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(54) **A laundry washing and/or drying machine, in particular of the front loading type, with a compartment for housing a container**

Waschmachine und/oder Wäschetrockner, insbesondere der Frontlader-Art, mit einem Fach zur Aufnahme eines Behälters

Lave-linge et/ou sèche-linge, en particulier de type de chargement frontal, avec un compartiment pour enceindre un récipient

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Description

[0001] The present invention relates to a laundry washing and/or drying machine, in particular of the front loading type.

[0002] It is well known that machines of this kind presuppose the use of washing agents, for instance in the form of powdered or liquid detergents, bleaches, softeners, etcetera. In some cases, the aforesaid washing agents must be preventively dosed prior to their placement in the machine, by means of appropriate dosing cups; in other cases, the quantity of detergent needed to complete a wash cycle is placed in a hollow spherical container, which is then positioned directly inside the drum of the machine, among the laundry to be washed. The containers of the various washing agents, be they in the form of bottles, boxes, pouches, etcetera, and/or the aforesaid dosing devices or spherical containers should opportunely be stored near the machine, for obvious reasons of convenience of use.

[0003] Bases or pedestals have been proposed, with the aim of raising the cabinet of a laundry washing machine relative to the ground and thereby facilitate, from the viewpoint of ergonomics, the operations of loading/unloading the laundry relative to the machine; in some case, within the base a housing is defined for a container or a drawer, in which objects of various nature can be stowed; examples of bases of this kind are found, for instance, in DE-A-19 83 8630 and EP-A-1 205 129.

[0004] Additionally, the document US-A-2,786,730 discloses a laundry washing machine with a cabinet in whose front wall a door is present, in addition to the one normally provided to allow loading and unloading the laundry; the additional door is mounted in an opening of the front wall, which allows to access an inner compartment of the cabinet, in which various kinds of products and objects can be stowed.

[0005] DE-U-91 13 852, upon which the preamble of claim 1 is based, discloses a laundry washing and/or drying machine for disabled people or elders, having a cabinet defining a compartment for housing a container. The container is slidably mounted on rails of the cabinet to be extracted from the compartment and then raised or lowered in an electrically automated way, in order to ease loading and unloading of the laundry with respect to the machine's porthole.

[0006] DE-U-94 19 046 discloses a box-like structure for housing a movable laundry container. The structure can be fitted above, below or at a side of the cabinet of the machine and the containers has side wheels for sliding on fixed side rails of the structure.

[0007] EP-A-1 233 100 discloses a washing machine whose cabinet includes a top compartment and a bottom compartment. The bottom compartment has side rail for supporting a trolley, within which a removable container can be housed.

[0008] DE-A-32 12 527 discloses a washing and/or drying machine which is increased in height in order to obtain a lower compartment open at the front and the bottom, which compartment is delimited by the side, rear and bottom walls of the cabinet. One or more drawers can be housed in the compartment

[0009] In view of the aforementioned state of the art, a first aim of the present invention is to provide a novel laundry washing and/or drying machine of simple and economical construction, which can be equipped with a container suitable for containing objects of various kinds, particularly advantageous to use from the ergonomic viewpoint.

[0010] A second aim of the present invention is to provide a novel laundry washing and/or drying machine of simple and economical construction, whose structure allows to define a closable housing for an easy to use container in which objects of various kinds can be stowed.

[0011] These and other aims are achieved, according to the present invention, by a laundry washing and/or drying machine having the characteristics of the appended claims, which are an integral part of the present description.

