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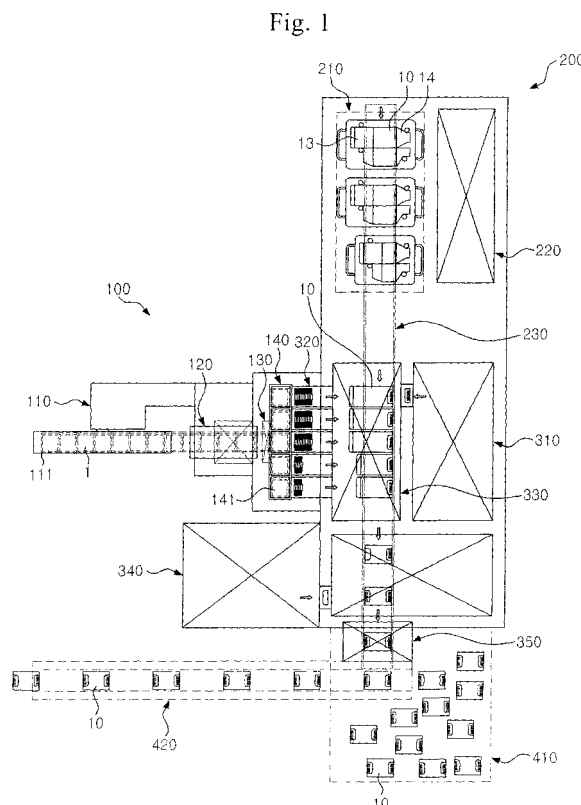
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(54) **Apparatus and method for automatically packing prescription packages as well as the prescription package box**

(57) The present invention relates to an apparatus and method for automatically packing prescription packages, in which prescription packages (1) discharged from an automatic prescribed-medicament packing machine for automatically packing medicaments prepared according to a physician's or pharmacist's prescription dose by dose are packed in a prescription package box (10) on a delivery basis, and a prescription package box (10) for packing prescription packages (1) on a delivery basis using the automatic prescription package packing apparatus. According to the present invention, there is provided a prescription package supplier (100) for cutting prescription packages (1) successively discharged from an automatic prescribed-medicament packing machine and supplying them, the automatic prescribed-medicament packing machine successively packing medicaments prepared according to a physician's or pharmacist's prescription dose by dose, and a prescription package receiver (300) for accommodating the prescription packages (1) supplied from the prescription package supplier (100) in a prescription package box (10) and then discharging the prescription package box (10); and a method for automatically packing prescription packages (1). In addition, according to the present invention, there is provided a prescription package box (10) in which prescription packages (1) are packed on a delivery basis by the automatic prescription package packing apparatus.



## Description

### BACKGROUND OF THE INVENTION

#### 1. Field of Invention

**[0001]** The present invention relates to apparatus and method for automatically packing prescription packages, in which prescription packages discharged from an automatic prescribed-medicament packing machine for automatically packing various medicaments dose by dose are packed in a prescription package box on a delivery basis, and a prescription package box for packing prescription packages on a delivery basis using the automatic prescription package packing apparatus.

#### 2. Description of the Prior Art

**[0002]** Conventionally, an automatic prescribed-medicament packing machine, which is supplied, according to a physician's or pharmacist's prescription, with medicaments such as tablets, capsules and the like from a plurality of cassette units respectively accommodating prescribed medicaments classified by their kinds and then continuously packs the medicaments dose by dose, has been developed and used.

**[0003]** A conventional automatic prescribed-medicament packing machine includes a plurality of cassette units which are arranged in an upper portion of a main body and in which medicaments such as tablets, capsules and the like of which the sizes and shapes are different from each other are accommodated; a hopper disposed in a lower portion of the main body for collecting the medicaments discharged and dropped from the cassette units; a printing unit for printing various data on a surface of a packing paper used for packing the medicaments; and a packing unit for packing the medicaments collected by the hopper in the packing paper.

**[0004]** The prescription packages packed by the above automatic prescribed-medicament packing machine are successively discharged out of the main body of the automatic prescribed-medicament packing machine. The successively discharged prescription packages are piled up out of the automatic prescribed-medicament packing machine as they are, so that a manager should periodically arrange the piled-up prescription packages.

**[0005]** As mentioned above, a manager should periodically arrange the prescription packages and then manually cut, pack and deliver the prescription packages by a predetermined number of packages or a number of packages for each patient. Thus, there is a problem in that the effects of the automation system obtained by the automatic prescribed-medicament packing machine that automatically packs prescribed medicaments are reduced by half. Also, it takes much time and manpower to arrange and deliver prescription packages.

