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Remarks:

Claims 16 to 19 are deemed to be abandoned due to non-payment of the claims fees (Rule 45(3) EPC).

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(54) **DISPENSER**

(57) Dispenser (1) comprising at least one channel (2) for storing a plurality of stacked objects (O) with a parallelepiped shape, the channel (2) being delimited by two lateral walls (21, 22) and a rear wall (23) and being frontally opened for accessing the channel (2), such that the lateral walls (21, 22) have a frontal free edge (24), the dispenser (1) comprising a movable element for frontally retaining the objects stored in the channel (2), wherein the movable element is a rod (3) parallel to the channel (2) that can rotate about an axis (4) parallel to the channel (2), thus having two moving rotating directions, the axis (4) being arranged in front of one of the frontal free edges (24) such that the rod (3) can be moved between a position in which the frontal opening of the channel (2) is clear for the replacement of objects (O) in the channel (2) and a retaining position in which the rod is inside the channel (2), a storage depth corresponding to the distance (d) between the rod (3) and the rear wall (23) being defined in the retaining position, the dispenser comprising means for fixing the rod in the channel (2) at different distances (d) of the rear wall (23), such that the storage depth (d) can be varied depending on the size of the objects (O) in the direction perpendicular to the rear wall (23).

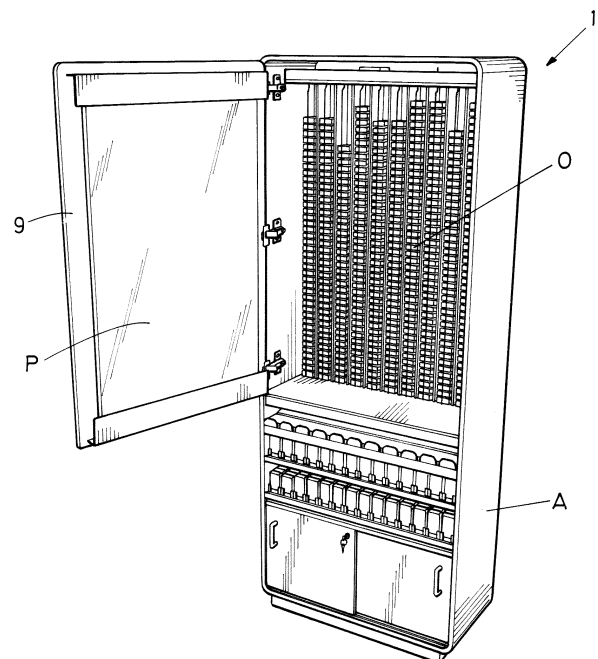


FIG.2

Description

TECHNICAL FIELD

[0001] The present invention relates to the field of dispensers of products arranged in several adjacent stacks that are dispensed from the bottom of the stacks. In particular, it relates to a dispenser of great simplicity in which it is intended that each component is as simple as possible, both to reduce their manufacturing cost and to simplify their use and maintenance.

STATE OF THE ART

[0002] The object of the invention relates to a dispenser designed to supply different types of products packaged in boxes and the like, such as tobacco packets, while said dispenser is usable for any type of varied and repetitive products, provided they adopt constant and regular geometric shapes for their stacked storage in a channel from where they can be provided unitarily.

[0003] In a known type, the dispenser comprises many adjacent vertical channels for storing stacked objects with a parallelepiped shape, such as tobacco packets.

[0004] In most of these dispensers, the channel is delimited by two lateral walls, a rear wall and a frontal wall. In some cases, the frontal wall is fixed, like the rear wall, such that possible blocking of the stacked objects may be difficult to unblock. In other cases, the frontal wall of each channel is provided with a slot that allows seeing the level of the stack. In other dispensers, the frontal wall is movable in a back front direction, such that it is possible to vary the storage depth of the channels. In the two latter cases, unblocking and/ or refilling are difficult tasks too, since the replenishment must be carried out from the upper aperture of the channels, and the dispensers are complex since they are made of many parts.

[0005] A key objective of the present invention is to provide a simple dispenser, which has a reduced number of parts, for regulating the storage depth and allowing a rapid replacement.

DESCRIPTION OF THE INVENTION

[0006] For overcoming the drawbacks of the prior art dispensers, the present invention proposes a dispenser comprising at least one channel for storing a plurality of stacked objects with a parallelepiped shape, the channel being delimited by two lateral walls and a rear wall and being frontally opened for accessing the channel, such that the lateral walls have a frontal free edge, the dispenser comprising a movable element for frontally retaining the objects stored in the channel, and wherein the movable element is a rod parallel to the channel that can rotate about an axis parallel to the channel, thus having two moving rotating directions.

[0007] The axis is arranged in front of one of the frontal free edges such that the rod can be moved between a

position in which the frontal opening of the channel is clear for the replacement of objects in the channel and a retaining position in which the rod is inside the channel and prevents the objects from moving forwards.

[0008] In this way, a storage depth corresponding to the distance between the rod and the rear wall is defined in the retaining position. The dispenser also comprises means for fixing the rod in the channel at different distances of the rear wall, such that the storage depth can be varied depending on the size of the objects in the direction perpendicular to the rear wall.

[0009] Therefore, it is a very simple storage structure, easy to build and easy to use. The rods can be as slender as permitted by the minimum retention force necessary to be exerted. It is emphasized that the fixing means of the rod are claimed as part of the dispenser itself, so that the distance can be regulated and such that a gap is ensured between the objects to be dispensed and the rod, and thus so that they can go down unhindered.

[0010] In some embodiments, both the lower end and the upper end of the rod have a perpendicular segment that extend toward the axis, the perpendicular segments extending themselves with another segment such that each one defines a free end destined to rotate in a respective rotation hole coinciding with the axis.

[0011] This is a simple implementation of the rotation of the rod, since it is sufficient to properly bend the ends of the rods with two approximately 90° curves so that their ends constitute the support points to rotate about the axis. The rotation could also be implemented with separate pieces, but that would complicate the assembly.

[0012] In some embodiments, the means for fixing the rod are able to transmit on the rod forces in the two moving directions.

[0013] Therefore, the rods can be locked so that they are in a fixed position without necessarily contacting the objects to be dispensed.

[0014] In some embodiments, the means for fixing the rod comprise a part provided with an engaging portion destined to be engaged in the upper end of the channel and a fixing portion for fixing the rod, the fixing portion being provided with a fixing surface of the rod.

[0015] Thus, there is a separate part that acts as an intermediary part between the rod and the channel, so that this piece is interchangeable, allowing the adjustment depth storage by just replacing the part. Preferably these parts are made of wood. Other components of the dispenser can be made of wood as well.