[0012] Additional aims, characteristics and advantages of the present invention shall become readily apparent from the detailed description that follows and from the accompanying drawings, provided purely by way of explanatory and non limiting example, in which:

- Figure 1 is a schematic perspective view of a front loading laundry washing machine according to the invention, in a first configuration of use;
- Figure 2 is a schematic perspective view of the machine of Figure 1, with a respective container removed;
- Figure 3 is a schematic partially sectioned lateral view of the machine of Figure 2;
- Figure 4 is a schematic section view according to the line IV-IV of Figure 3;
- Figure 5 is a schematic perspective view of a front loading laundry washing machine according to the invention, in a second configuration of use;
- Figure 6 is a schematic perspective view of the machine of Figure 5, with a respective container removed;
- Figure 7 is a partially sectioned schematic lateral view of the machine of Figure 6;
- Figure 8 is a schematic section view according to the line VIII-VIII of Figure 7;
- Figure 9 is a schematic perspective view of the machine of Figure 5, with a respective frontal covering element partially opened;
- Figure 10 is a partial and schematic perspective view of the machine of Figure 9, with a respective container in the extraction phase and in a first condition of use;
- Figure 11 is a partial and schematic perspective view in enlarged scale of the machine of Figure 10, with the container extracted and in a second condition of use.

[0013] In the figures, the reference number 1 globally designates a front loading laundry washing machine according to the invention. The machine 1 comprises a cabinet 2, for instance made of metal plate, which delimits a substantially closed space S, for housing functional members of the machine. Within the space S a so called oscillating assembly is mounted, comprising a washing tub 3, in which a drum for the laundry is housed, designated by the number 4 in Figure 3, rotatable around a respective axis. In the exemplified case, the tub 3 is mounted in such a way that the axis of rotation of the drum 4, designated as A, is slightly inclined; the machine 1 could in any case be of the traditional type, i.e. with the drum rotating according to a horizontal axis. As shown in Figure 3, the aforesaid oscillating assembly further comprises an electrical motor 5, fastened inferiorly to the tub 3, in the rear area thereof; as in the prior art, the actuation produced by the shaft of the motor 5 is transmitted to the drum 4 through a belt and a pulley, not shown.

[0014] The oscillating assembly further comprises a first and a second counterweight, designated respectively as 6 and 7 in Figure 3, which develop lengthwise substantially in a circumference arc; the counterweight 6 is fastened superiorly to the tub 3, in the rear area thereof, whilst the counterweight 7 is fastened inferiorly to the tub, in the front area thereof. The oscillating assembly is supported from below by means of four load-bearing feet 8, i.e. support devices that integrate within them both a spring and a braking element; each foot 8 has a lower end, anchored to a respective support 8A integral with the lower bottom of the cabinet 2, and an upper end anchored to the tub 3. Alternatively, the load-bearing feet 8 could be replaced with classic damping elements, in the form of friction dampers, with the tub assembly hung superiorly to two springs anchored at one end to the tub 3 and at the other end to respective attachments of the cabinet 2; Figure 1 shows a possible position of such possible springs, designated by the number 9. The dampers 8, and any springs, are inclined relative to the vertical, to converge from the respective attachment point to the cabinet 2 or to the support 8A towards the tub 3.

[0015] The cabinet 2 has a front opening, whereat a door is positioned, designated by the number 10 in Figures 1 and 2, comprising a respective frame 10A and a transparent central part 10B, for instance made of glass. The door 10 is provided with means for hinging to the cabinet 2 and with a locking/releasing mechanism, which elements are not shown. The opening of the cabinet 2 in which the door 10 is operative faces a homologous opening present in the front wall of the tub 3; the latter in turn faces a corresponding opening defined in the front part of the drum 4; between the front wall of the cabinet 2 and the opening of the tub 3 suitable sealing means are provided, constituted for instance by a bellows gasket 11 having substantially annular and/or tapered shape, with ends at the opening of the drum 4.

[0016] Within the space S delimited by the walls of the cabinet 2 a dispenser of washing agents 12 is also provided, which can be fed with water. The dispenser 12 is positioned in proximity to the lower edge of the opening present in the front wall of the cabinet 2 and is fastened thereto; the dispenser 12 is thus positioned within the annular space delimited by the gasket 11; in this way the water - washing agent mixture released by the dispenser 12 can arrive directly and quickly in contact with the laundry to be washed, guided by the gasket 11 which extends between the opening of the cabinet 2 and the mouth of the drum 4. The position of the dispenser 12 is also advantageous from the ergonomic viewpoint.