### SUMMARY OF THE INVENTION

**[0006]** The present invention is conceived to solve the aforementioned problems in the prior art. An object of the present invention is to provide an apparatus and method for automatically packing prescription packages, in which prescription packages discharged from an automatic prescribed-medicament packing machine for automatically packing medicaments prepared according to a physician's or pharmacist's prescription dose by dose are automatically arranged and packed in a prescription package box on a delivery basis, and a prescription package box for packing prescription packages on a delivery basis using the automatic prescription package packing apparatus.

**[0007]** According to an aspect of the present invention for achieving the objects, there is provided an apparatus for automatically packing prescription packages prepared according to a physician's or pharmacist's prescription. The apparatus comprises a prescription package supplier for cutting prescription packages successively discharged from an automatic prescribed-medicament packing machine and supplying them, the automatic prescribed-medicament packing machine successively packing medicaments prepared according to a physician's or pharmacist's prescription dose by dose; and a prescription package receiver for accommodating the prescription packages supplied from the prescription package supplier in a prescription package box and then discharging the prescription package box.

**[0008]** The apparatus may further comprise a box supplier for supplying the prescription package receiver with the prescription package box for accommodating the prescription packages.

**[0009]** The prescription package supplier may include a cutting unit for cutting the successively connected prescription packages discharged from the automatic prescribed-medicament packing machine into the separate prescription packages, each of which contains one dose of medicaments; and an arranging unit for arranging the prescription packages, which are cut by the cutting unit, in groups of the prescription packages to be packed in the prescription package box and having them waiting.

**[0010]** The prescription package supplier may further include a bobbin mounting unit to which a bobbin tray is mounted, the prescription packages successively discharged from the automatic prescribed-medicament packing machine being stored while being wound around the bobbin tray.

**[0011]** The prescription package supplier may further include a prescription package delivery unit for delivering the successively connected prescription packages and at the same time reading dosage information recorded on each prescription package.

**[0012]** The prescription package delivery unit may include a vision inspection system for determining whether the prescribed medicaments are normally packed by reading shapes and colors of the medicaments photo-

graphed by a camera, the vision inspection system including a camera for photographing a prescription package in which the prescribed medicaments are packed and an image reading unit for determining whether the prescription package is normally packed through the image photographed by the camera.

[0013] The arranging unit may have at least one receiving portion, and the prescription packages to be packed are temporarily stored in each receiving portion based on dosage information.

[0014] The box supplier may include a box magazine for storing prescription package boxes classified into each size in an unfolded state; a first forming unit for folding one of the prescription package boxes stored in the box magazine to be shaped for containing the prescription packages, the one prescription package box having a required size; and a box delivery unit for supplying the shaped prescription package box to the prescription package receiver.

[0015] The prescription package receiver may include a loading unit for loading the prescription packages supplied from the prescription package supplier in the prescription package box; and a second forming unit for closing a cover of the prescription package box in which the prescription packages are loaded by the loading unit and sealing the prescription package box.

[0016] The prescription package receiver may further include a labeling unit for attaching a label, on which dosage information on the packed medicaments is printed, to an outside of the prescription package box.

[0017] The prescription package receiver may further include an inspecting unit for reading the dosage information from the label attached to the outside of the prescription package box that is completely packed, and then inspecting whether the prescription packages are accurately packed.

[0018] The apparatus may further comprise a chute for temporarily storing prescription package boxes that are completely packed and then discharged from the prescription package receiver.

[0019] The apparatus may further comprise a conveyor device for delivering the prescription package boxes stored in the chute to another place.

[0020] According to another aspect of the present invention, there is provided a method for automatically packing prescription packages prepared according to a physician's or pharmacist's prescription. The method comprise the steps of cutting prescription packages successively discharged from an automatic prescribed-medicament packing machine and supplying them, the automatic prescribed-medicament packing machine automatically packing medicaments prepared according to a physician's or pharmacist's prescription dose by dose; and accommodating the supplied prescription packages in a prescription package box to be stacked up therein.

[0021] According to a further aspect of the present invention, there is provided a prescription package box for packing prescription packages on a delivery basis by the

aforementioned automatic prescription package apparatus.

[0022] The prescription package box may have an opening formed at a lower end thereof so that the accommodated prescription packages are taken out one by one, and a label attached to the opening so that the opening is maintained in a closed state until the prescription package box is used, the label having dosage information on the packed prescribed medicaments printed thereon, the label being removed when the prescription package box is used.

[0023] The prescription package box may have an additional label attached to another position than the opening and the same dosage information as the label attached to the opening being printed on the additional label having.