[0016] In some embodiments, the fixing surface comprises:

- a slot destined to be arranged along a perpendicular direction to the channel and parallel to the rear wall, and
- a fixing element of the rod that is movable through the slot and that can be fixed in a position in the slot.

[0017] This feature reduces the size of the fixing ele-

ment, as this latter can be positioned in the desired position in the slot. Since the rod is a rotating member, depending on the selected storage depth, not only this latter will be modified, but also the position along the fixing surface of the rod will change, such that it will be possible to position the fixing element in its right position and design the fixing element with just the size necessary for its function of fixing the rod.

[0018] In some embodiments, the fixing element is a magnet and the rod is made of ferromagnetic material. This is a preferred solution due to its simplicity.

[0019] In some embodiments, the slot has a rectangular or dovetailed-shaped cross section.

[0020] In the case where it is rectangular, the material from which the fixing element is somewhat deformable and the dimensions of the fixing element are slightly larger to achieve a resistant engagement. Another possibility is to use an adhesive to permanently attach the magnet to the slot. It is also possible to combine an adhesive with a dovetail shaped section of the slot to increase the retention of the fixing element in the normal direction.

[0021] In some embodiments, the fixing element has a flexible hook for clipping the rod, the hook being made of metal or plastic material.

[0022] This is an alternative to the magnet that requires no magnetic materials.

[0023] In some embodiments, the engaging portion has a shape that is complementary to the upper end of the channel and comprises a fixing magnet flush with a surface destined to be arranged against an internal surface of the channel, said internal surface of the channel comprising a ferromagnetic portion for adhering to the fixing magnet.

[0024] This solution is advantageous since the same elements with the same dimensions for different functions can be employed, so that both the manufacture of the dispenser and the replacement of parts are simplified.

[0025] In some embodiments both magnets are identical.

[0026] In some embodiments one or both ends of the rod destined to be inserted in the axis holes comprise protrusions, and the holes comprise in their internal surface recesses, such that the protrusions and the recesses cooperate to define many stable positions of the rod corresponding to different storage depths.

[0027] This is another alternative to establish different stable positions of the rods, but without using the intermediate part, but instead by carrying out a suitable shaping of the articulation of the rods.

[0028] In some embodiments, the dispenser comprises a plurality of channels, separated by the lateral walls and a corresponding number of rods.

[0029] In some embodiments, the dispenser comprises two crossbars destined to be fixed to the front edges of the walls, one of them being an upper bar provided on a lower surface with an upper rotation hole for every rod, the other one being a lower bar provided on an upper surface with a lower rotation hole for every rod.

[0030] The crossbars make possible to increase the rigidity of the structure, since they join the walls that separate the channels, and allow for supporting the ends of the rods.

[0031] In some embodiments, the dispenser comprises in the lower end of each channel a guiding slot oriented in the depth direction, and a pusher movable along the guiding slot and provided with a pushing step in its rear end which is coincident, in a back position, with the rear wall of the channel such that in a back position the step can be positioned behind the rear surface of the lowest object, the pusher being provided in its front end with a handle, such that when pulling the handle, the step pushes the lowest object of the stack and extracts it by the lower end of the front opening of the channel. The pusher comprises, extending backwards from the step, a flat surface for the temporary bearing of the following object to be dispensed.

[0032] This is a very simple solution for dispensing the lowermost product in the stack. It is emphasized that in more advanced variants the handle can be replaced by a button that activates an electromagnetic actuator to move the pusher.

[0033] In some embodiments, the dispenser comprises a front cover articulated in a side of the dispenser, the front cover being provided with a screen, such that, when the cover is closed, images can be displayed, and when it is opened, the rods can be accessed to open them, and then the channels can be accessed for replacement of the objects to be dispensed.

[0034] Thus, the functions of the dispenser expand to information and interactive functions. The information may be particularly related to the products to be dispensed, or the operation of the machine itself, such as reporting on the filling level of the different stacks of products.

[0035] The invention also relates to a dispenser consisting of a box provided inside with a plurality of channels for storing a plurality of stacked objects with a parallelepiped shape, each channel being delimited by two lateral walls and a rear wall and frontally opened for accessing the channels, the dispenser being provided with a front cover articulated with one of the edges of the box such that it allows accessing the channels for the replacement of objects, the dispenser comprising a dispensing opening arranged under the front cover, the dispensing opening being in communication with the lower end of the channels such that the lowest object of the stacked objects can be dispensed through the dispensing opening, wherein the front cover is provided with an opening and a screen mounted in the front cover, such that images projected by the screen can be seen through the opening.

[0036] Thus, it is a dispenser in which the entire front surface of the cabinet is used, and which also allows incorporating information display functions regarding the operation of the machine itself, such as the status of the dispenser, the filling level of the stacks, or if it is a tactile screen, it constitutes an interactive environment for the

user. If the machine is manual, it can serve for example to find out which handle corresponds to the selected product, and if it is automatic it allows interfacing with automatic control means to expel the chosen product.

[0037] In some embodiments, the dispenser comprises in the lower end of each channel a guiding slot oriented according to a depth direction, and a pusher that is movable in the guiding slot provided with a step in its rear portion which coincides, in a back position, with the rear wall of the channel, the dispenser being provided with means for moving the pusher.

[0038] In some embodiments, the means for moving each pusher comprise in the frontal part of the pusher a handle that can be accessed from the outside, such that when pulling the handle, the step pushes the lowest object of the stack and extracts it by the lower end of the front opening of the channel and then the object exits through the dispensing opening, the dispensing opening being arranged between the handles and the front cover.

[0039] In some embodiments, the means for moving each pusher comprise an electromagnetic actuator, the dispenser being provided with control means, the screen being a tactile screen, the screen and the electromagnetic actuators being connected to the control means.

[0040] In such a way, the screen can display the type of product of the different stacks, the user can select a product displayed, and then the control means can activate the electromagnetic actuator to dispense the selected product.

BRIEF DESCRIPTION OF THE DRAWINGS

[0041] To complete the description and in order to provide for a better understanding of the invention, a set of drawings is provided. Said drawings form an integral part of the description and illustrate an embodiment of the invention, which should not be interpreted as restricting the scope of the invention, but just as an example of how the invention can be carried out. The drawings comprise the following figures:

Figure 1 is a perspective view of the inventive dispenser, provided with a screen in the front cover.

Figure 2 is a perspective view that shows the inside of the dispenser, with the channels arranged inside thereof.

Figure 3 is a perspective view of the main components of the dispenser, according to an embodiment.

Figures 4 to 6 are perspective views of different parts for fixing the rods, for different storing depths and shown in their operative orientation.

Figures 7 to 9 correspond to the sections of the parts shown in figures 4 to 6.

Figure 10 is a section along a vertical plane perpendicular to the rear wall that schematically shows the main elements in an operative position.