[0017] On the lower bottom of the cabinet 2 a discharge pump 13 and a sensor 14 of an anti-flooding safety device are present, known in themselves and shown only schematically in Figure 3. Other usual functional components of the machine 1 internal to the space S, such as a filter, a programmer, hydraulic conduits, electrical cables, etcetera are not shown in the figures. In Figures 1 and 2, the references 15A and 15B designate an information display and some control pushbuttons of the machine 1, which can be mounted on the frame 10A of the door 10 or on the cabinet 2. To the bottom of the cabinet 2, lastly, height-adjustable support feet P are associated, for instance of the type with threaded stem screwed in a respective nut screw present in the bottom itself.

[0018] In Figure 1, the reference 16A designates a movable covering element, provided to allow access to a compartment in which a container is housed suited to receive objects of various kinds, such as packages of washing agents, measuring cups, rags, cloths, etcetera. The covering element 16A, hereinafter also called additional door, is preferably a part of the aforesaid container, the latter being designated by the reference 16 and globally having the shape of a trolley provided with wheels which bear on the floor of the space where the machine is installed; the wheels of the trolley 16 are schematically shown in Figure 3, where they are designated by the reference 16B.

[0019] As can be seen in Figure 2, where the trolley 16 is not shown, the bottom of the cabinet is so shaped as to have a niche or recess 17 open towards the exterior of the cabinet in two directions, substantially orthogonal to each other, designated as X and Y in Figures 2 and 3; within the recess or indentation 17 at least part of the trolley 16 can be housed. The recess 17 is delimited by outer surfaces of walls which are part of the bottom of the cabinet 2 as a whole, so that, in fact, the trolley 16 is positioned outside the space S. In the exemplified case, the recess 17 is delimited by two opposite vertical walls 17A, an upper wall 17B and a rear wall 17C of the bottom. The recess 17 is thus completely open on two substantially orthogonal faces of the cabinet 2, and in particular the front and lower faces.

[0020] In the preferred embodiment of the invention, the lower bottom of the cabinet 2 is formed by a single component made of plastic material, such as polypropylene with the addition of structural inert charge, designat-

ed by the reference F in Figures 2, 3 and 4, whereto distinct panels are fastened in known manners (for example by means of screws), which form the vertical walls of the cabinet 2. Said plastic bottom can advantageously incorporate the supports 8A and other anchoring/support elements for inner components of the machine 2, such as the pump 13 and the sensor 14. In a possible, though less advantageous, variant, one or more walls 17A, 17B and 17C could be obtained by suitably bending a respective panel which forms a vertical wall of the cabinet 2, with the contiguous edges of the walls belonging to different panels being welded, saddle joined, or otherwise joined to each other, in known manners.

[0021] When in the recess 17 the trolley 16 is housed, as in Figure 1, a front part of the trolley, which forms the additional door 16A, is substantially flush with the front wall of the cabinet 2; therein a depression 19 is conveniently formed at the upper edge of the recess 17, to allow an easy grip of the front wall 16A of the trolley 16.

[0022] As shown in Figures 3 and 4, between the wall 17C which delimits the recess 17 to the rear and the rear wall of the cabinet or of the bottom F, designated as F1, a portion of the space S extends, in which the pump 13 and the sensor 14 are positioned; between the walls 17A which laterally delimit the recess 17 and the respective lateral walls 2A of the cabinet 2 or of the bottom F, designated as F2, two parallel portions of the space S are defined, in which the front dampers 8 and the respective supports extend. Figure 3 also shows that the wall 17B which superiorly delimits the recess 17 is slightly inclined towards the rear part of the cabinet 2. This arrangement allows to convey any water leaks towards the sensor 14, so that the latter can detect them rapidly and consequently can inhibit any further inflow of water into the machine and/or the power supply to the machine, in manners that are known in themselves.

