipped with an aperture. The aperture interconnects the outside of the pharmaceutical composition containers (210, 260, 400, 500) with the spaces (230, 232, 234, 236, 280, 282, 284, 286, 422, 424, 426, 520, 522, 524, 526).

Effect of the Invention

[0016] According to this invention, it is possible to reduce the residual quantity of a pharmaceutical composition.

Brief Description of the Drawings

[0017]

FIG. 1 is a partial cross section of the pharmaceutical composition container of the embodiment 1 of this invention.

FIG. 2 shows how the pharmaceutical composition container of the embodiment 1 of this invention is used.

FIG. 3 is a partial cross section of the pharmaceutical composition container of the alternative embodiment 1 of this invention.

FIG. 4 is a partial cross section of the pharmaceutical composition container of the alternative embodiment 2 of this invention.

FIG. 5 is a partial cross section of the pharmaceutical composition container of the alternative embodiment 3 of this invention.

FIG. 6 is a partial cross section of the pharmaceutical composition container of the alternative embodiment 4 of this invention.

FIG. 7 is a partial cross section of the pharmaceutical composition container of the alternative embodiment 5 of this invention.

FIG. 8 is a partial cross section of the pharmaceutical composition container of the alternative embodiment 6 of this invention.

FIG. 9 is a partial cross section of the pharmaceutical composition container of the embodiment 2 of this invention.

FIG. 10 is an external view of the pharmaceutical composition container of the embodiment 2 of this invention.

FIG. 11 shows a state of the embodiment 2 of this invention wherein the cover insert portion is inserted into the cover and the base is on the outside of the cover.

FIG. 12 is a rear view of the state in the embodiment 2 of this invention wherein the cover insert portion is inserted into the cover.

FIG. 13 is a partial cross section of the pharmaceutical composition container of the embodiment 3 of this invention.

FIG. 14 shows the state of the embodiment 3 of this invention wherein the pharmaceutical composition container is folded.

FIG. 15 shows the state of the embodiment 3 of this invention after one end of the pharmaceutical composition container is inserted into the cover.

FIG. 16 is a partial cross section of the pharmaceutical composition container of the embodiment 4 of this invention.

FIG. 17 is a partial cross section showing one end of the pharmaceutical composition container of the embodiment 4 of this invention during the production thereof.

FIG. 18 is a perspective view showing one end of the pharmaceutical composition container of the embodiment 4 of this invention during the production thereof.

FIG. 19 is a partial cross section of the pharmaceutical composition container of the embodiment 5 of this invention.

FIG. 20 shows the wound state of the pharmaceutical composition container of the embodiment 5 of this invention.

Modes for Carrying Out the Invention

[0018] The following explains the embodiments of this invention on the basis of the drawings. In the following explanations, identical parts are assigned the same reference numeral. The names and functions thereof are also the same. Accordingly, detailed explanations thereof will not be repeated.

<Embodiment 1>

[0019] FIG. 1 is a partial cross section of the pharmaceutical composition container 10 of this embodiment. FIG. 2 shows how the pharmaceutical composition container 10 of this embodiment is used.

[0020] The pharmaceutical composition container 10 of this embodiment is formed by adhering the peripheries of two synthetic-resin (preferably a soft synthetic resin that can be folded, such as low-density polyethylene) sheets 20 and 20 to each other. The pharmaceutical composition 10 has a swallowing-aid substance storage chamber 30, an encapsulating-item storage chamber 32 and an outlet chamber 34 formed therein. The swallowing-aid substance chamber 30, the encapsulating-item storage chamber 32 and the outlet chamber 34 are so formed as to maintain air tightness against the external space. The swallowing-aid substance storage chamber 30, the encapsulating-item storage chamber 32 and the outlet chamber 34 are arranged in one row.

[0021] A swallowing-aid substance 40 is stored inside the swallowing-aid substance storage chamber 30. The swallowing-aid substance 40 in this embodiment is a sterilized jelly containing water. The water content of the jelly in this embodiment is set in such a manner that it is possible to provide at least two minutes of time from when the swallowing-aid substance 40 covers the surface of the encapsulating item 42, which will be explained later, until the encapsulating item 42 has completely melted. The outlet chamber 34 is an empty chamber until the second weak seal portion 72, which will be explained later, is broken.

[0022] An encapsulating item 42 made of a wafer is stored inside the encapsulating-item storage chamber 32. A granular drug or another pharmaceutical composition 80 is stored inside the encapsulating item 42. The encapsulating item 42 of this embodiment is made by placing the pharmaceutical composition 80 into a commercially available wafer and twisting the portion corresponding to the inlet for the pharmaceutical composition 80. Thereby the encapsulating item 42 is tightly sealed. However, in this embodiment, a wafer made of starch and having a thickness of 10 μm is used. This is to provide at least two minutes of time from when the swallowing-aid substance 40 covers the surface of the encapsulating item 42 until the encapsulating item 42 has completely melted. Naturally, the thickness of the wafer should be selected as appropriate depending on the material properties thereof.

[0023] Note that, if necessary, a gas (for example, nitrogen gas) which does not have any effect on the pharmaceutical composition 80 or the swallowing-aid substance 40 is filled into the encapsulating-item storage chamber 32 and the swallowing-aid substance storage chamber 30.

[0024] The portion between the swallowing-aid substance storage chamber 30 and the encapsulating-item storage chamber 32 is partitioned by a first weak seal portion 70. The portion between the encapsulating-item storage chamber 32 and the outlet chamber 34 is partitioned by a second weak seal portion 72. The first weak seal potion 70 and the second weak seal portion 72 are those parts of the portion where the two sheets 20 and 20 are adhered to each other which correspond to the portions between two adj oining spaces. The strength of the first weak seal portion 70 and the second weak seal portion 72 is weaker than the strength of the circumfer-

ential strong seal portion 74 (the portion where the two sheets 20 and 20 are adhered to each other excluding the first weak seal portion 70 and the second weak seal portion 72). This is made possible by using different materials as the adhesive agents to adhere the two sheets 20 and 20 to each other. As a result, the first weak seal portion 70 and the second weak seal portion 72 are easily broken by the force applied by the swallowing-aid substance 40 to the swallowing-aid substance storage chamber 30 or the encapsulating-item storage chamber 32 when the swallowing-aid substance storage chamber 30 or the encapsulating-item storage chamber 32 is pressed from the outside of the pharmaceutical composition container 10. That is to say, the swallowing-aid substance storage chamber 30 and the encapsulating-item storage chamber 32 are sealed in such a state that they can be interconnected with each other by means of force applied from the outside of pharmaceutical composition container 10.

[0025] A pair of cutout portions 50, which each comprise a V-shaped cutout, are formed on the two sides of the outlet chamber 34. The predetermined aperture part 60, which is sandwiched between the cutout portions 50, is the portion where an aperture is to be formed. This aperture interconnects the inside of the outlet chamber 34 with the outside.

[0026] The procedure for taking the pharmaceutical composition 80 out of the pharmaceutical composition container 10 and ingesting the pharmaceutical composition 80 will be explained while referring to FIG. 2.

[0027] First, the caretaker etc. presses the swallowing-aid substance storage chamber 30 from the outside of the pharmaceutical composition container 10 to break the first weak seal portion 70 by means of the pressure from inside the swallowing-aid substance storage chamber 30. When the first weak seal portion 70 is broken, the swallowing-aid substance 40 is pushed out into the encapsulating-item storage chamber 32. The swallowing-aid substance 40 that was pushed out spreads inside of the encapsulating-item storage chamber 32 and fills the surroundings of the encapsulating item 42. From this time, the surface of the encapsulating item 42 starts to melt in the swallowing-aid substance 40.

[0028] After the swallowing-aid substance 40 is pushed out into the encapsulating-item storage chamber 32, the caretaker or patient 90 or the like squeezes the pharmaceutical composition container 10 from the swallowing-aid substance storage chamber 30 towards the encapsulating-item storage chamber 32. Thereby, the second weak seal portion 72 breaks as a result from the pressure applied to the swallowing-aid substance 40. When the second weak seal portion 72 is broken, the swallowing-aid substance 40 and the encapsulating item 42 are pushed out into the outlet chamber 34. When the swallowing-aid substance 40 and the encapsulating item 42 are pushed out into the outlet chamber 34, the caretaker or patient 90 or the like apply a shearing force to the cutouts 50 to form an aperture on the outlet chamber 34. When the aperture is formed, the caretaker or patient 90 or the like hold that aperture against the mouth of the patient and squeeze the pharmaceutical composition container 10 from the swallowing-aid substance storage chamber 30 towards the encapsulating-item storage chamber 32. Thereby the encapsulating item 42, which is covered by the swallowing-aid substance 40, enters the mouth of the patient 90. FIG. 2 shows the state in which the patient 90 squeezes the pharmaceutical composition container 10. At this time, the surface of the encapsulating item 42 has melted in the ingredients of the swallowing-aid substance 40, and therefore the surface of the encapsulating item 42 is slippery. Because the surface of the encapsulating item 42 is slippery, the encapsulating item 42 is swallowed smoothly.

[0029] In this way, the pharmaceutical composition container 10 of this embodiment produces the following effects. The first effect is that it is possible to easily swallow a granular drug or another pharmaceutical composition 80. The second effect is that tastes such as the bitter taste of drugs are suppressed. The third effect is that it is possible to suppress the scattering of the pharmaceutical composition 80 in the mouth. The fourth effect is that concerns regarding the stability of the drug become unnecessary. The fifth effect is that it is possible to let patients with swallowing difficulties ingest solids of various types. The sixth effect is that it is possible to reduce the residual quantity of the pharmaceutical composition 80 inside the pharmaceutical composition container 10 (in this embodiment, it is possible to reduce the residual quantity close to zero).

[0030] The first effect will now be explained in detail. The encapsulating item 42 enters the mouth of the patient 90 while being covered by the swallowing-aid substance 40. At this time, the surface of encapsulating item 42 has melted. The encapsulating item 42 can easily be swallowed even by the patient 90, who has swallowing difficulties, because the encapsulating item 42 is enclosed in the swallowing-aid substance 40 and the surface of the encapsulating item 42 has melted. Since the pharmaceutical composition 80 is inside the encapsulating item 42, the pharmaceutical composition 80 is also swallowed with the swallowing of the encapsulating item 42. Thereby it is possible to easily swallow the pharmaceutical composition 80.