Figure 11 is a section along a vertical plane perpendicular to the rear wall that schematically shows the main elements in a replenishment position, that is, with the rod opened to access the inside.

Figure 12 is schematic plant view of the basic arrangement of the invention.

Figure 13 to 16 show for two embodiments of the invention a frontal and a perspective view.

DESCRIPTION OF A WAY OF CARRYING OUT THE INVENTION

[0042] As shown in the drawings the invention relates to a dispenser 1 provided with channels 2 for storing a plurality of stacked objects O with a parallelepiped shape like tobacco packs for example.

[0043] As shown in FIGS. 3 and 10, the channel 2 is delimited by two lateral walls 21, 22 and a rear wall 23, thus leaving a frontal opening for accessing the channel 2.

[0044] In such a way, the lateral walls have a back edge joined to the rear wall 23, and a frontal free edge 24 that is visible in FIG. 3.

[0045] The dispenser 1 comprises a movable element 3 for frontally retaining the objects stored in the channel 2, which is a rod 3 parallel to the channel 2 that can rotate about an axis 4 parallel to the channel 2. Therefore, the rod 3 has two moving rotating directions. It is understood that the channel defines a longitudinal direction that will be normally arranged vertical in use. The channel could also be tilted.

[0046] The axis 4 is arranged in front of one of the frontal free edges 24, or nearby thereof, such that the rod 3 can be moved between:

- a position in which the frontal opening of the channel 2 is clear for the replacement of objects O in the channel 2, as shown in FIG. 11 and with dashed lines in FIG. 12; and
- a retaining position, shown in FIG. 10 and with solid line in FIG. 12, in which the rod is inside the channel 2.

[0047] As shown in FIG. 12, in the retaining position, a storage depth d corresponding to the distance d between the rod 3 and the rear wall 23 is defined in the retaining position. This distance has to be slightly greater, in a distance e comprised between 1 and 3 mm, than the size of the objects to be dispensed in the d direction, so as to avoid the blocking of the movement of the objects in the vertical direction.

[0048] The dispenser comprises means for fixing the

rod 3 in the channel 2, by applying thereon forces in the two moving directions, at different distances d of the rear wall 23, such that the storage depth d can be varied depending on the size of the objects O in the direction perpendicular to the rear wall 23. Therefore, the user will be able to adjust it depending on the size of the objects.

[0049] As shown in FIG. 3 and 10, both the lower end 31 and the upper end 32 of the rod 3 have a perpendicular segment that extend toward the axis 4, the perpendicular segments extending themselves with another segment such that each one defines a free end destined to rotate in a respective rotation hole coinciding with the axis 4.

[0050] As shown in FIGS. 4 to 9, the means for fixing the rod 3 comprise a part 5 provided with an engaging portion 51 destined to be engaged in the upper end of the channel 2 and a fixing portion 52 for fixing the rod 3. The fixing portion 52 is provided with a fixing surface 53 for fixing the rod 3.

[0051] As better shown in these figures, the user can replace these parts 5 for adjusting the storage depth of the channels 2. The fixing surface 53 comprises a slot 54 destined to be arranged along a perpendicular direction to the channel 2 and parallel to the rear wall 23, and a fixing element 55 of the rod 3 that is movable through the slot 54 and that can be fixed in a position in the slot 54. This fixing element 55 is a magnet. Therefore, the rod 3 has to be made of ferromagnetic material.

[0052] The engaging portion 51 has a shape that is complementary to the upper end of the channel 2 and it comprises a fixing magnet 57 flush with a surface 56 destined to be arranged against an internal surface 59 of the channel 2, and the internal surface 59 of the channel 2 comprises a ferromagnetic portion 58 for adhering to the fixing magnet 57.

[0053] In the embodiments shown, both magnets 55, 57 are identical.

[0054] As shown in FIG. 3, the dispenser comprises two crossbars 6, 7 destined to be fixed to the front edges 24 of the walls 21, 22, one of them being an upper bar 6 provided on a lower surface with an upper rotation hole for every rod 3, the other one being a lower bar 7 provided on an upper surface with a lower rotation hole for every rod 3.

[0055] As shown in FIG. 3, the dispenser comprises in the lower end of each channel 2 a guiding slot 8 oriented in the depth direction.

[0056] A pusher movable along the guiding slot 8 is fitted in the guiding slot 8. This pusher is provided with a pushing step 81 in its rear end which is coincident, in a back position, with the rear wall 23 of the channel 2 such that in a back position the step can be positioned behind the rear surface of the lowest object. The pusher extends backwards with a supporting surface 84 for bearing the following object to be dispensed, while dispensing the current one.

[0057] The pusher is provided in its front end with a handle 82, such that when pulling the handle 82, the step pushes the lowest object of the stack and extracts it by

the lower end of the front opening of the channel 2.

[0058] As shown in FIGS. 1 and 2, there is a front cover 9 articulated in a side of the dispenser 1, and being provided with a screen P , such that, when the cover 9 is closed, images can be displayed, and when it is opened, the rods can be accessed to open them, and then the channels 2 can be accessed for replacement of the objects to be dispensed.

[0059] In this text, the term "comprises" and its derivations such as "comprising" should not be understood in an excluding sense, that is, these terms should not be interpreted as excluding the possibility that what is described and defined may include further elements.

[0060] The invention is obviously not limited to the specific embodiments described herein, but also encompasses any variations that may be considered by any person skilled in the art for example, as regards the choice of materials, dimensions, components, configuration, within the general scope of the invention as defined in the claims.

Claims

1. Dispenser (1) comprising at least one channel (2) for storing a plurality of stacked objects (O) with a parallelepiped shape, the channel (2) being delimited by two lateral walls (21, 22) and a rear wall (23) and being frontally opened for accessing the channel (2), such that the lateral walls (21, 22) have a frontal free edge (24), the dispenser (1) comprising a movable element for frontally retaining the objects stored in the channel (2), **characterized in that** the movable element is a rod (3) parallel to the channel (2) that can rotate about an axis (4) parallel to the channel (2), thus having two moving rotating directions, the axis (4) being arranged in front of one of the frontal free edges (24) such that the rod (3) can be moved between a position in which the frontal opening of the channel (2) is clear for the replacement of objects (O) in the channel (2) and a retaining position in which the rod is inside the channel (2), a storage depth corresponding to the distance (d) between the rod (3) and the rear wall (23) being defined in the retaining position, the dispenser comprising means for fixing the rod in the channel (2) at different distances (d) of the rear wall (23), such that the storage depth (d) can be varied depending on the size of the objects (O) in the direction perpendicular to the rear wall (23).
2. Dispenser according to claim 1, wherein both the lower end (31) and the upper end (32) of the rod (3) have a perpendicular segment that extend toward the axis (4), the perpendicular segments extending themselves with another segment such that each one defines a free end destined to rotate in a respective rotation hole coinciding with the axis (4).