[0023] To improve the ergonomics of the machine 1 according to the invention, to the machine a respective pedestal or basement can be associated, designated in Figures 5 through 8 by the reference 20, for instance made of metallic material. As shown in Figures 6 and 8, the basement 20 has a box structure with substantially C shaped section, so that within it a respective cavity 21 is formed, open to the front, open upwards, i.e. towards the overlying machine 1 and open downwards, i.e. towards the floor. The aforesaid cavity 21 is delimited by two opposite lateral walls 21A and a rear wall 21C of the base.

[0024] The machine is fastened on the base 20 by known means, for instance by means of screws, after removing from the cabinet 2 the respective lower feet P; the latter can advantageously be transferred to the basement 20, whose bottom wall shall be provided with respective nut screws; alternatively, the basement 20 can be provided with its own feet with adjustable height.

[0025] As shown in Figure 6, as a result of the superposition of the cabinet 2 onto the basement 20, the recess 17 overlies the cavity 21, in such a way as to form a suitable seat to house a movable container, designated by the number 22 in Figure 5, having greater dimensions than the container previously designated by the reference 16, and in particular having a containment volume that is substantially equal to that of the drum 4 of the machine 1. In view of the above, the container 22 can advantageously be used to store the laundry to be washed in the machine 1.

[0026] The trolley 22 also comprises a respective front part, which forms a covering element or additional door 22A suitable to remain substantially flush with the front surface of the cabinet 2, and wheel designated by the reference 22B in Figure 7, able to bear directly on the floor of the space where the machine is installed. The basement 21, too, preferably has such external dimensions as to remain substantially flush relative to the walls of the cabinet 2, when the cabinet is superposed to the base.

[0027] As shown in Figure 8, the width of the cavity 21, i.e. the distance between the respective walls 21A, is substantially equal to the width of the recess 17, whilst the lengthwise development of the cavity 21 is greater than that of the recess 17, as shown in Figure 7; for this reason, the container 22 can comprise an upper section 22', able to occupy the recess 17 of the cabinet 2, and a longer lower section 22", able to occupy the cavity 21 of the basement 20.

[0028] In Figure 9, the machine 1 provided with the basement 20 is shown with the additional door 22A partially open; in this figure, as in Figures 10 and 11, the trolley 22 is shown, taking it for granted that the trolley 16 may be similarly formed, although with smaller dimensions.

[0029] In the exemplified case, the trolley 22 comprises a containment portion 23 formed by a net structure defining a bottom wall, two lateral walls and a rear wall; the structure of the containment portion 23 comprises an upper frame 24, two front uprights 25 and two rear uprights 26. The covering element or additional door 22A is articulated to the structure of the trolley 22 in such a way that it can be flipped forward, in the position shown in Figure 9, to provide access to the containment portion 23 without having to extract the dolly 22 from the respective housing.

[0030] For this purpose, the additional door 22A can conveniently be articulated in its lower area to the front uprights 25, by known means, to/be moved angularly around a substantially horizontal axis. Preferably, between the structure of the trolley 22 and the additional door 22A an elastic element is fastened, such as a spring, not shown in the figures, operative to stress the door itself in the respective closed position, i.e. adjacent to the front uprights 25. If, after partially opening the additional door 22A as in Figure 9, a forward traction is exerted, the trolley 22 can be extracted from the respective housing, for example in the position shown in Figure 10. At this point, releasing the additional door 22A, the latter is free to return to the respective resting position, under the action of the aforesaid elastic element. The trolley 22 is prefer-

ably maintained in a predefined position within the housing formed by the union between the cavities 16 and 21, for example by means of guides not shown herein, or elastic or snap-on latches, or resilient lateral elements; in said predefined position, as previously mentioned, the additional door 22A is substantially flush with the front wall of the cabinet 2.