[0024] The prescription packages may be accommodated inside of the prescription package box to be stacked up therein, and the prescription packages may be stacked up so that dosage order is the same as the stacked order of the prescription packages from the bottom.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0025]

Fig. 1 is a schematic view of an apparatus for automatically packing prescription packages prepared by a physician's or pharmacist's prescription according to the present invention;

Fig. 2 is a perspective view of a prescription package box, in which prescription packages are packed on a delivery basis by the automatic prescription package packing apparatus of Fig. 1; and

Fig. 3 is a sectional view of the prescription package box.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0026] Hereinafter, an apparatus and method for automatically packing prescription packages and a prescription package box according to a preferred embodiment of the present invention will be described in detail.

[0027] Fig. 1 is a schematic view showing an apparatus for automatically packing prescription packages on a delivery basis according to the present invention, Figs. 2 (a) to (c) are perspective views showing a prescription package box, in which the prescription packages are packed on a delivery basis by the automatic prescription package packing apparatus of Fig. 1, and Fig. 3 is a sectional view showing the prescription package box.

[0028] As shown in Fig. 1, the automatic prescription package packing apparatus according to the present invention comprises a prescription package supplier 100 for cutting a series of connected prescription packages 1 successively discharged from an automatic prescribed-

medicament packing machine into separate prescription packages 1, each of which contains one dose of medicaments and then arranging and supplying the prescription packages 1 by a predetermined number of packages or a number of packages for each patient, i.e., on a delivery basis; a box supplier 200 for supplying a prescription package box for containing the prescription packages 1; and a prescription package receiver 300 for accommodating the prescription packages 1 supplied from the prescription package supplier 100 in the prescription package box supplied from the box supplier 200 and then discharging the prescription package box.

**[0029]** The prescription package supplier 100 includes a cutting unit 130 for cutting the successively connected prescription packages 1 discharged from the automatic prescribed-medicament packing machine into the separate prescription packages 1 each of which contains one dose of medicaments 2; and an arranging unit 140 for arranging the prescription packages 1, which are cut by the cutting unit 130, in groups of the prescription packages to be packed in respective prescription package boxes 10 and having them waiting.

**[0030]** Further, in a case where the prescription packages 1 successively discharged from the automatic prescribed-medicament packing machine are stored while being wound around a bobbin tray 111, the prescription package supplier 100 further includes a bobbin mounting unit 110 to which the bobbin tray 111 may be mounted.

**[0031]** Also, the prescription package supplier 100 preferably further includes a prescription package delivery unit 120 for delivering the successively connected prescription packages supplied from the bobbin tray 111 or the automatic prescribed-medicament packing machine and at the same time reading dosage information recorded on each prescription package 1 according to a physician's or pharmacist's prescription.

**[0032]** The prescription packages 1 successively discharged from the automatic prescribed-medicament packing machine are generally stored while being wound around the bobbin tray 111. The bobbin tray 111 around which the prescription packages 1 are wound may be temporarily placed in an additional storage rack (not shown).

**[0033]** The bobbin mounting unit 110 has a motor (not shown) housed therein, and the motor intermittently rotates the bobbin tray 111. The motor is preferably intermittently operated by means of a sensor (not shown) for detecting a state where the prescription packages 1 supplied from the bobbin tray 111 to the prescription package delivery unit 120 sags. That is, if the prescription packages 1 between the bobbin tray 111 and the prescription package delivery unit 120 are pulled tightly, the sensor detects it and then operates the motor to rotate the bobbin tray 111 by a predetermined angle to unwind the prescription packages 1.

**[0034]** The prescription packages 1 unwound from the bobbin tray 111 are delivered to the cutting unit 130 through the prescription package delivery unit 120 having

rollers or the like (not shown). At this time, the prescription package delivery unit 120 is preferably provided with an information acquiring means such as a scanner (not shown) to read the dosage information recorded on the outside of the prescription packages 1. The dosage information recorded on the outside of the prescription packages 1 is recorded while the automatic prescribed-medicament packing machine packs medicaments according to a physician's or pharmacist's prescription dose by dose.

**[0035]** If necessary, the prescription package delivery unit 120 may include a vision inspection system (not shown) for inspecting a kind and state of the medicaments 2 packed in each prescription package 1. The vision inspection system, which determines whether the prescribed medicaments are normally packed by reading shapes and colors of the medicaments photographed by a camera, may include a camera (not shown) for photographing a prescription package in which the prescribed medicaments are packed, and an image reading unit (not shown) for determining whether the prescription package is normally packed through the image photographed by the camera.

**[0036]** In a case where the prescription package delivery unit 120 includes the vision inspection system as mentioned above, it is possible to inspect and confirm whether medicaments are suitably packed according to the dosage information before the prescription packages are packed in a prescription package box and then to store the information in a database.