3. Dispenser according to any of the preceding claims, wherein the means for fixing the rod (2) are able to transmit on the rod (3) forces in the two moving directions.
4. Dispenser according to any of the preceding claims, wherein the means for fixing the rod (3) comprise a part (5) provided with an engaging portion (51) destined to be engaged in the upper end of the channel (2) and a fixing portion (52) for fixing the rod (3), the fixing portion (52) being provided with a fixing surface (53) of the rod (3).
5. Dispenser according to claim 4, wherein the fixing surface (53) comprises a slot (54) destined to be arranged along a perpendicular direction to the channel (2) and parallel to the rear wall (23), and a fixing element (55) of the rod (3) that is movable through the slot (54) and that can be fixed in a position in the slot (54).
6. Dispenser according to claim 5, wherein the fixing element (55) is a magnet and wherein the rod (3) is made of ferromagnetic material.
7. Dispenser according to claim 6, wherein the slot (54) has a rectangular or dovetailed-shaped cross section.
8. Dispenser according to claim 5, wherein the fixing element (55) has a flexible hook for clipping the rod (3), the hook being made of metal or plastic material.
9. Dispenser according to any of claims 5 to 8, wherein the engaging portion (51) has a shape that is complementary to the upper end of the channel (2) and comprises a fixing magnet (57) flush with a surface (56) destined to be arranged against an internal surface of the channel (2), said internal surface of the channel (2) comprising a ferromagnetic portion (58) for adhering to the fixing magnet (57).
10. Dispenser according to claims 6 and 9 wherein both magnets (55, 57) are identical.
11. Dispenser according to claim 2 or 3, wherein one or both ends of the rod destined to be inserted in the axis holes comprise protrusions, and the holes comprise in their internal surface recesses, such that the protrusions and the recesses cooperate to define many stable positions of the rod (3) corresponding to different storage depths (d).
12. Dispenser according to any of the preceding claims, comprising a plurality of channels (2), separated by the lateral walls (21, 22) and a corresponding number of rods (3).
13. Dispenser according to claim 2 or any claim depending thereof, comprising two crossbars (6, 7) destined to be fixed to the front edges (24) of the walls (21, 22), one of them being an upper bar (6) provided on a lower surface with an upper rotation hole for every rod (3), the other one being a lower bar (7) provided on an upper surface with a lower rotation hole for every rod (3).
14. Dispenser according to any of the preceding claims, comprising in the lower end of each channel (2) a guiding slot (8) oriented in the depth direction, and a pusher movable along the guiding slot (8) and provided with a pushing step (81) in its rear end which is coincident, in a back position, with the rear wall (23) of the channel (2) such that in a back position the step can be positioned behind the rear surface of the lowest object, the pusher being provided in its front end with a handle (82), such that when pulling the handle (82), the step pushes the lowest object of the stack and extracts it by the lower end of the front opening of the channel (2).
15. Dispenser according to any of the preceding claims, comprising a front cover (9) articulated in a side of the dispenser (1), the front cover (9) being provided with a screen (P), such that, when the cover (9) is closed, images can be displayed, and when it is opened, the rods can be accessed to open them, and then the channels (2) can be accessed for replacement of the objects to be dispensed.
16. Dispenser (1) consisting of a box (A) provided inside with a plurality of channels (2) for storing a plurality of stacked objects (O) with a parallelepiped shape, each channel (2) being delimited by two lateral walls (21, 22) and a rear wall (23) and frontally opened for accessing the channels (2), the dispenser (1) being provided with a front cover (9) articulated with one of the edges (11) of the box (A) such that it allows accessing the channels (2) for the replacement of objects (O), the dispenser (1) comprising a dispensing opening (12) arranged under the front cover (9), the dispensing opening (12) being in communication with the lower end of the channels (2) such that the lowest object of the stacked objects can be dispensed through the dispensing opening (12), **characterized in that** the front cover (9) is provided with an opening and a screen (P) mounted in the front cover (9), such that images projected by the screen (P) can be seen through the opening (A).
17. Dispenser according to claim 16, which comprises in the lower end of each channel (2) a guiding slot (8) oriented according to a depth direction, and a pusher (83) that is movable in the guiding slot (8) provided with a step (81) in its rear portion which coincides, in a back position, with the rear wall (23)

of the channel (2), the dispenser (1) being provided with means for moving the pusher (83).

18. Dispenser according to claim 17, wherein the means for moving each pusher (83) comprise in the frontal part of the pusher (83) a handle (82) that can be accessed from the outside, such that when pulling the handle (82), the step pushes the lowest object of the stack and extracts it by the lower end of the front opening of the channel (2) and then the object exits through the dispensing opening (12), the dispensing opening (12) being arranged between the handles (82) and the front cover (9).
19. Dispenser according to claim 17, wherein the means for moving each pusher (83) comprise an electromagnetic actuator, the dispenser being provided with control means, the screen being a tactile screen, the screen and the electromagnetic actuators being connected to the control means.

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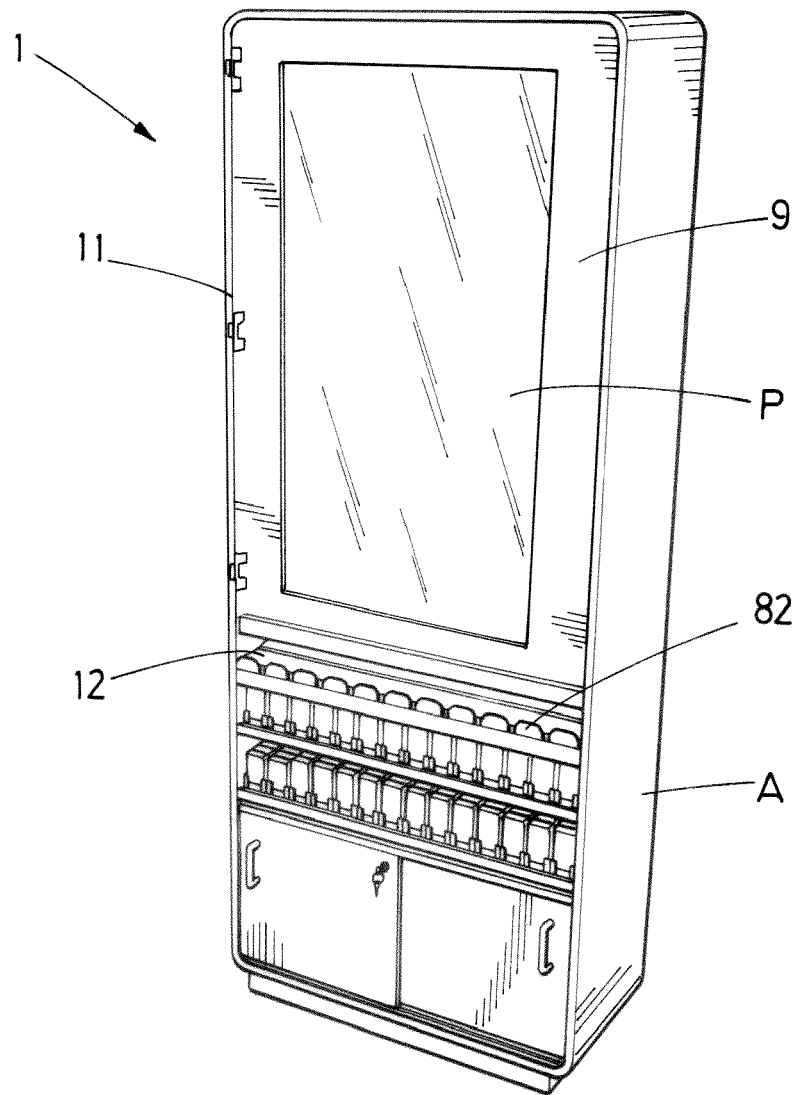