[0031] The second effect will now be explained in detail. As mentioned above, the encapsulating item 42 enters the mouth of the patient 90 while being covered by the swallowing-aid substance 40. Thereby the pharmaceutical composition 80, which is contained in the encapsulating item 42, is doubly enclosed by the swallowing-aid substance 40 and the encapsulating item 42. Even if the pharmaceutical composition 80 is a drug, the probability that the tongue of the patient 90 senses the bitter taste thereof is low because the pharmaceutical composition 80 is doubly enclosed. As a result, the bitter taste or other tastes of the drugs are suppressed.

[0032] The third effect will now be explained in detail.

As mentioned above, the pharmaceutical composition 80 is doubly enclosed by the swallowing-aid substance 40 and the encapsulating item 42. This reduces the probability that the pharmaceutical composition 80 scatters in the mouth of the patient 90. As a result, it is possible to suppress the scattering of the pharmaceutical composition 80 in the mouth.

[0033] The fourth effect will now be explained in detail. Drugs are chemical substances. When chemical substances come into contact with each other, chemical reactions occur in many cases. Due to the occurrence of chemical reactions, the pharmacological effect of the drug is lost. For this reason, it is not possible to preserve a plurality of drugs in a mixed state in many cases. If the pharmaceutical compositions are to be preserved in a mixed state, it is necessary to research in advance whether the chemical substances lose their pharmacological effect. The pharmaceutical composition container 10 of this embodiment is equipped with a plurality of spaces. Storing one type of drug each in those spaces is substantially identical with separately preserving a plurality of drugs. This is the reason why concerns regarding the stability of the drug are unnecessary when the pharmaceutical composition container 10 of this embodiment is used. Since concerns regarding the stability of the drug are unnecessary, the advance research on whether the pharmacological effects of the plurality of drugs are lost also becomes unnecessary.

[0034] The fifth effect will now be explained in detail. As the swallowing-aid substance 40 and the encapsulating item 42 are swallowed after the swallowing-aid substance 40 is guided into the encapsulating-item storage chamber 32, the activity of the pharmaceutical composition 80 per se will not have a significant effect on the difficulty or easiness of swallowing any more. Thereby it is possible to let patients with swallowing difficulties ingest solids of various types.

[0035] The sixth effect will now be explained in detail. When the swallowing-aid substance 40 and the encapsulating item 42 are pushed out from the aperture formed on the pharmaceutical composition container 10, the pharmaceutical composition 80 inside the encapsulating item 42 will also be pushed out at the same time. This significantly reduces the residual quantity of the pharmaceutical composition 80 in the encapsulating-item storage chamber 32 as compared to cases where the pharmaceutical composition 80 is not contained in the encapsulating item 42. Moreover, the encapsulating item 42 of this embodiment is tightly sealed. Since the encapsulating item 42 is tightly sealed, the probability of the pharmaceutical composition 80 leaking from the encapsulating item 42 is extremely low. Since this probability is extremely low, it is possible to reduce the residual quantity of the pharmaceutical composition 80 inside the pharmaceutical composition container 10 (actually, it is possible to reduce the residual quantity close to zero).

[0036] The pharmaceutical composition container 10 explained in this embodiment is presented as an example to concretize the technical concept of this invention. The material properties of the sheet 20 are not limited to the abovementioned embodiment. The shape of sheet 20, the shape of the spaces, the shape of the aperture, the dimensions, structures and positioning thereof are not limited to those mentioned in the abovementioned embodiment. It is possible to apply various changes to the pharmaceutical composition container 10 explained in this embodiment within the scope of the technical concept of this invention.

[0037] For example, FIG. 3 is a partial cross section of the pharmaceutical composition container 12 of the alternative embodiment 1. On the swallowing-aid substance storage chamber 100 in this pharmaceutical composition container 12, a first tapered portion 130, which faces the encapsulating-item storage chamber 110, gradually becomes narrower towards the encapsulating-item storage chamber 110. On the encapsulating-item storage chamber 110, a second tapered portion 140, which faces the swallowing-aid substance storage chamber 100, gradually becomes narrower towards the swallowing-aid substance storage chamber 100. This increases the probability that, when the first weak seal portion 70 is broken and the swallowing-aid substance 40 is pushed out into the encapsulating-item storage chamber 110, the entire quantity of the swallowing-aid substance 40 is pushed out.

[0038] Further, as an alternative to an encapsulating item 42 like that shown in FIG. 1, a bag-like encapsulating item 120 like that shown in FIG. 3 may also be stored. Of course, the encapsulating item 120 may also be stored in the pharmaceutical composition container 10 shown in FIG. 1. Moreover, the shape of the encapsulating item is not limited to those shown in FIG. 1 and 3. For example, as an alternative to the encapsulating items 42 and 120, a publicly known capsule may also be stored as the encapsulating item. As mentioned above, the swallowing-aid substance 40 in this embodiment is a sterilized jelly containing water. For this reason, if a publicly known capsule is stored as the encapsulating item, the surface of that capsule melts in water, which is an ingredient of the swallowing-aid substance 40. Thereafter the capsule melts in the digestive juices of the stomach or intestines.

[0039] Further, the number of spaces provided in one pharmaceutical composition container may be only two, or may be three or more. FIG. 4 is a partial cross section of the pharmaceutical composition container 14 of the alternative embodiment 2. The pharmaceutical composition container 14 has a swallowing-aid substance storage chamber 102, a first encapsulating-item storage chamber 112, a second encapsulating-item storage chamber 114 and an outlet chamber 150 formed therein. The swallowing-aid substance storage chamber 102, the first encapsulating-item storage chamber 112, the second encapsulating-item storage chamber 114 and the outlet chamber 150 are arranged in one row. Note that the end of the first encapsulating-item storage chamber 112 on the side of the second encapsulating-item storage

chamber 114 becomes narrower towards the second encapsulating-item storage chamber 114, and the encapsulating item 42 is stored in the first encapsulating-item storage chamber 112; therefore it is possible to smoothly push out the encapsulating item 42 by means of the swallowing-aid substance 40. The end of the second encapsulating-item storage chamber 114 on the side of the outlet chamber 150 becomes narrower towards the outlet chamber 150, and the encapsulating item 42 is stored in the second encapsulating-item storage chamber 114; therefore this encapsulating item 42 is also pushed out smoothly in the same way. On a side note, as an alternative to the encapsulating item 42, a bag-like encapsulating-item 120 like that shown in FIG. 3 may be stored in the first encapsulating-item storage chamber 112 and the second encapsulating-item storage chamber 114.

[0040] Moreover, an empty chamber may be provided between the swallowing-aid substance storage chamber and the encapsulating-item storage chamber. An empty chamber is a space in which nothing is stored, or in which a gas is stored that does not have any effect on the pharmaceutical composition 80 or the swallowing-aid substance 40. FIG. 5 is a partial cross section of the pharmaceutical composition container 15 of the alternative embodiment 3. As an alternative to the first encapsulating-item storage chamber 112 shown in FIG. 4, an empty chamber 116 is provided. Providing an empty chamber 116 can, to a certain extent, reduce the probability that the swallowing-aid substance 40 is mixed with the pharmaceutical composition 80 even if the sealing properties between the spaces are damaged due to an unintentional accident. If the pharmaceutical composition container 15 is foldable at the portion of the empty chamber 116, folding that portion can further reduce the probability that the swallowing-aid substance 40 and the pharmaceutical composition 80 are mixed.

[0041] Further, the pharmaceutical composition container is not limited to one made by adhering two sheets to each other. FIG. 6 is a partial cross section of the pharmaceutical composition container 16 of the alternative embodiment 4. FIG. 7 is a partial cross section of the pharmaceutical composition container 18 of the alternative embodiment 5. The containers are formed by double-folding one sheet. By forming the pharmaceutical composition containers 16 and 18 by double-folding one sheet for each, it is possible to increase the volume of the swallowing-aid substance storage chambers 104 and 106 compared to a pharmaceutical composition container formed by adhering two sheets of the same outer dimensions to each other. When the volume of the swallowing-aid substance storage chambers 104 and 106 increases, it is possible to increase the feed amount of the swallowing-aid substance 40. Note that the pharmaceutical composition container may also be made by adhering the walls of one tube to each other here and there.

[0042] Further, in the abovementioned pharmaceutical composition container, the cutout portions 50 are composed of a V-shaped cutout, but the shape of the cutout in this invention may be another one than a V-shape.

[0043] Further, in the abovementioned embodiments, cases were explained where the pharmaceutical composition is a powdered or granular preparation and the swallowing-aid substance is a jelly; however, it is needless to say that the pharmaceutical composition and swallowing-aid substance applied to this invention are not limited thereto. For example, apart from a powdered or granular preparation, the pharmaceutical composition may be a tablet, a capsule or a simple block. The swallowing-aid substance may be an aqueous solution, or may also be honey, custard cream, peanut spread, cheese spread or the like. Moreover, the item formed as the pharmaceutical composition is not limited to an item that is usually treated as a medical drug. For example, the item formed as the pharmaceutical composition may also be a food which is recognized for its effect of improving the health state.

[0044] As the material for the encapsulating item, a wafer made of starch with a thickness of 10 μm as mentioned above, or a variety of other materials conventionally known as edible film materials can be used. The types of the materials include polysaccharides (for example, pullulan, arabinoxylan, decomposition products of guar gum, sodium alginate, carrageenan, agar-agar, pectin, cellulose etc.) and peptide-based substances (for example, gelatin, decomposition products of silk protein, decomposition products of casein etc.). Those materials may be used on a standalone basis or as a combination of two or more types.

[0045] Further, in the abovementioned embodiment, it was explained that outlet chambers 34 and 150 were provided, however, it is also possible to not provide an outlet chamber 34, but to provide the cutouts 50 on the encapsulating-item storage chamber 32 or the like, open an aperture by applying shearing force to those cutouts 50 and hold that aperture against the mouth of the patient.