**[0037]** The cutting unit 130 cuts the successively connected prescription packages 1 into the separate prescription packages 1 using a cutter (not shown). The dosage information read by the prescription package delivery unit 120 is transmitted to the cutting unit 130 together with the prescription packages. Based on the dosage information, the cutting unit 130 counts the number of prescription packages 1 for each medicine taker. The dosage information is also transmitted to the box supplier as explained later, so that the box supplier may supply a prescription package box suitable for the number of the prescription packages 1.

**[0038]** Meanwhile, the cutting unit 130 may include a position measurement sensor (not shown) so as to cut the connected prescription packages at an accurate position.

**[0039]** The prescription packages 1 cut into the pieces are supplied to the arranging unit 140. The arranging unit 140 has at least one receiving portion 141, wherein the prescription packages 1 to be packed are temporarily stored in each receiving portion 140 based on dosage information by a predetermined number of the packages prescription packages 1 to be packed or a number of packages for each medicine taker. In order to supply the cut prescription packages 1 by the cutting unit 130 to the corresponding receiving portion 141, a passage selectively opened or closed may be formed between the cutting unit 130 and each receiving portion 141, or the re-

ceiving portion 141 may be configured to accommodate the cut prescription packages 1 while the receiving portion 141 moves.

**[0040]** At the prescription package receiver 300, the prescription packages 1 accommodated in the receiving portion 141 of the arranging unit 140 in an arranged state are accommodated in the prescription package box 10 supplied from the box supplier 200.

**[0041]** The box supplier 200 includes a box magazine 210 for storing the prescription package boxes classified into each size in an unfolded state; a first forming unit 220 for folding one having a required size of the prescription package boxes stored in the box magazine to be shaped for containing the prescription packages 1; and a box delivery unit 230 for supplying the shaped prescription package box 10 to the prescription package receiver 300.

**[0042]** The box magazine 210 stores the prescription package boxes that are not yet folded into a box shape in a laminated state and supplies the first forming unit 220 with one of the boxes, which has a suitable size for the dosage information transmitted from the prescription package supplier 100.

**[0043]** The first forming unit 220 forms the prescription package box 10 in a shape as shown in Figs. 2 and 3. At this time, the prescription package box 10 to be required for inputting the prescription packages 1 is shaped so that an upper cover 13 thereof is not closed but only a lower cover 14 thereof is closed. The prescription package box 10 shaped as mentioned above is delivered onto the box delivery unit 230.

**[0044]** The box delivery unit 230 is preferably configured as a conveyor device that delivers the shaped prescription package box 10 to the prescription package receiver 300. Each prescription package box 10 is assigned specific information related to a location on the box delivery unit 230. This specific information has contents related to the size and location of the box on the box delivery unit 230.

**[0045]** To this end, the box delivery unit 230 preferably has partitioned spaces in each of which the prescription package box 10 is positioned one by one, or the box delivery unit 230 is provided with a delivery tray (not shown) on which each prescription package box 10 may be loaded. A chip having an identification number recoded may be attached to each space or delivery tray.

**[0046]** As mentioned above, if the box delivery unit 230, i.e., the conveyor device, is operated, the identification information of the box may be transmitted together at each step, and boxes having suitable sizes can be supplied to the prescription package receiver 300 according to the dosage information sent from the prescription package supplier 100.

**[0047]** The prescription package receiver 300 includes a loading unit 320 for loading the prescription packages, which are supplied from the prescription package supplier 100, in the prescription package box 10 supplied from the box supplier 200; and a second forming unit 330

for closing the upper cover 13 of the prescription package box 10 in which the prescription packages are loaded by the loading unit 320 and sealing the prescription package box.

**[0048]** The prescription package receiver 300 may further include first and second labeling units 310, 340 for attaching labels, on which dosage information such as information on the packed medicaments is printed, to an outside of the prescription package box 10.

**[0049]** In addition, the prescription package receiver 300 preferably further includes an inspecting unit 350 for reading the dosage information from the label 15 attached to the outside of the prescription package box 10 that is completely packed, inspecting whether the prescription packages are accurately packed, and then storing the data in a server (not shown).

**[0050]** The first labeling unit 310 attaches the label 15 to a lower portion of the prescription package box 10 supplied by the box delivery unit 230 of the box supplier 200 (see Fig. 2 (a)). To this end, the first labeling unit 310 includes a printer for printing a label based on the dosage information sent from the prescription package supplier 100, and a label attaching unit for attaching the printed label to the outside of the prescription package box 10.