FIG.1

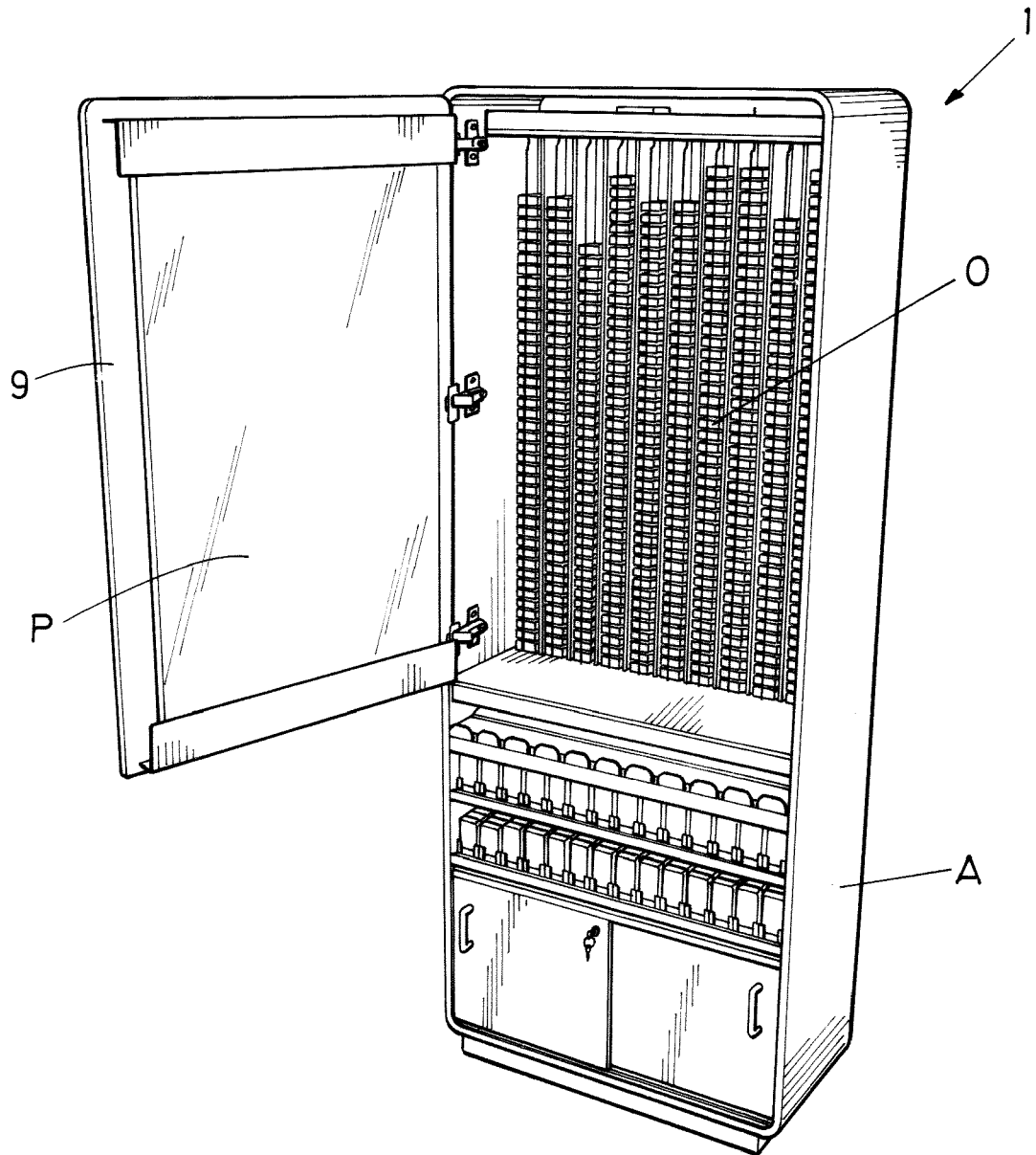


FIG.2

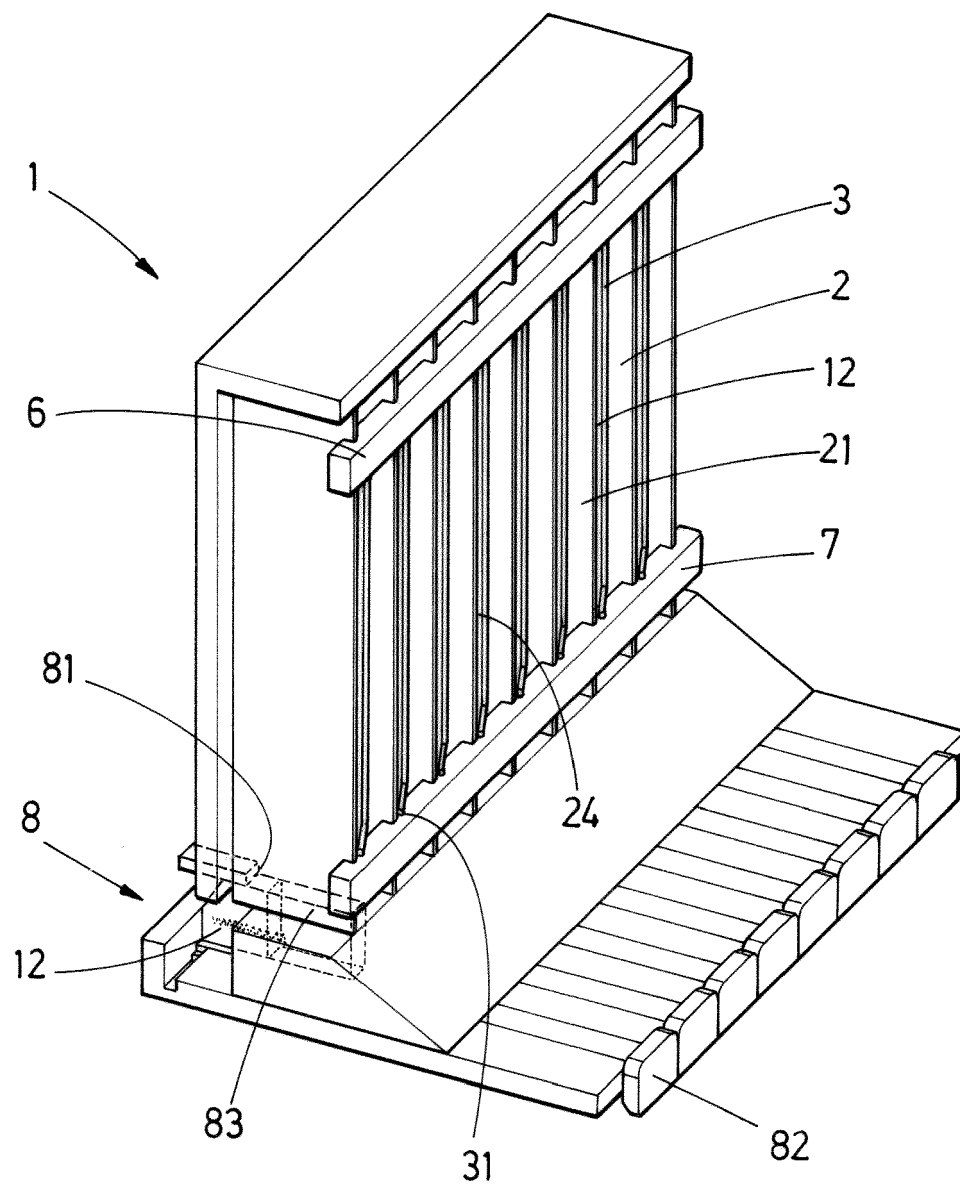


FIG.3

FIG.4

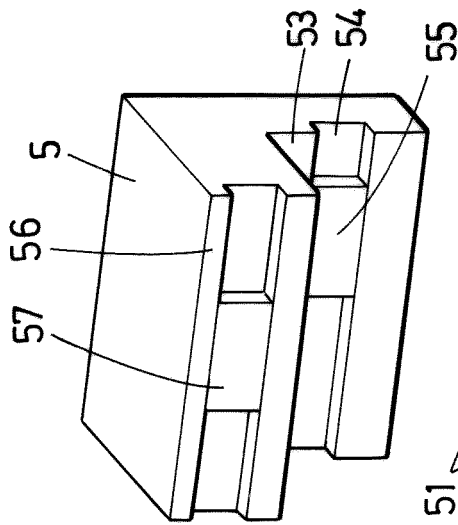


FIG.5

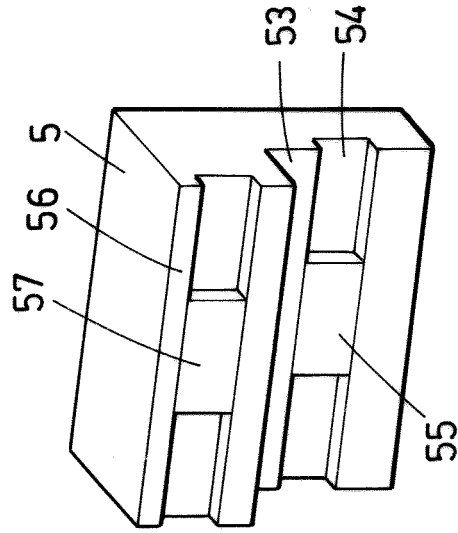