[0046] Further, the structure of the portions 70, 71 and 72 between two adjoining spaces may be different than that mentioned above. For example, a thin film may be formed in the portions 70, 71 and 72 between two adjoining spaces. This kind of film can be formed by sandwiching the member that serves as the film between the two sheets 20 and 20, and adhering same to each other. However, the structure of the portions 70, 71, and 72 between two adjoining spaces must be a structure that is sealed in such a state that the spaces are interconnected by a force that is applied from the outside of the pharmaceutical composition container 10. This "force that is applied from the outside of the pharmaceutical composition container 10" may be a force that is directly applied to the portions 70, 71 and 72 between adjoining spaces, or may be a force that is indirectly applied to any one thereof.

[0047] Further, the swallowing-aid substance 40 does not have to be directly filled into the space provided in the pharmaceutical composition container. FIG. 8 is a partial cross section of the pharmaceutical composition

container 11 of the alternative embodiment 6. The pharmaceutical composition container 11 of this embodiment has a first bag storage chamber 36, a second bag storage chamber 38, an encapsulating-item storage chamber 32 and an outlet chamber 34 formed therein. Same as the encapsulating-item storage chamber 32 and the outlet chamber 34, the first bag storage chamber 36 and the second bag storage chamber 38 are so formed as to maintain air tightness against the external space.

[0048] The first bag storage chamber 36 and the second storage bag chamber 38 store and fix the aid-substance storage bag 22. The aid-substance storage bag 22 is directly fixed by the circumferential strong seal portion 74 and the third weak seal portion 76. The strength of the third weak seal portion 76 against breakage is roughly the same as that of the circumferential strong seal portion 74.

[0049] A swallowing-aid substance 40 is stored inside the aid-substance storage bag 22. The strength of the aid-substance storage bag 22 on the end at the side facing the first weak seal portion 70 is such that the end is broken by a force applied from the outside of the pharmaceutical composition container 11. The swallowing-aid substance 40 is sterilized together with the aid-substance storage bag 22, then sandwiched between the sheets 20 and 20 and adhered thereto. Next, the outer circumferential strong seal portion 74 etc. are formed. Thereby one end of the aid-substance storage bag 22 breaks when force is applied from the outside of the pharmaceutical composition container 11. When the end breaks, the swallowing-aid substance 40 leaks out into the first bag storage chamber 36. When, at this time, more force is applied from the outside of the pharmaceutical composition container 11, the first weak seal portion 70 is broken by the force received from the swallowing-aid substance 40. When the first weak seal portion 70 is broken, the encapsulating item 42 is enclosed in the swallowing-aid substance 40.

<Embodiment 2>

[0050] The following explains embodiment 2 of this invention. Note that items which are identical with those explained in the embodiment 1 are given identical reference numerals. In this embodiment, the detailed explanation thereof will not be repeated.

<Explanation of the Structure>

[0051] FIG. 9 is a partial cross section of the pharmaceutical composition container 260 of this embodiment. The pharmaceutical composition container 260 of this embodiment is formed by double-folding one sheet made of a synthetic resin (low-density polyethylene, PET (polyethylene terephthalate) or another resin that is soft so as to be foldable and is heat-sealable, like composite resin), adhering the ends of the double-folded sheet to each other and aligning the outer shape by cutting the adhered portion.

[0052] The portion where the ends of the sheet are adhered to each other is the circumferential strong seal portion 270. The inside of the pharmaceutical composition container 260 is provided with a plurality of spaces. The portions between the plurality of spaces are sealed by a first weak seal portion 300, a second weak seal portion 302 and a third weak seal portion 304. The first weak seal portion 300 comprises a first weak-seal zone 310, an intermediate chamber 312 and a second weak-seal zone 314.

[0053] One of the spaces inside the pharmaceutical composition container 260 is the swallowing-aid substance storage chamber 280. A swallowing-aid substance 40 is stored inside the swallowing-aid substance storage chamber 280. The first weak-seal zone 310 of the first weak seal portion 300 easily opens by means of the pressure received from the swallowing-aid substance 40 when force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 260. When the first weak-seal zone 310 opens, the swallowing-aid substance 40 is pushed out into the intermediate chamber 312. Thereafter, the second weak-seal zone 314, the second weak seal portion 302 and the third weak seal portion 304 sequentially open in the same way. This can be realized because the strength of the first weak seal portion 300, the second weak seal portion 302 and the third weak seal portion 304 is weak compared to that of the circumferential strong seal portion 270. The reason is the same as in the case of the embodiment 1, and therefore a detailed explanation thereof will not be repeated here.

[0054] In one type of the spaces inside the pharmaceutical composition container 260, the first encapsulating-item storage chamber 282 and the second encapsulating-item storage chamber 284 exist. An encapsulating item 212 is stored in each of the encapsulating-item storage chambers. The pharmaceutical composition encapsulated by the encapsulating item 212 stored in the first encapsulating-item storage chamber 282 and the pharmaceutical composition encapsulated by the encapsulating item 212 stored in the second encapsulating-item storage chamber 284 are of different types.

[0055] Further, one of the spaces inside the pharmaceutical composition container 260 is an aperture chamber 286. The aperture chamber 286 is provided on one end of the pharmaceutical composition container 260 and serves as the chute (in other words, the device for dropping the encapsulating item 212 into the mouth of the patient) for the ingestion of the encapsulating item 212.

[0056] Of the two ends of the pharmaceutical composition container 260, the end on the opposite side of the end on which the aperture chamber 286 is provided, is the cover 288. The boundary between the swallowing-aid substance storage chamber 280 and the cover 288 is the bottom strong seal portion 272. The strength of the bottom strong seal portion 272 is the same as that of the circumferential strong seal portion 270; therefore the bot-

tom strong seal portion 272 is not broken even when force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 260. Note that, in the explanation of the pharmaceutical composition container 260 of this embodiment, the portion which is more to the side of the second encapsulating-item storage chamber 284 than the cover 288 is referred to as the "container body."

[0057] FIG. 10 is an external view of the portion of the pharmaceutical composition container 260 of this embodiment which corresponds to the rear surface when viewed as shown in FIG. 9. As is obvious from FIG. 10, a label 262 is adhered to the pharmaceutical composition container 260 of this embodiment.

<Features Unique to This Embodiment>

[0058] The features unique to the pharmaceutical composition container 260 of this embodiment as compared to the pharmaceutical composition containers of the other embodiments are that: the cover 288 is disposed on one end and a cover insert portion 320 which is inserted into this cover 288 is disposed on the other end; the width of the pharmaceutical composition container 260 is larger on the base 330 of the portion which is inserted into the cover 238; the bottom strong seal portion 272 and a portion of the second weak seal portion 302 or a portion of the third weak seal portion 304 are folded over to insert the tip of the cover insert portion 320 into the cover 238, and the base 330 is on the outside of the cover 238. FIG. 11 shows the state where the cover insert portion 320 is inserted into the cover 238 and the base 330 is on the outside of the cover 238. As is obvious from FIG. 11, the portion of the base 330 is depressed; therefore it is possible to easily to pull out the cover insert portion 320 by inserting a finger thereinto. FIG. 12 is a view of the portion which corresponds to the rear surface when viewed as shown in FIG. 11, in the state shown in FIG. 11. The major part of the rear surface of the pharmaceutical composition container 260 is occupied by the label 262.

<Usage Method>

[0059] When using the pharmaceutical composition 260 of this embodiment, a finger is engaged with the abovementioned base 330 and the abovementioned cover insert portion 320 is pulled out of the cover 238 in this state. When the cover insert portion 320 is pulled out, the cover insert portion 320 is placed into the mouth of the patient. The subsequent usage method is the same as in the other embodiments or alternative embodiments thereof.

<Explanation of the Effect>

[0060] With the pharmaceutical composition container 260 of this embodiment, the cover insert portion 320 can easily be pulled out because a finger can be engaged with the base 330 of the cover insert portion 320.

[0061] Further, the pharmaceutical composition container 260 of this embodiment produces the same effects like that of the embodiment 1.

<Embodiment 3>

[0062] The following explains embodiment 3 of this invention. Note that items which are identical with those explained in the embodiment 1 are given identical reference numerals. In this embodiment, the detailed explanation thereof will not be repeated.

<Explanation of the Structure>

[0063] FIG. 13 is a partial cross section of the pharmaceutical composition container 400 of this embodiment. Same as in the embodiment 2, the pharmaceutical composition container 400 of this embodiment is formed by double-folding one sheet made of a synthetic resin, adhering the ends of the double-folded sheet to each other and aligning the outer shape by cutting the adhered portion.

[0064] The portion where the ends of the sheet are adhered to each other is the circumferential strong seal portion 410. The inside of the pharmaceutical composition container 400 is provided with a plurality of spaces. The portions between the plurality of spaces are sealed by a first weak seal portion 440, a second weak seal portion 442 and a third weak seal portion 444. The first weak seal portion 440 comprises a first weak-seal zone 450, an intermediate chamber 452 and a second weak-seal zone 454.

[0065] One of the spaces is the swallowing-aid substance storage chamber 420. A swallowing-aid substance 40 is stored inside the swallowing-aid substance storage chamber 420. When force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 400, the first weak seal zone 450 and the second weak seal zone 454 sequentially open in the same way as the first weak seal portion 300, the second weak seal portion 302 and the third weak seal portion 304 in the embodiment 2. The reason why the first weak seal zone 450 and the second weak seal zone 454 open in this way is the same as that in the embodiment 2.

[0066] In one type of the spaces inside the pharmaceutical composition container 400, the first encapsulating-item storage chamber 422 and the second encapsulating-item storage chamber 424 exist. An encapsulating item 212 is stored in each of the encapsulating-item storage chambers. The pharmaceutical composition encapsulated by the encapsulating item 212 stored in the first encapsulating-item storage chamber 422 and the pharmaceutical composition encapsulated by the encapsulating item 212 stored in the second encapsulating-item storage chamber 424 are of different types.

[0067] One of the spaces is an aperture chamber 426. Same as the aperture chamber 286 of the embodiment 2, the aperture chamber 426 serves as a chute for the ingestion of the encapsulating item 212.