**[0051]** The label 15 attached to the lower portion of the box prevents the lower cover 14 from being opened and also serves to close an opening 11 for taking out the prescription package 1 until the prescription package box is used, as described later with reference to Figs. 2 and 3.

**[0052]** Further, if the prescription package box 10 positioned on the box delivery unit 230 of the box supplier 200 reaches a predetermined position, the loading unit 320 loads the prescription packages 1, which are in a standby state as being arranged in the prescription package supplier 100, in the prescription package box 10. To this end, the loading unit 320 may be provided with a guide member (not shown) and a pusher (not shown). In addition, in order to prevent the prescription package box 10 from playing while the prescription packages are loaded, it is preferred that there is provided a clamping means for gripping the prescription package box 10.

**[0053]** If the prescription packages 1 are completely loaded, the second forming unit 330 closes the open upper cover 13 of the prescription package box 10 to seal the box. The prescription package box 10 formed in the shape of a perfect cubic by the second forming unit 330 is delivered toward the second labeling unit 340 by means of the box delivery unit 230.

**[0054]** The second labeling unit 340 attaches a label to an upper portion of the prescription package box 10 supplied by the box delivery unit 230 of the box supplier 200 (not shown in Fig. 2). To this end, the second labeling unit 340 includes a printer for printing a label based on the dosage information sent from the prescription package supplier 100, and a label attaching unit for attaching the printed label to the outside of the prescription package box 10, similarly to the first labeling unit 310.

**[0055]** The inspecting unit 350 is used for finally in-

specting a packed state of the prescription package box 10, in which the prescribed medicaments are packed, before the prescription package box 10 is discharged. The inspecting unit 350 may inspect the packing state by confirming whether the dosage information sent from the prescription package supplier 100 is identical to the information read from the label attached to the outside of the prescription package box 10. To this end, the inspecting unit 350 may be provided with a scanner (not shown) for reading the information of the label.

**[0056]** Various data read and inspected by the inspecting unit 350 are transmitted to the server (not shown) that controls the overall works of the above automatic prescription package packing apparatus. The data stored in the server may be used in common with other apparatus for another work, if necessary.

**[0057]** The prescription package boxes 10 completely packed and then discharged from the prescription package receiver 300 may be temporarily stored in a chute 410. Subsequently, the prescription package boxes 10 may be delivered for a post-process such as distribution work while being stored in the chute 410, or they may be delivered to another place by means of a conveyor device 420.

**[0058]** The prescription package boxes 10 may also be delivered for a post-process by means of the conveyor device 420 just after it is discharged from the prescription package receiver 300 without a temporary storage means such as the chute.

**[0059]** In addition, it is possible to prepare a worktable (not shown) between the chute 410 and the conveyor device 420 so that a manager may finally inspect the prescription package boxes on the work table with the naked eye. Also, a scanner and a display may be installed over the work table to inspect the finally scanned information again.

**[0060]** As shown in Figs. 2 and 3, the prescription package box 10, in which prescription packages 1 are packed on a delivery basis by the automatic prescription package packing apparatus, has an generally rectangular hexahedral shape, and the opening 11 is formed in a lower end of the prescription package box 10 such that the accommodated prescription packages 1 can be taken out one by one.

**[0061]** As explained above, the opening 11 is maintained in a closed state by the label 15 until the prescription package box is used, and the label 15 is removed for using the prescription package box. Although not shown, the labels may be attached to the upper and lower portions of the prescription package box 10, respectively. Thus, even though the label 15 attached to the lower portion is removed, it is possible to inspect the dosage information such as the kind of accommodated using the label (not shown) attached to the upper portion.

**[0062]** Referring to Fig. 3, the prescription packages 1 respectively containing the prescribed medicaments 2 are stacked up inside of the prescription package box 10. The prescription packages are preferably stacked up

in order so that the prescription packages are used from the bottom. For example, in a case where a physician or pharmacist prescribes that the medicaments should be taken three times a day for three days, the prescription packages are stacked up so that the lowermost prescription package should be taken out in the morning of the first day, the prescription package right above it should be taken out in the daytime of the first day, and the prescription package right above it should be taken out in the evening of the first day.

**[0063]** As mentioned above, the present invention may provide a prescription package box in which prescription packages are accommodated in order of usage, so that a patient may take prescribed medicaments more easily with no fear of taking medicaments in wrong order.

**[0064]** According to the present invention, contrary to a conventional method of packing the same kind of medicaments in a bundle as conducted in common pharmaceutical companies, it is possible to arrange prescription packages containing medicaments for each medicine taker prescribed by a physician or pharmacist and then automatically cut and pack the packages by a predetermined number of packages or a number of packages for each patient.