FIG.6

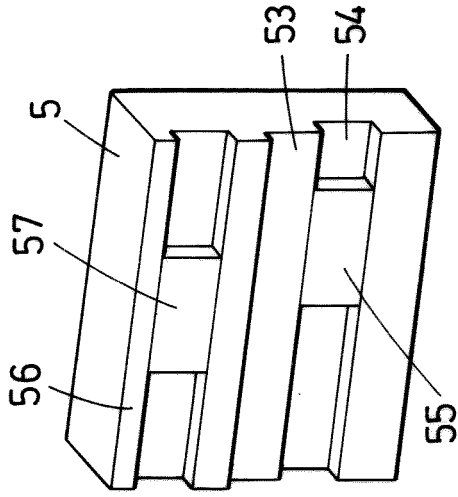


FIG.7

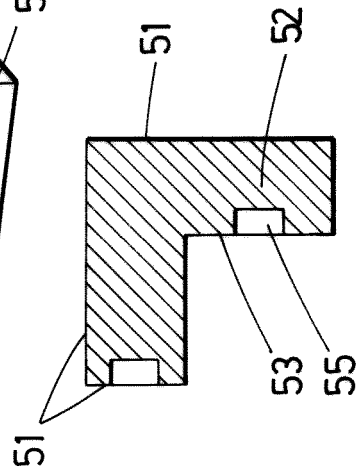


FIG.8

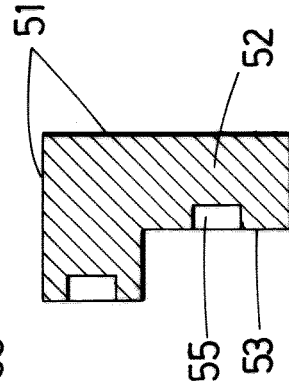
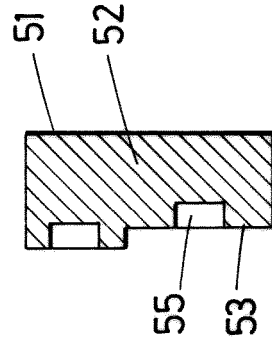