[0068] Of the two ends of the pharmaceutical composition container 400, the end on the opposite side of the end on which the aperture chamber 426 is provided, is the cover 428. The boundary between the swallowing-aid substance storage chamber 420 and the cover 478 is the bottom strong seal portion 412. The strength of the bottom strong seal portion 412 is the same as that of the circumferential strong seal portion 410; therefore the bottom strong seal portion 412 is not broken even when force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 400.

<Features Unique to This Embodiment>

[0069] The features unique to the pharmaceutical composition container 400 of this embodiment as compared with the pharmaceutical composition containers of the other embodiments are that: the cover 478 is disposed on one end; the bottom strong seal portion 412 and the base of the portion where the aperture chamber 426 is disposed are folded over to insert the portion where the aperture chamber 426 is disposed into the cover 478; the tip 480 of the portion where the aperture chamber 426 is disposed is round; and a part of the edge 482 of the cover 478 is cut out. Note that, in the explanation of the pharmaceutical composition container 400 of this embodiment, the portion which is more to the side of the second encapsulating-item storage chamber 424 than the cover 478 is referred to as the "container body."

<Usage Method>

[0070] When using the pharmaceutical composition 350 of this embodiment, the one of the two ends of the pharmaceutical composition container 400 on which the aperture chamber 426 is disposed is pulled out of the cover 478. The subsequent usage method is the same as in the other embodiments.

<Explanation of the Effect>

[0071] During the production of the pharmaceutical composition container 400 of this embodiment, the pharmaceutical composition container 400 is folded over in such a manner that the portion where the aperture chamber 426 is disposed and the cut-out edge 482 of the cover 478 face each other. FIG. 14 shows the state in which pharmaceutical composition container 400 is folded over during production. After the pharmaceutical composition container 400 is folded over, the portion where the aperture chamber 426 is disposed is inserted into the cover 478. At this time, the tip 480 of the portion where the aperture chamber 426 is disposed gets caught at any position of the cut-out edge 482 of the cover 478 and opens the mouth of the cover 478. Since the mouth of the cover 478 is opened, the tip 480 smoothly enters the inside of the cover 478. FIG. 15 shows the pharmaceutical composition container 400 after the portion where the aperture chamber 426 is disposed is inserted into the cover 478.

[0072] Further, the pharmaceutical composition container 400 of this embodiment produces the same effects like that of the embodiment 1.

<Embodiment 4>

[0073] The following explains embodiment 4 of this invention. Note that items which are identical with those explained in the embodiment 1 are given identical reference numerals. In this embodiment, the detailed explanation thereof will not be repeated.

<Explanation of the Structure>

[0074] FIG. 16 is a partial cross section of the pharmaceutical composition container 500 of this embodiment. Same as in the embodiment 2, the pharmaceutical composition container 500 of this embodiment is formed by double-folding one sheet made of a synthetic resin, adhering the ends of the double-folded sheet to each other and aligning the outer shape by cutting the adhered portion.

[0075] The portion where the ends of the sheet are adhered to each other is the circumferential strong seal portion 510. The inside of the pharmaceutical composition container 500 is provided with a plurality of spaces. The portions between the plurality of spaces are sealed by a first weak seal portion 540, a second weak seal portion 542 and a third weak seal portion 544. The first weak seal portion 540 comprises a first weak-seal zone 550, an intermediate chamber 552 and a second weak-seal zone 554.

[0076] One of the spaces inside the pharmaceutical composition container 500 is the swallowing-aid substance storage chamber 520. A swallowing-aid substance 40 is stored inside the swallowing-aid substance storage chamber 520. When force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 500, the first weak seal zone 550 and the second weak seal zone 554 sequentially open in the same way as the first weak seal portion 300, the second weak seal portion 302 and the third weak seal portion 304 in the embodiment 2. The reason why the first weak seal zone 550 and the second weak seal zone 554 open in this way is the same as that in the embodiment 2.

[0077] In one type of the spaces inside the pharmaceutical composition container 500, the first encapsulating-item storage chamber 522 and the second encapsulating-item storage chamber 524 exist. An encapsulating item 212 is stored in each of the encapsulating-item stor-

age chambers. The pharmaceutical composition encapsulated by the encapsulating item 212 stored in the first encapsulating-item storage chamber 522 and the pharmaceutical composition encapsulated by the encapsulating item 212 stored in the second encapsulating-item storage chamber 524 are of different types.

[0078] One of the spaces is an aperture chamber 526. Same as the aperture chamber 286 of the embodiment 2, the aperture chamber 526 serves as a chute for the ingestion of the encapsulating item 212.

[0079] Of the two ends of the pharmaceutical composition container 500, the end on the opposite side of the end on which the aperture chamber 526 is provided, is the cover 528. The boundary between the swallowing-aid substance storage chamber 520 and the cover 528 is the bottom strong seal portion 512. The strength of the bottom strong seal portion 512 is the same as that of the circumferential strong seal portion 510; therefore the bottom strong seal portion 512 is not broken even when force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 500. Note that, in the explanation of the pharmaceutical composition container 500 of this embodiment, the portion which is more to the side of the second encapsulating-item storage chamber 524 than the cover 528 is referred to as the "container body."

<Features Unique to This Embodiment>

[0080] FIG. 17 is a partial cross section showing one end of the pharmaceutical composition container 500 during the production thereof. FIG. 18 is a perspective view showing one end of the pharmaceutical composition container 500 during the production thereof. The features unique to the pharmaceutical composition container 500 of this embodiment as compared to the pharmaceutical composition containers of the other embodiments will be explained while referring to FIG. 17 and FIG. 18. The features thereof are that: the bottom strong seal portion 512 and the base of the portion where the aperture chamber 526 is disposed are folded over to insert the portion where the aperture chamber 526 is disposed into the cover 528; and a melt-bonding margin 514 is disposed on the tip portion 516 which is inserted into the cover 528 on the circumferential strong seal portion 510. This melt-bonding margin 514 is folded back like shown in FIG. 18 and melt-bonded to the tip portion 516.

<Usage Method>

[0081] The usage method of the pharmaceutical composition container 500 of this embodiment is the same as that of the embodiment 3.

<Explanation of the Effect>

[0082] Even if there are burrs at the end of the circumferential strong seal portion 510, those burrs do not easily touch the inside of the mouth of the patient because the pharmaceutical composition container 500 of this embodiment has a structure like that mentioned above. Since the burrs do not easily touch the inside of the mouth, the mouth of the patient is not easily scratched.

[0083] Further, the pharmaceutical composition container 500 of this embodiment produces the same effects like that of the embodiment 1.

<Embodiment 5>

[0084] The following explains embodiment 5 of this invention. Note that items which are identical with those explained in the embodiment 1 are given identical reference numerals. In this embodiment, the detailed explanation thereof will not be repeated.

<Explanation of the Structure>

[0085] FIG. 19 is a partial cross section of the pharmaceutical composition container 210 of this embodiment. Same as in the embodiment 2, the pharmaceutical composition container 210 of this embodiment is formed by double-folding one sheet made of a synthetic resin, adhering the ends of the double-folded sheet to each other and aligning the outer shape by cutting the adhered portion.

[0086] The portions where the ends of the sheet are adhered to each other are the circumferential strong seal portions 220 and 222. The inside of the pharmaceutical composition container 210 is provided with a plurality of spaces. The portions between the plurality of spaces are sealed by a first weak seal portion 240, a second weak seal portion 242 and a third weak seal portion 244. The first weak seal portion 240 comprises a first weak-seal zone 250, an intermediate chamber 252 and a second weak-seal zone 254.

[0087] One of the spaces inside the pharmaceutical composition container 210 is the swallowing-aid substance storage chamber 230. A swallowing-aid substance 40 is stored inside the swallowing-aid substance storage chamber 230. When force is applied to the swallowing-aid substance 40 from the outside of the pharmaceutical composition container 260, the first weak seal zone 250 and the second weak seal zone 254 sequentially open in the same way as the first weak seal portion 300, the second weak seal portion 302 and the third weak seal portion 304 in the embodiment 2. The reason why the first weak seal zone 250 and the second weak seal zone 254 open in this way is the same as that in the embodiment 2.

[0088] In one type of the spaces inside the pharmaceutical composition container 210, the first encapsulating-item storage chamber 232 and the second encapsulating-item storage chamber 234 exist. An encapsulating item 212 is stored in each of the encapsulating-item storage chambers. The pharmaceutical composition encapsulated by the encapsulating item 212 stored in the first

encapsulating-item storage chamber 232 and the pharmaceutical composition encapsulated by the encapsulating item 212 stored in the second encapsulating-item storage chamber 234 are of different types. Further, the outer shape of the encapsulating items 212 is different from that of the encapsulating item 42 in the embodiment 1.

[0089] Further, one of the spaces inside the pharmaceutical composition container 210 is an aperture chamber 236. Same as the aperture chamber 286 of the embodiment 2, the aperture chamber 236 serves as a chute for the ingestion of the encapsulating item 212.

[0090] The pharmaceutical composition 210 of this embodiment is wound in such a manner that the swallowing-aid substance storage chamber 230 surrounds the aperture chamber 236. If the pharmaceutical composition container 210 is only wound, it is likely that the pharmaceutical composition container 210 straightens during the time from the completion until the use of the pharmaceutical composition container 210; therefore end of the swallowing-aid substance storage chamber 230 of the wound pharmaceutical composition container 210 is fixed with a tape 214. FIG. 20 shows the wound pharmaceutical composition container 210.

<Usage Method>

[0091] To use the pharmaceutical composition container 210 of this embodiment, the tape 214 is peeled off and the pharmaceutical composition container 210 is straightened. When the pharmaceutical composition container 210 extends straightly, the aperture chamber 236 is placed into the mouth of the patient. Thereafter the encapsulating item 212 is ingested in the same way as the embodiment 1 or the alternative embodiments thereof.

<Explanation of the Effect>

[0092] The pharmaceutical composition container 210 of this embodiment produces the same effects like that of the embodiment 1.