**[0065]** Therefore, according to the present invention, it is possible to maximize the effect of an automation system obtained by an automatic prescribed-medicament packing machine that automatically packs prescribed medicaments and to improve the productivity by reducing manpower and time consumed for arranging and delivering prescription packages.

**[0066]** It has been described with reference to the accompanying exemplary drawings that the apparatus and method for automatically packing prescription packages on a delivery basis, and the prescription package box in which prescription packages are packed on a delivery basis using the automatic prescription package packing apparatus according to the present invention. However, the present invention is not limited to the aforementioned embodiment and the accompanying drawings. It will be apparent to those skilled in the art that various modifications and changes can be made thereto within the spirit and scope of the present invention.

## Claims

1. An apparatus for automatically packing prescription packages prepared according to a physician's or pharmacist's prescription, comprising:

a prescription package supplier for cutting prescription packages successively discharged from an automatic prescribed-medicament packing machine and supplying them, the automatic prescribed-medicament packing machine successively packing medicaments prepared according to a physician's or pharmacist's pre-

- scription dose by dose; and  
a prescription package receiver for accommod-  
ating the prescription packages supplied from  
the prescription package supplier in a prescrip-  
tion package box and then discharging the pre-  
scription package box.
2. The apparatus as claimed in claim 1, further com-  
prising a box supplier for supplying the prescription  
package receiver with the prescription package box  
for accommodating the prescription packages.
3. The apparatus as claimed in claim 1, wherein the  
prescription package supplier includes:
- a cutting unit for cutting the successively con-  
nected prescription packages discharged from  
the automatic prescribed-medicament packing  
machine into the separate prescription packag-  
es, each of which contains one dose of medica-  
ments; and  
an arranging unit for arranging the prescription  
packages, which are cut by the cutting unit, in  
groups of the prescription packages to be  
packed in the prescription package box and hav-  
ing them waiting.
4. The apparatus as claimed in claim 3, wherein the  
prescription package supplier further includes a bob-  
bin mounting unit to which a bobbin tray is mounted,  
the prescription packages successively discharged  
from the automatic prescribed-medicament packing  
machine being stored while being wound around the  
bobbin tray.
5. The apparatus as claimed in claim 3, wherein the  
prescription package supplier further includes a pre-  
scription package delivery unit for delivering the suc-  
cessively connected prescription packages and at  
the same time reading dosage information recorded  
on each prescription package.
6. The apparatus as claimed in claim 5, wherein the  
prescription package delivery unit includes a vision  
inspection system for determining whether the pre-  
scribed medicaments are normally packed by read-  
ing shapes and colors of the medicaments photo-  
graphed by a camera, the vision inspection system  
including a camera for photographing a prescription  
package in which the prescribed medicaments are  
packed and an image reading unit for determining  
whether the prescription package is normally packed  
through the image photographed by the camera.
7. The apparatus as claimed in claim 3, wherein the  
arranging unit has at least one receiving portion, and  
the prescription packages to be packed are tempo-  
rarily stored in each receiving portion based on dos-
- age information.
8. The apparatus as claimed in claim 2, wherein the  
box supplier includes:
- a box magazine for storing prescription package  
boxes classified into each size in an unfolded  
state;  
a first forming unit for folding one of the prescrip-  
tion package boxes stored in the box magazine  
to be shaped for containing the prescription  
packages, the one prescription package box  
having a required size; and  
a box delivery unit for supplying the shaped pre-  
scription package box to the prescription pack-  
age receiver.
9. The apparatus as claimed in claim 1, wherein the  
prescription package receiver includes:
- a loading unit for loading the prescription pack-  
ages supplied from the prescription package  
supplier in the prescription package box; and  
a second forming unit for closing a cover of the  
prescription package box in which the prescrip-  
tion packages are loaded by the loading unit and  
sealing the prescription package box.
10. The apparatus as claimed in claim 9, wherein the  
prescription package receiver further includes a la-  
beling unit for attaching a label, on which dosage  
information on the packed medicaments is printed,  
to an outside of the prescription package box.
11. The apparatus as claimed in claim 10, wherein the  
prescription package receiver further includes an in-  
specting unit for reading the dosage information from  
the label attached to the outside of the prescription  
package box that is completely packed, and then  
inspecting whether the prescription packages are  
accurately packed.
12. The apparatus as claimed in claim 1, further com-  
prising a chute for temporarily storing prescription  
package boxes that are completely packed and then  
discharged from the prescription package receiver.
13. The apparatus as claimed in claim 12, further com-  
prising a conveyor device for delivering the prescrip-  
tion package boxes stored in the chute to another  
place.
14. A method for automatically packing prescription  
packages prepared according to a physician's or  
pharmacist's prescription, comprising the steps of:
- cutting prescription packages successively dis-  
charged from an automatic prescribed-medica-

ment packing machine and supplying them, the automatic prescribed-medicament packing machine automatically packing medicaments prepared according to a physician's or pharmacist's prescription dose by dose; and  
accommodating the supplied prescription packages in a prescription package box to be stacked up therein.