FIG.9



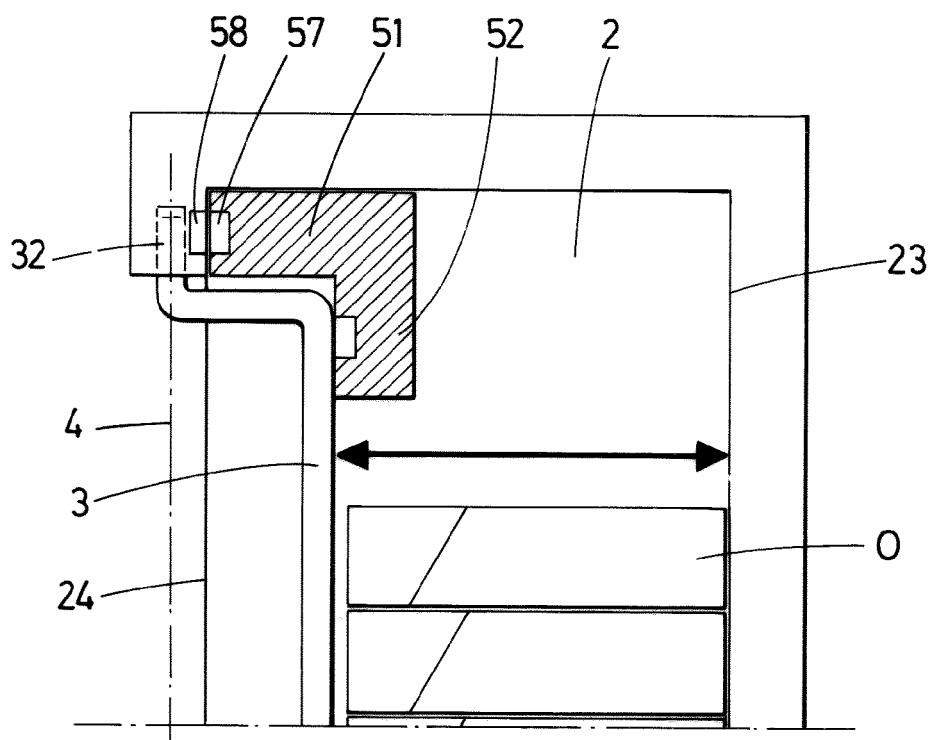


FIG.10

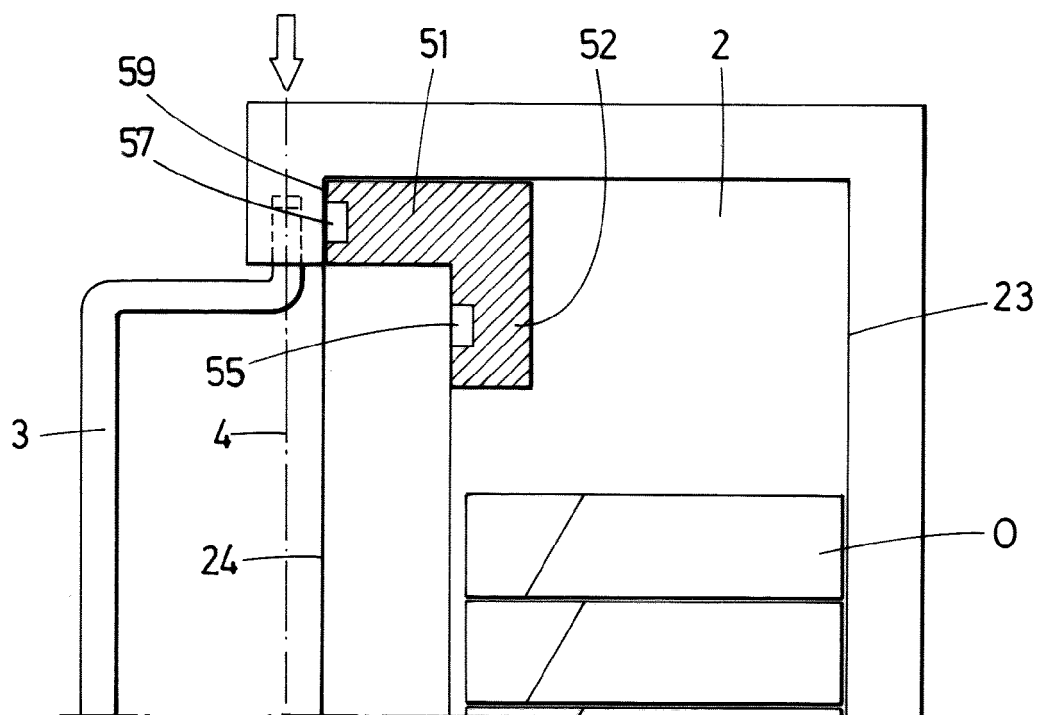


FIG.11

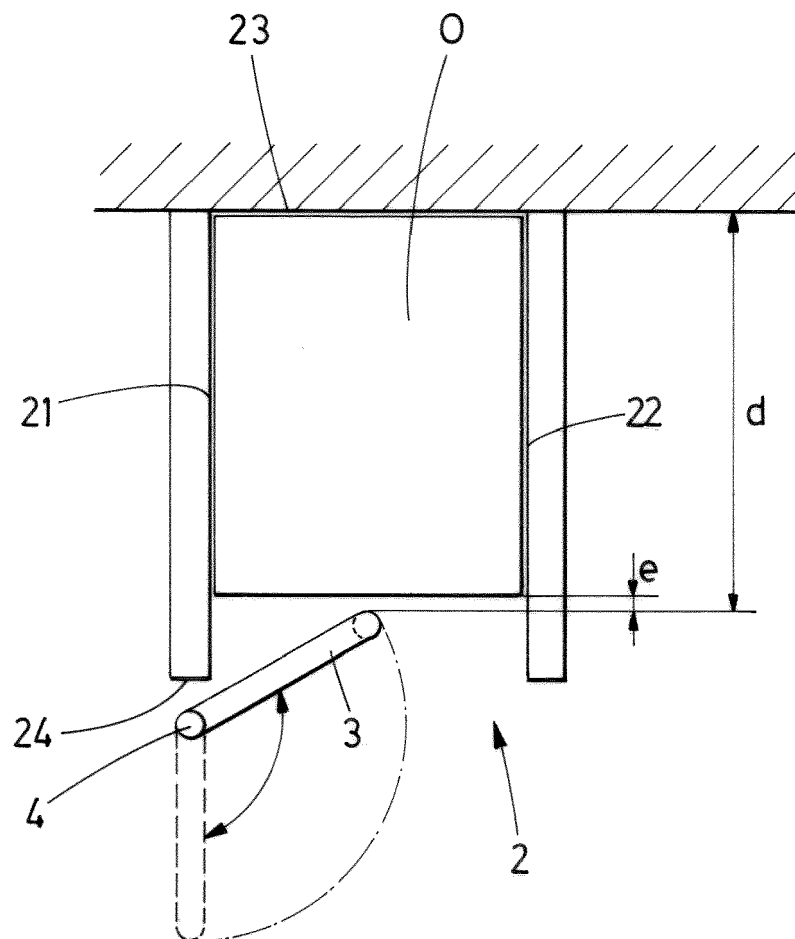


FIG.12

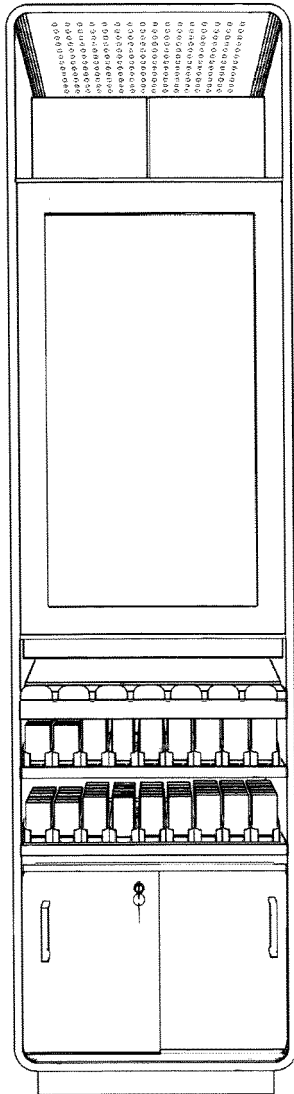


FIG. 13

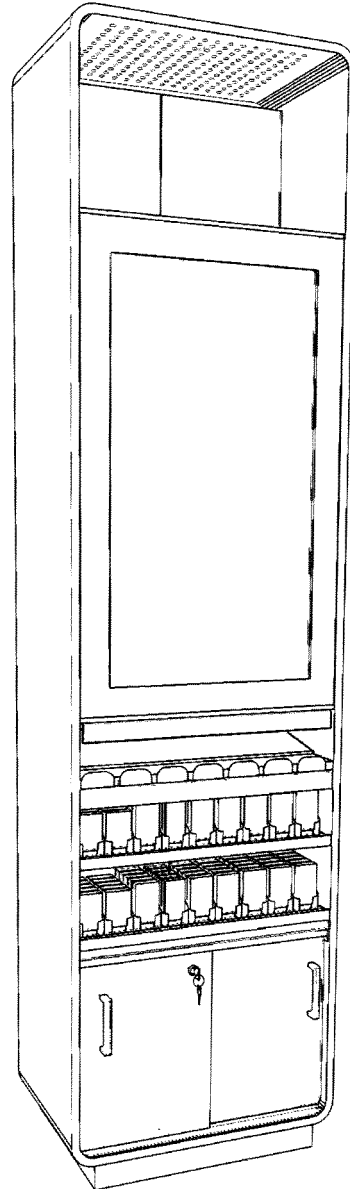


FIG. 14

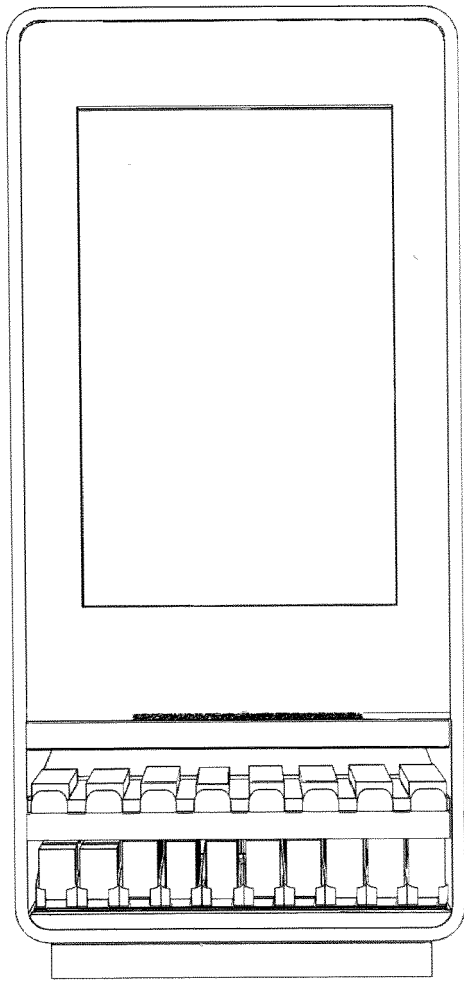


FIG.15

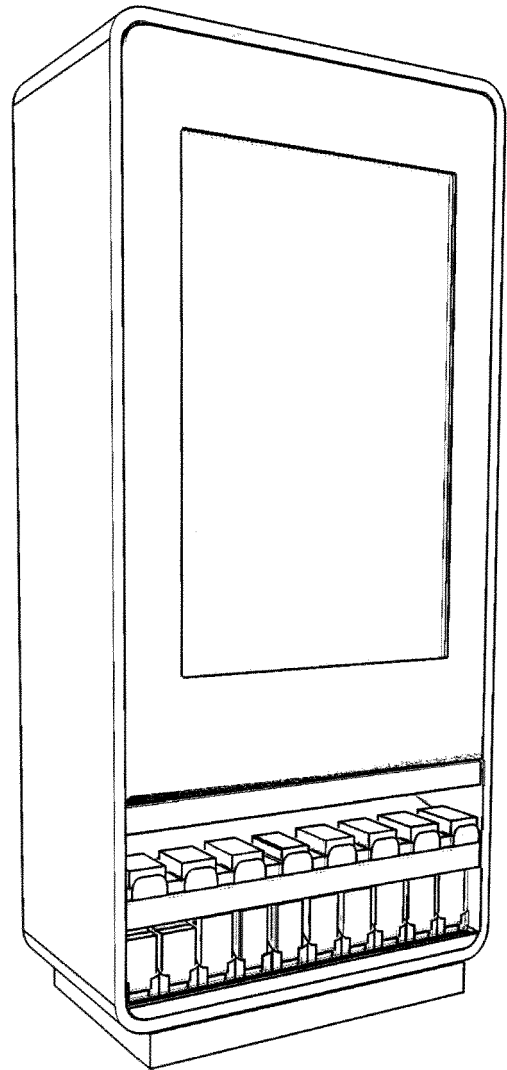


FIG.16



EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 524 468 A (AEGUANA DIGITAL LTD [GB]) 30 September 2015 (2015-09-30) * figures 3,6a-10 *	1-4,11, 12,14	INV. A47F1/08 A47F1/10
X	US 1 003 669 A (THAYER RALPH W [US]) 19 September 1911 (1911-09-19) * figures 1-3 *	1,2,12	ADD. A47F3/02 G07F11/00 G07F11/20
			TECHNICAL FIELDS SEARCHED (IPC)
			A47F G07F
1 The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		29 September 2016	Martinez Valero, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-14

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**Application Number
EP 16 38 2015

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-14

Dispenser comprising a movable element to vary the storage depth.

2. claims: 15-19

Dispenser comprising a screen in its front cover.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 16 38 2015

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-09-2016

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GB 2524468	A	30-09-2015	NONE	

US 1003669	A	19-09-1911	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82