Industrial Applicability

[0093] The pharmaceutical composition container of this invention is suitable for the use as, for example, a container for the ingestion of a drug. Specifically, the pharmaceutical composition container of this invention is suitable for the use as a container for the ingestion of a drug, wherein the drug is filled into the container by a system as mentioned below. Such system is one wherein a plurality of auger filling machines are set up, a transport system and weighing system are added, the filling machines, the transport system and the weighing system are connected to a medical-drug production line and automatic operation is performed over a long time.

Explanation of the Reference Numerals

[0094]

10, 11, 12, 14, 15, 16, 18, 210, 260, 400 and 500: pharmaceutical composition container
20: sheet
22: aid-substance storage bag
30, 100, 102, 104, 106, 230, 280 and 520: swallowing-aid substance storage chamber
32 and 110: encapsulating-item storage chamber
34 and 150: outlet chamber
36: first bag storage chamber
38: second bag storage chamber
40: swallowing-aid substance
42, 120 and 212: encapsulating item
50: cutout
60: predetermined aperture part
70, 240, 300, 440 and 540: first weak seal portion
72, 242, 302, 442 and 542: second weak seal portion
74, 220, 222, 270, 410 and 510: circumferential strong seal portion
76, 244, 304, 444 and 544: third weak seal portion
80: pharmaceutical composition
90: patient
112, 232, 282, 422 and 522: first encapsulating-item storage chamber
114, 234, 284, 424 and 524: second encapsulating-item storage chamber
116: empty chamber
130: first tapered portion
140: second tapered portion
214: tape
236, 286, 426 and 526: aperture chamber
238, 288, 428, 478 and 528: cover
250, 310, 450 and 550: first weak seal zone
252, 312, 452 and 552: intermediate chamber
254, 314, 454 and 554: second weak seal zone
262: label
272, 412 and 512: bottom strong seal portion
320: cover insert portion
330: base
480: tip
482: edge
516: tip portion

Claims

1. A pharmaceutical composition container equipped with a plurality of spaces, wherein the portions between two adjoining aforementioned spaces are sealed, the aforementioned portions between two adjoining spaces open when force is applied from the outside of the aforementioned pharmaceutical composition container, a swallowing-aid substance is stored in a swallowing-aid substance storage chamber which is at least one of the aforementioned

spaces, an encapsulating item is stored in an encapsulating-item storage chamber which is at least one of the aforementioned spaces, the aforementioned encapsulating item contains a pharmaceutical composition, at least the surface of the aforementioned encapsulating item melts in the ingredients of the aforementioned swallowing-aid substance, and a predetermined aperture part is provided in which an aperture is to be formed that interconnects the outside of the aforementioned pharmaceutical composition container with the aforementioned spaces.

2. The pharmaceutical composition container described in claim 1, wherein the aforementioned swallowing-aid substance contains water, and at least the surface of the aforementioned encapsulating item melts in the ingredients of the aforementioned swallowing-aid substance due to the material of the aforementioned encapsulating item being a water-soluble substance.

3. The pharmaceutical composition container described in claim 2, wherein the aforementioned swallowing-aid substance is a water-containing jelly and the aforementioned water-soluble substance is starch.

4. The pharmaceutical composition described in claim 1, wherein at least one of the aforementioned spaces is disposed between the aforementioned swallowing-aid substance storage chamber and the aforementioned encapsulating-item storage chamber.

5. The pharmaceutical composition container described in claim 1, wherein the aforementioned encapsulating item is tightly sealed.

6. A pharmaceutical composition container equipped with at least three spaces, wherein the portions between two adjoining aforementioned spaces are sealed, the aforementioned portions between two adjoining spaces open when force is applied from the outside of the aforementioned pharmaceutical composition container, a swallowing-aid substance is stored in a swallowing-aid substance storage chamber which is at least one of the aforementioned spaces, an encapsulating item is stored in an encapsulating-item storage chamber which is at least one of the aforementioned spaces, the aforementioned encapsulating item contains a pharmaceutical composition, at least the surface of the aforementioned encapsulating item melts in the ingredients of the aforementioned swallowing-aid substance, and an aperture chamber which is at least one of the aforementioned spaces is provided with an aperture that interconnects the outside of the aforementioned pharmaceutical composition container with the aforementioned spaces.