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15. A prescription package box for packing prescription packages on a delivery basis by the automatic prescription package apparatus according to any one of claims 1 to 11. 10
16. The prescription package box as claimed in claim 15, wherein the prescription package box has an opening formed at a lower end thereof so that the accommodated prescription packages are taken out one by one, and a label attached to the opening so that the opening is maintained in a closed state until the prescription package box is used, the label having dosage information on the packed prescribed medicaments printed thereon, the label being removed when the prescription package box is used. 20
17. The prescription package box as claimed in claim 16, wherein the prescription package box has an additional label attached to another position than the opening and the same dosage information as the label attached to the opening being printed on the additional label having. 30
18. The prescription package box as claimed in claim 16, wherein the prescription packages are accommodated inside of the prescription package box to be stacked up therein, and the prescription packages are stacked up so that dosage order is the same as the stacked order of the prescription packages from the bottom. 35

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Fig. 1

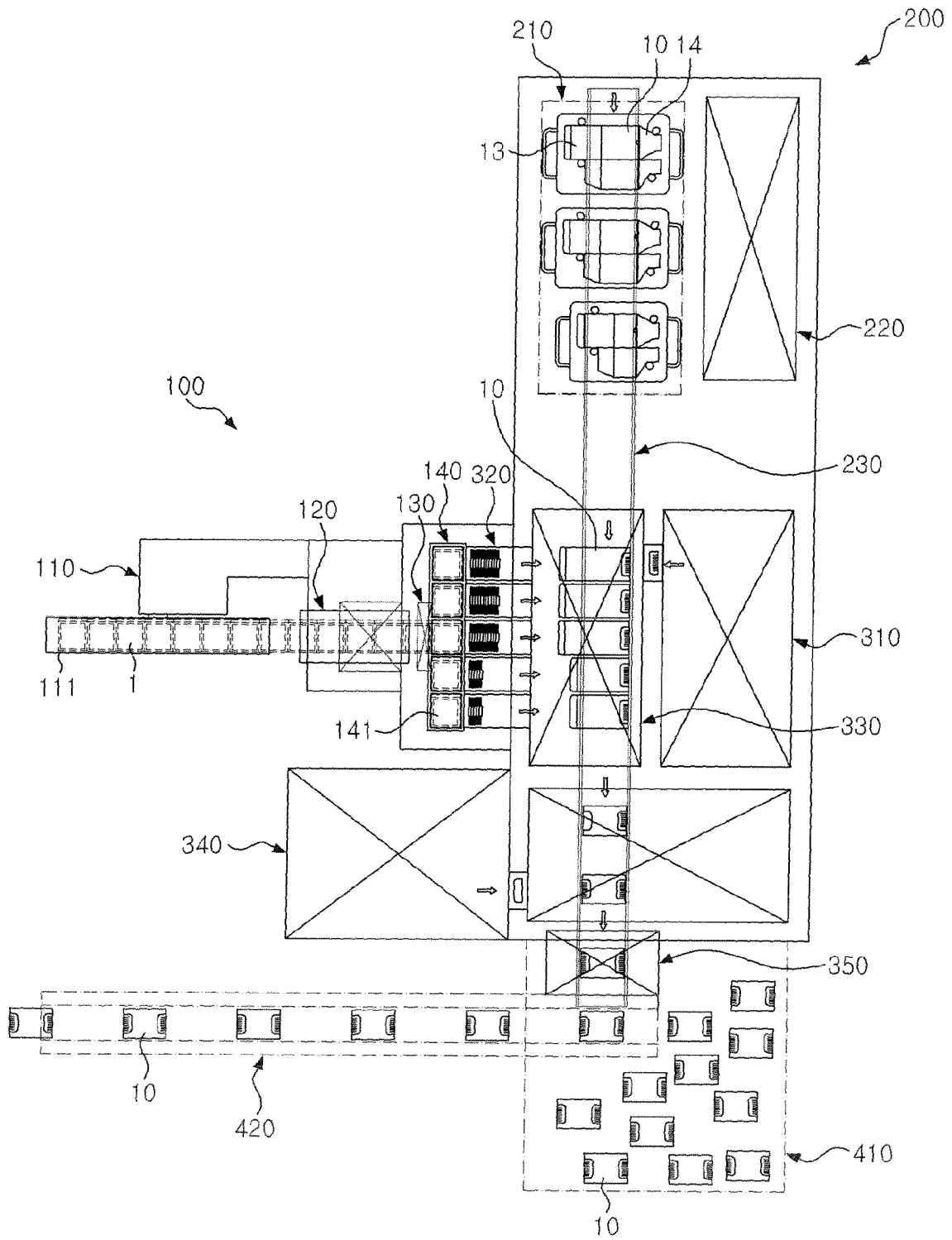


Fig. 2

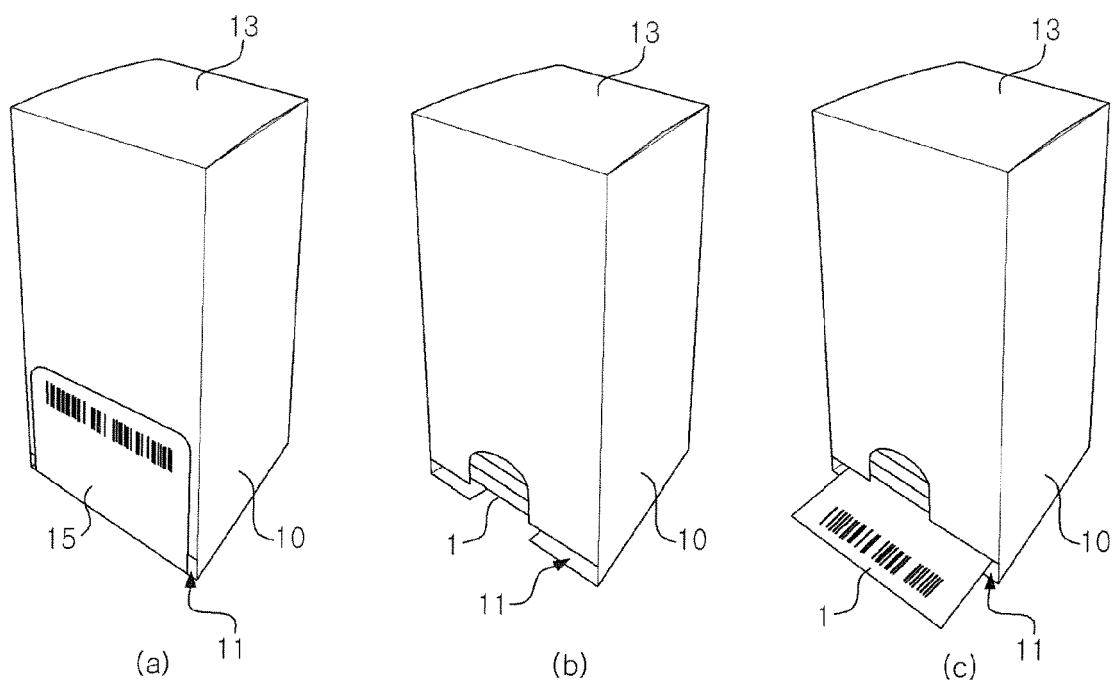
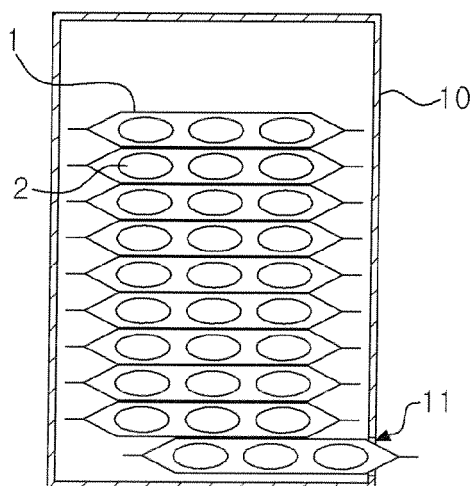


Fig. 3





## EUROPEAN SEARCH REPORT

Application Number  
EP 08 15 5465

| DOCUMENTS CONSIDERED TO BE RELEVANT  |   |                                  |   |
|--|---|----------------------------------|---|
| Category   | Citation of document with indication, where appropriate, of relevant passages   | Relevant to claim                | CLASSIFICATION OF THE APPLICATION (IPC)               |
| A  | US 6 691 490 B1 (YUYAMA SHOJI [JP] ET AL)<br>17 February 2004 (2004-02-17)<br>* column 3, line 61 - column 7, line 67;<br>figures * | 1,2,14,<br>15                    | INV.<br>B65B5/10<br>B65B57/14<br>A61J7/00<br>B65B5/06 |
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