Fig. 1

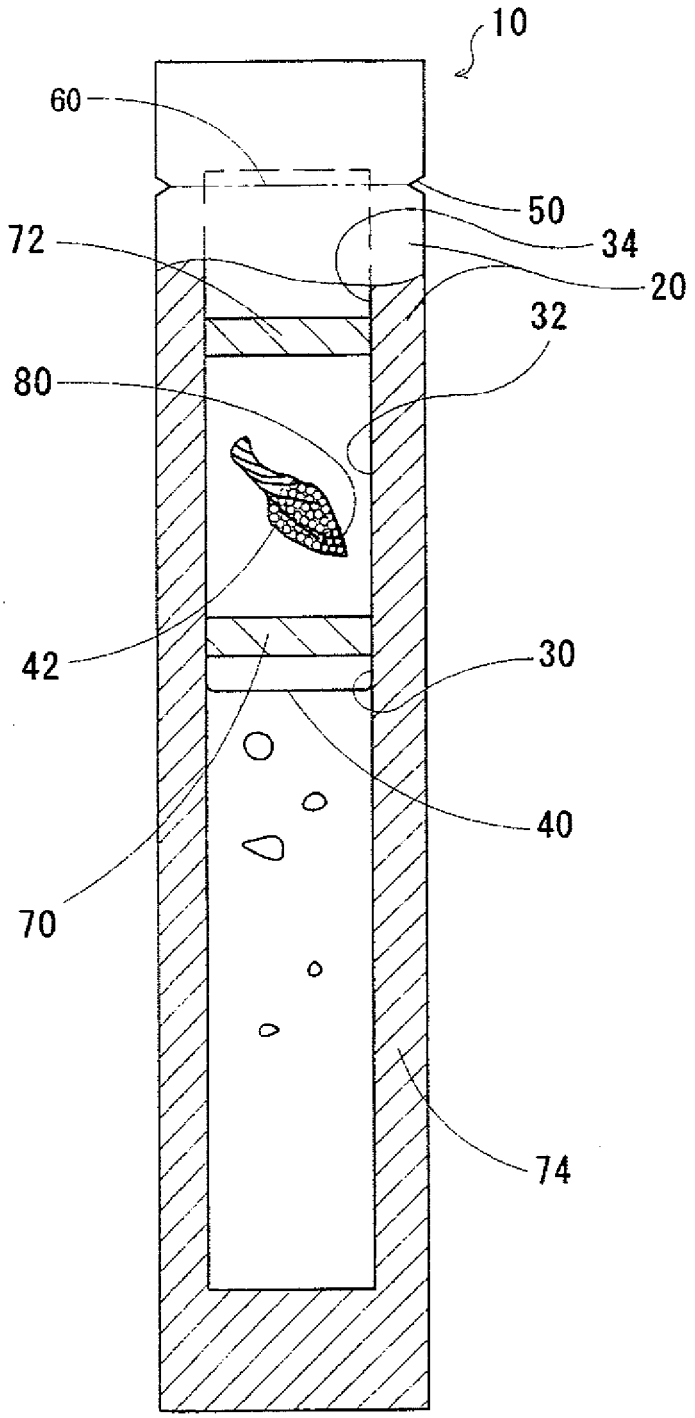


Fig. 2

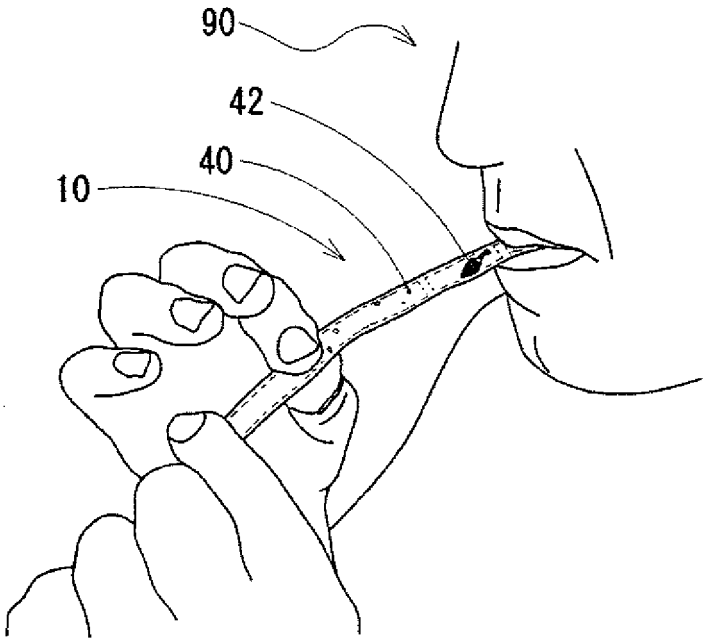


Fig. 3

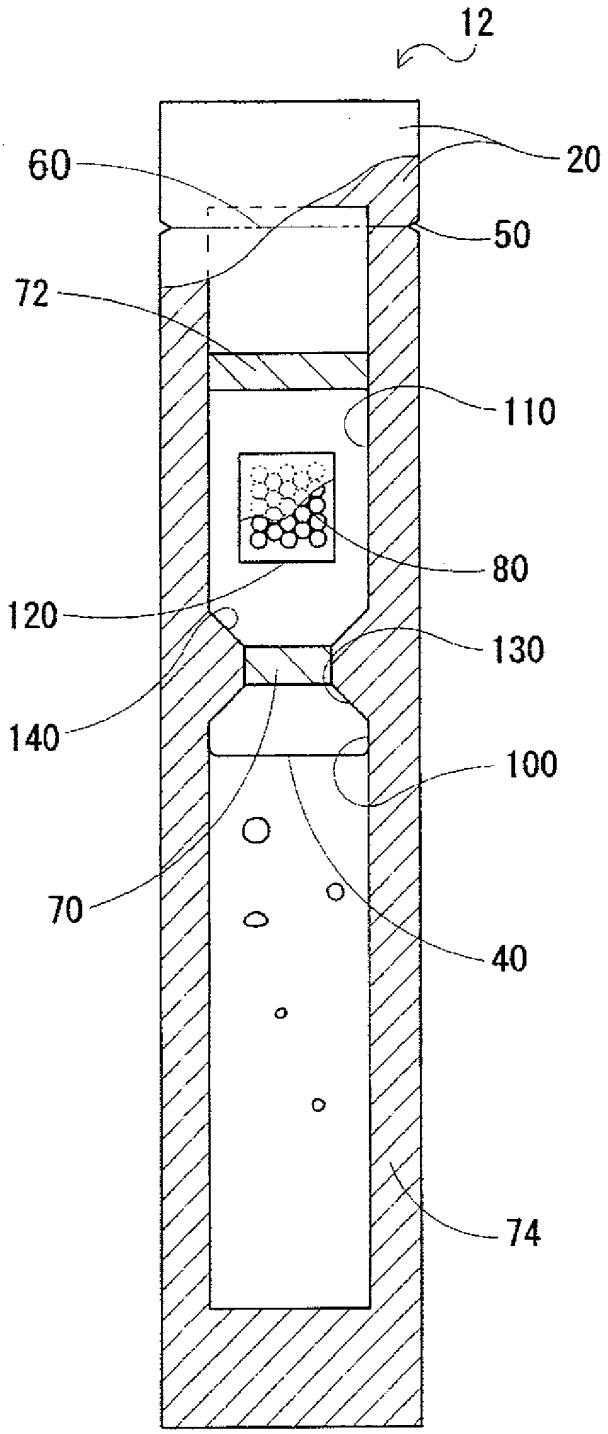


Fig. 4

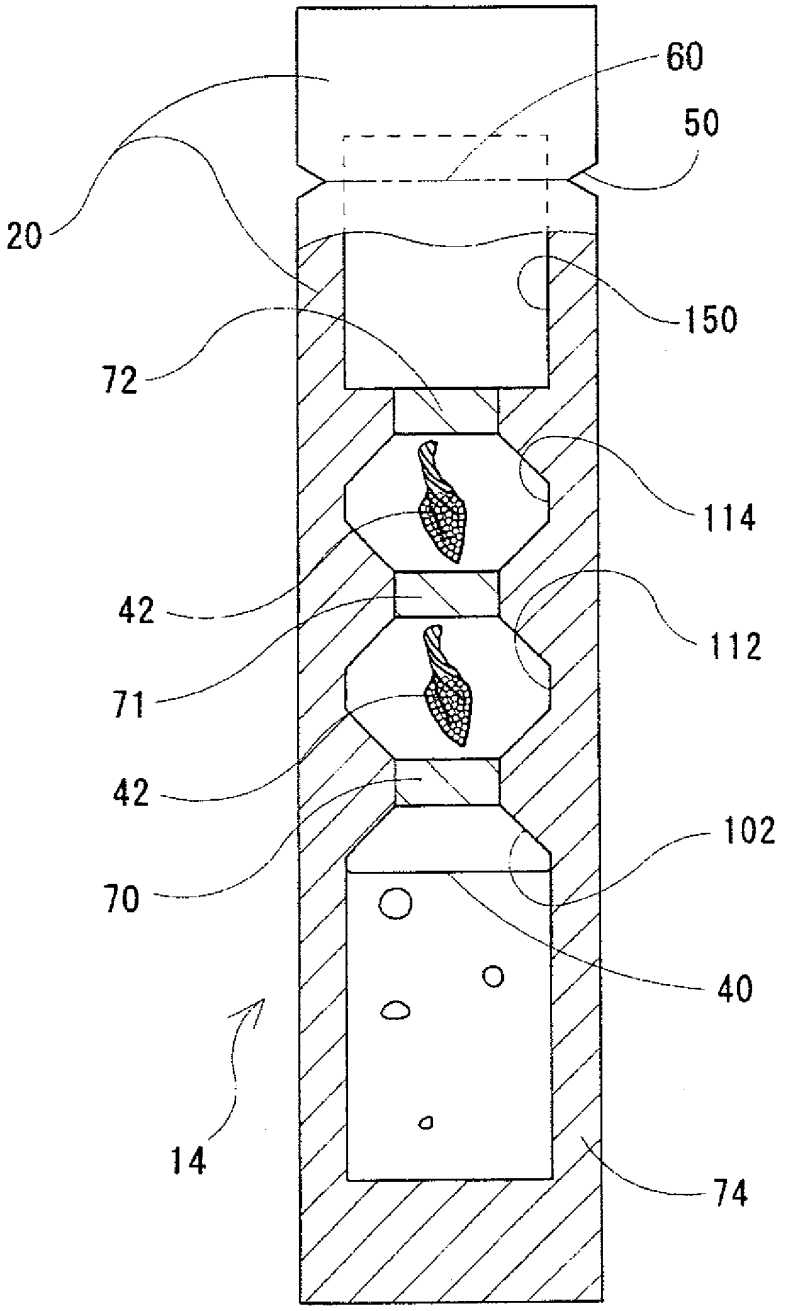


Fig. 5

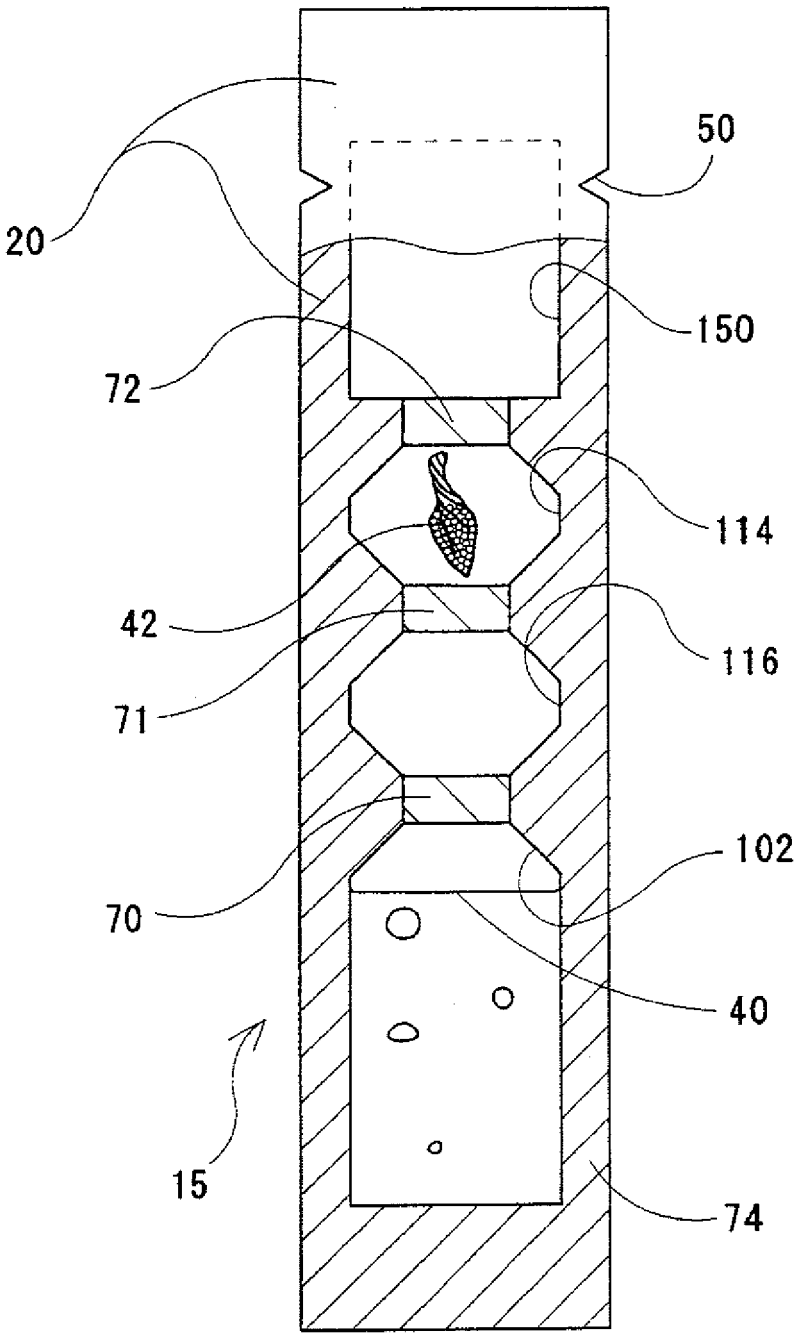


Fig. 6

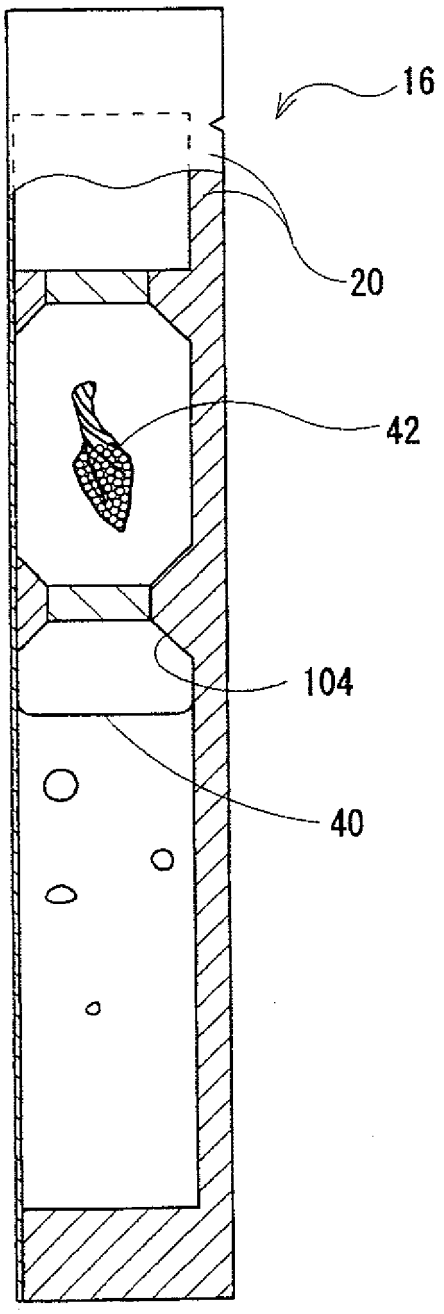


Fig. 7

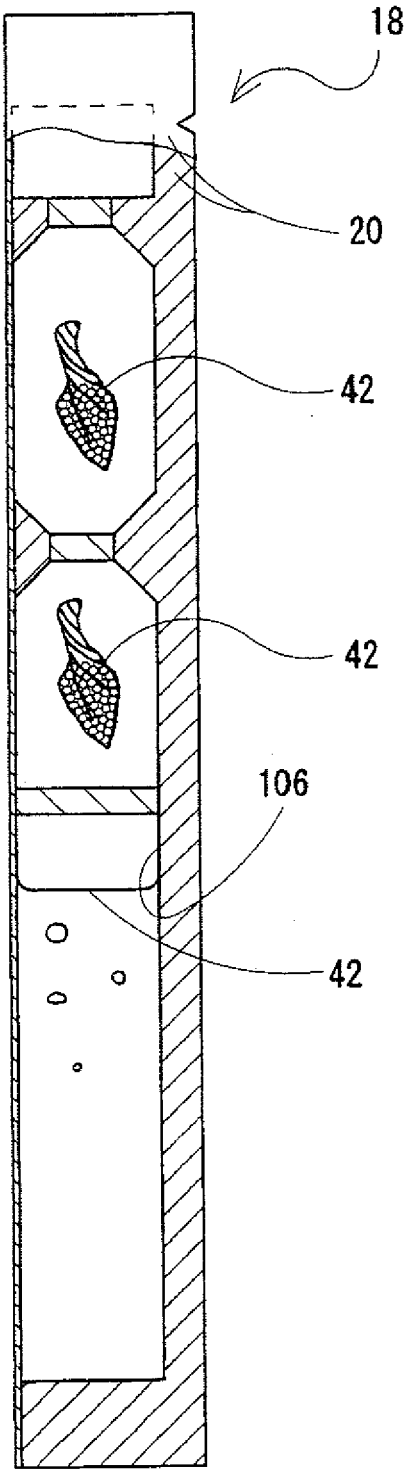


Fig. 8

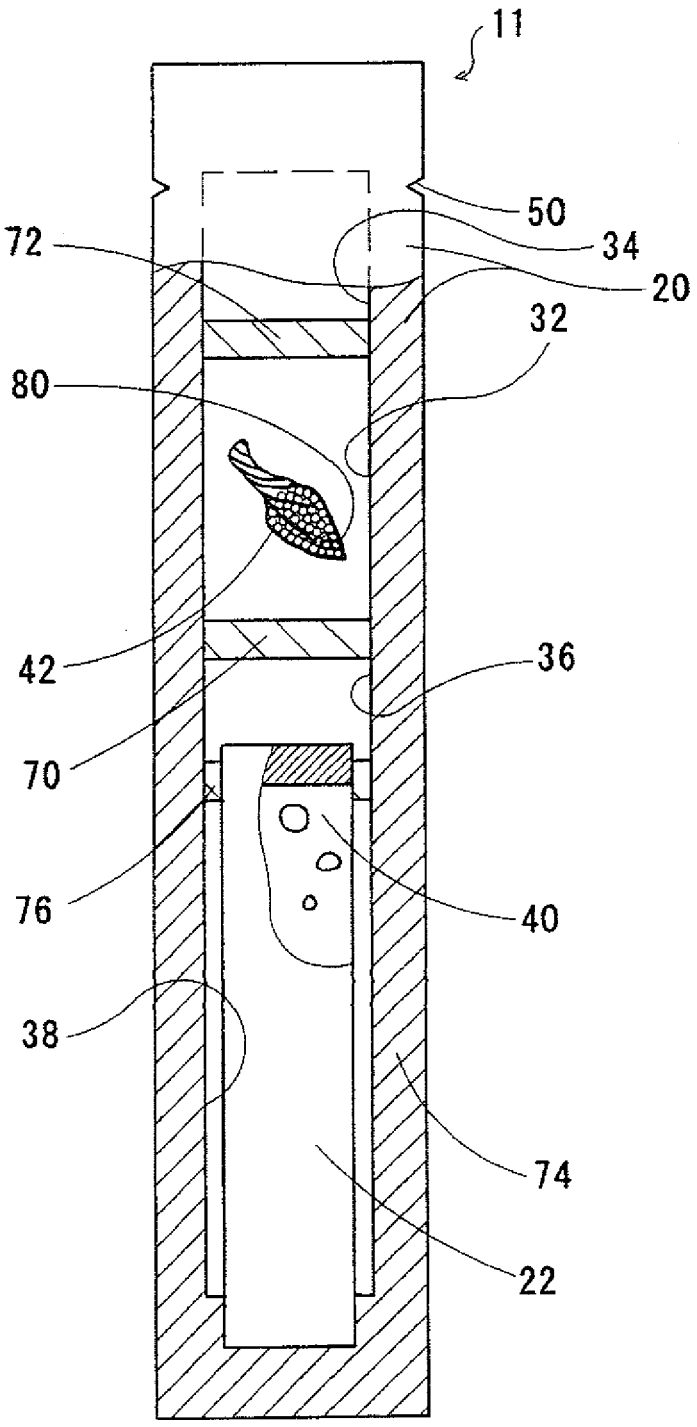


Fig. 9

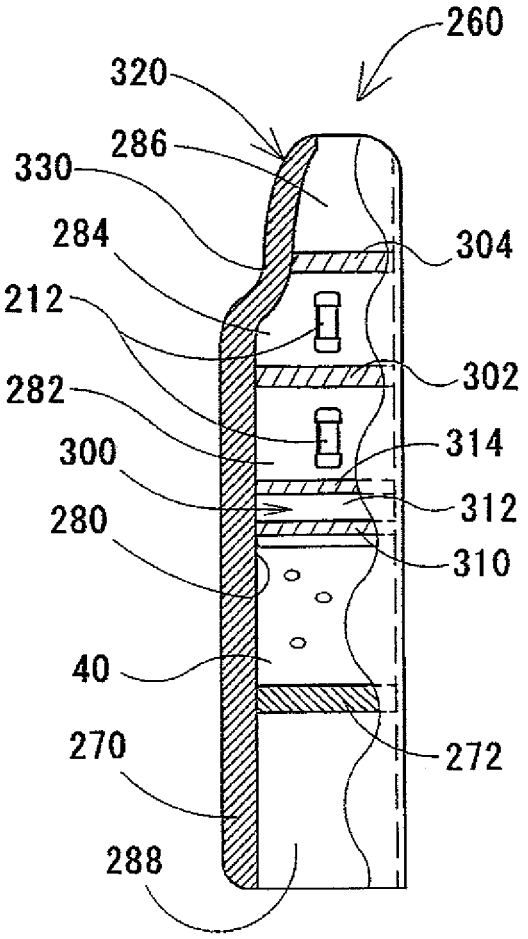

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Fig. 10

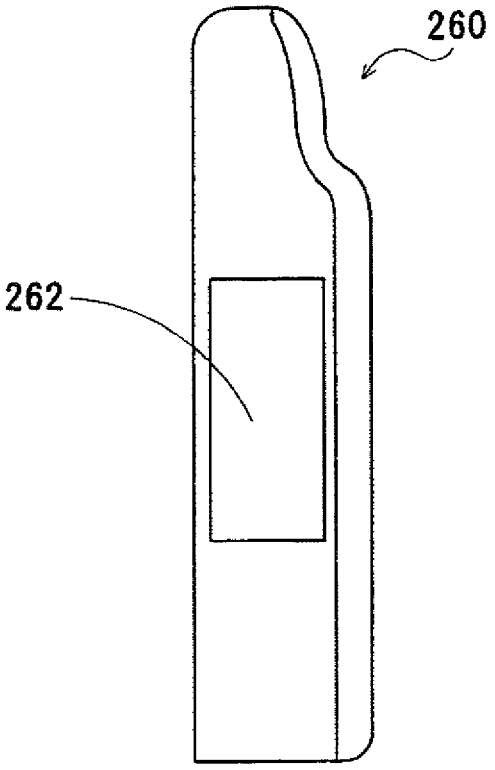


Fig. 11

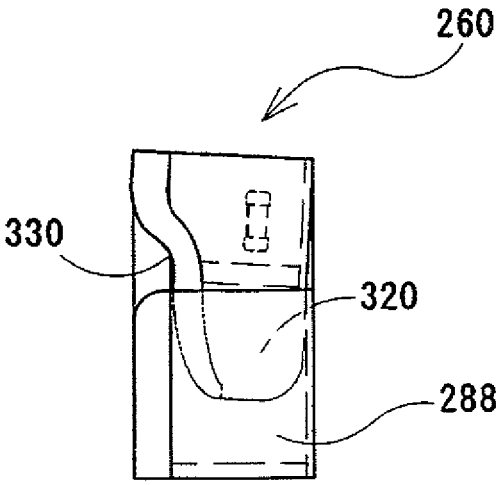


Fig. 12

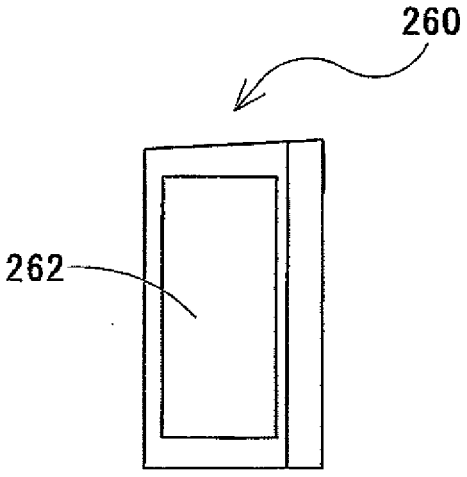


Fig. 13

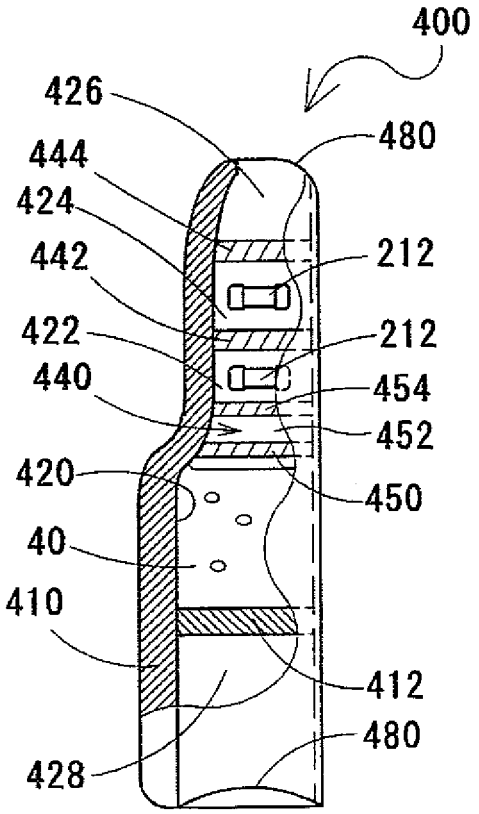

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Fig. 14

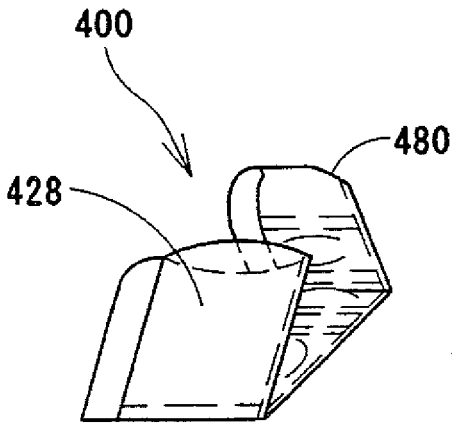


Fig. 15

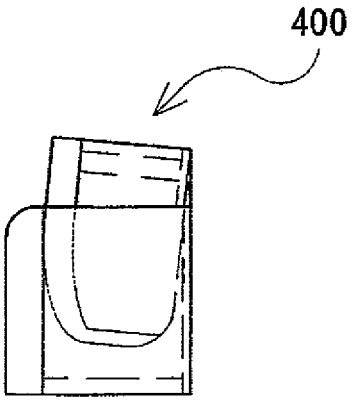


Fig. 16

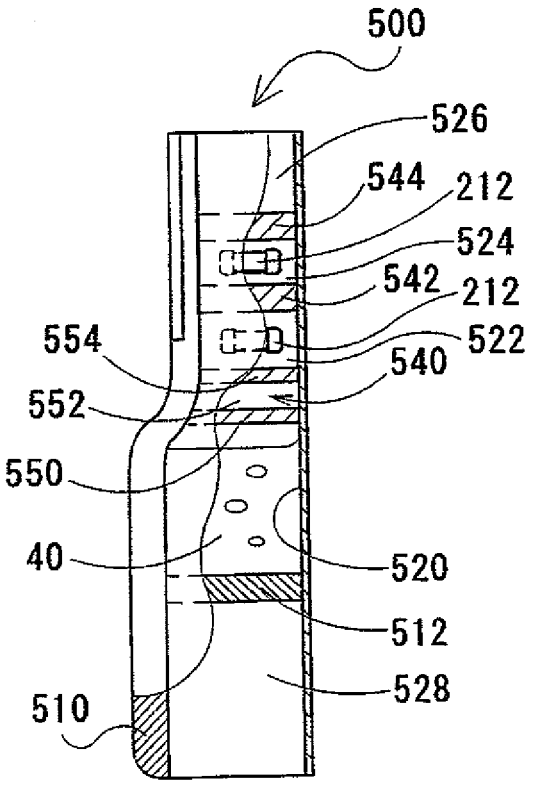

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510

Fig. 17

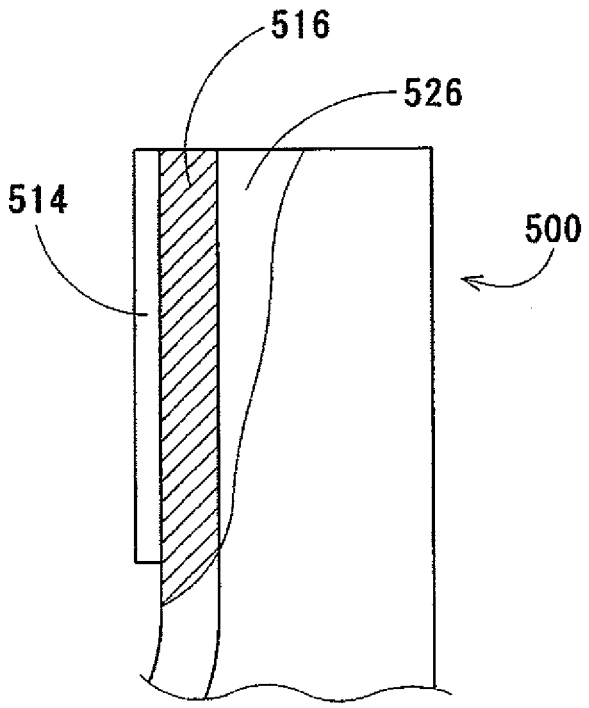


Fig. 18

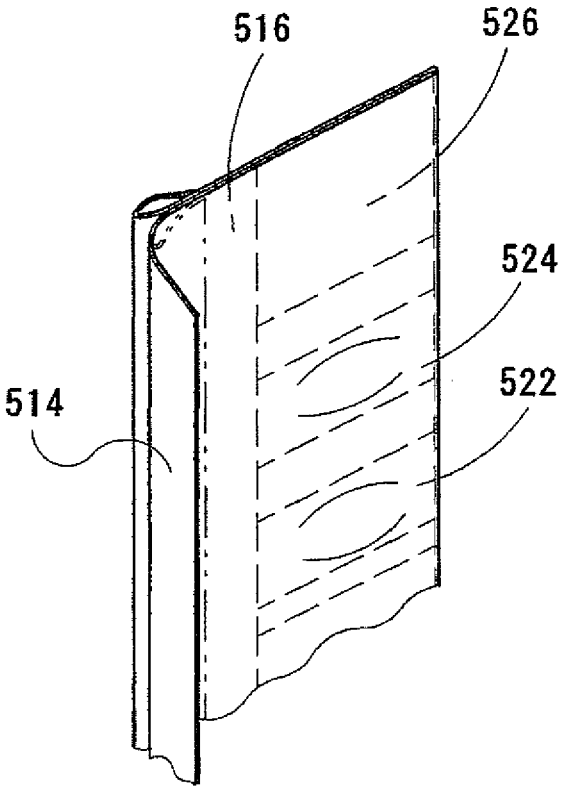


Fig. 19

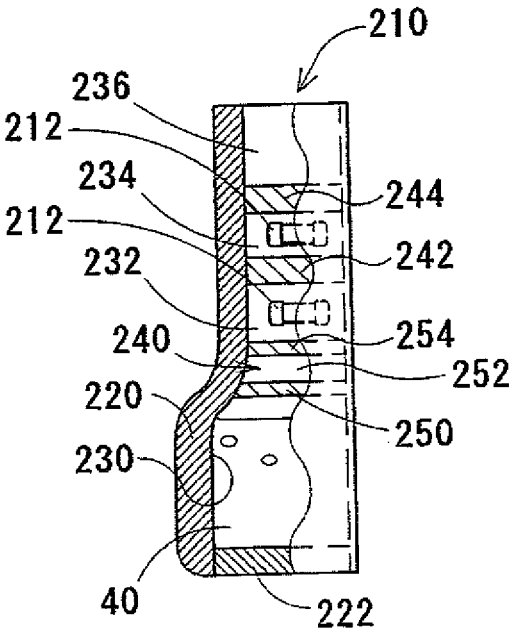
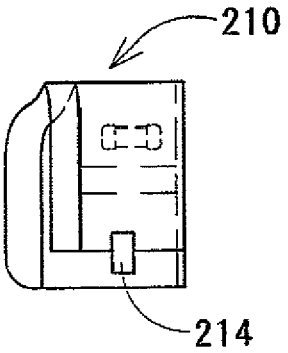


Fig. 20



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2010/055212

A. CLASSIFICATION OF SUBJECT MATTER
A61J1/03(2006.01)i, *A61J1/05*(2006.01)i

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)
A61J1/03, A61J1/05

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2010
Kokai Jitsuyo Shinan Koho	1971-2010	Toroku Jitsuyo Shinan Koho	1994-2010

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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 3070094 A (Stanley J. SARNOFF), 25 December 1962 (25.12.1962), column 2, line 26 to column 6, line 47; fig. 1 to 4 (Family: none)	1 2-6
Y	JP 10-234820 A (Takeda Chemical Industries, Ltd.), 08 September 1998 (08.09.1998), paragraphs [0006] to [0020]; fig. 1 to 2 (Family: none)	2-3
Y	JP 2000-262589 A (JMS Co., Ltd.), 26 September 2000 (26.09.2000), paragraph [0018]; fig. 7 (Family: none)	4

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* 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
01 July, 2010 (01.07.10)	13 July, 2010 (13.07.10)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2010/055212

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2004-018443 A (Pigeon Corp.), 22 January 2004 (22.01.2004), claims 1 to 2 (Family: none)	5
Y	JP 11-313871 A (Hoechst Marion Roussel Ltd.), 16 November 1999 (16.11.1999), claim 3; paragraph [0030]; fig. 3 (Family: none)	6

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2010/055212

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Since the invention in claim 1 is stated in US 3070094 A (Stanley J. SARNOFF), 25 October 1962 (25.12.1962), line 26, second column-line 47, six column, Fig. 1-4 (hereafter, referred to as document 1), any novelty to the invention stated in document 1 cannot be found. Therefore, the invention does not have a special technical feature. The "diluent chamber 24", "medicament chamber 26", "passage 45", "capsule 41", "medicament or vaccine 40" in document 1 correspond to the "swallowing support substance storage chamber", "enclosing object storage chamber", "predicted opening-formation portion", "enclosing object", (continued to extra sheet)

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☒ No protest accompanied the payment of additional search fees.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2010/055212

Continuation of Box No.III of continuation of first sheet(2)

"medicine composition" in the invention in claim 1, respectively. The claim involves five inventions (groups) having respective special technical features.

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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

- JP 10234820 A **[0005]**