[0031] In the preferred embodiment of the invention, the trolley 22 comprises a frame for supporting the containment portion 23, foldable and in particular capable of assuming a lowered configuration and a raised configuration. In the case exemplified in the figures, the aforesaid frame comprises a base frame, designated by the reference 27 in Figures 10 and 11, having overall U shape, whereto the wheels 22B are associated. To the front area of the frame 27 the first ends of two parallel arms or levers are articulated with known means, whereof one is designated by the reference 28 in Figure 11; the second ends of the levers 28 are instead articulated to the rear uprights 26 of the containment portion 23.

[0032] In the preferred embodiment, the trolley 22 is further provided with at least a gas spring or similar actuator, to determine the automatic rise of the containment portion 23 from the position shown in Figure 10 to the one shown in Figure 11; in this light, for example, the aforementioned gas spring, not shown in the figures, is operative to cause the automatic rotation of the levers 28 at the respective articulations to the frame 27, and the trolley 22 is provided with a latching/releasing device, known in itself, able to be switched between a first and a second condition; in the first, latched, condition, the device maintains the frame in the respective lowered or folded configuration, as shown in Figure 10, against the action of the gas spring; in the second condition of the device, i.e. the release condition, the gas spring instead is free to extend in order to cause the angular motion of the levers 28 and thus the rise of the containment portion 23 to the position visible in Figure 11. The aforesaid device can be, for example, of the push-pull type: with the trolley 22 in the lowered position, shown in Figure 10, the device is released by a slight downwards thrust of the containment portion 23, with the consequent rise thereof by virtue of the action of the gas spring; to bring the dolly back to the position of Figure 10, it is sufficient to thrust downwards the containment portion 23, overcoming the action of the gas spring, until producing the re-latching of the device.

[0033] As an alternative to the use of a gas spring or of a similar actuator, the containment portion 23 could be raised manually, though still providing a bistable latching/releasing device, known in itself, operative to lock the containment portion 23 in the raised position, instead of in the lowered position; in view of this, the containment portion 23 may be freely raised until causing the device to switch to the respective latched condition; the release of the device will then be obtained by slightly raising the containment portion 23, in order subsequently to be able to re-lower the containment portion.

[0034] The provision of the trolley 22 with containment portion 23 able to be raised clearly allows considerably to enhance the functionality and ergonomics of use of the machine 1 of the invention. As mentioned above, the trolley 16 or 22 can be advantageously used to contain commonly used objects in combination with the machine 1; advantageously, the trolley can be exploited for the progressive accumulation of the laundry to be washed, simply by partially opening the additional door 16A, 22A, without necessarily having to extract the trolley itself (Figure 9) from its housing. For the purposes of the subsequent transfer of the laundry items to be washed into the drum 4, a user need do no more than to extract the trolley 22 (Figure 10) and then cause its shift to the respective raised configuration (Figure 11). In this condition, the containment portion 23 is at an optimal height to facilitate the move, by the user, of the laundry items from the portion itself into the drum 4.

[0035] It is clear that numerous variants are possible to the laundry washing machine described by way of example, without thereby departing from the scope as defined in the claims and it is also clear that in the practical embodiment of the invention, shapes, dimensions, materials and components used could be different from those indicated previously by way of example, and replaced with technically equivalent elements.

[0036] The base 20 could incorporate a carriage device of a known kind, provided to facilitate the displacement of the assembly constituted by the base itself and by the machine 1; such a device associated to the base could comprise wheels or rollers and a respective mechanism to move the latter from an inoperative position, in which the wheels are retracted, to an operative position, in which the wheels are lowered to raise the base from the floor and thus allow its easy displacement.

[0037] The front part or additional door 16A, 22A of the trolleyl6, 22 could be angularly movable according to a substantially vertical axis, or be linearly slidable in the vertical or of the rolling gate type, whilst still being supported by the trolley itself, instead of by the cabinet 2 of the machine.

[0038] The containment portion 23, which need not necessarily be a net, could comprise a bowl or the like, removable from the trolley 22.

Claims

1. A laundry washing and/or drying machine (1), in particular of the front loading type, comprising

- a cabinet (2) within which a tub (3) is located, housing a drum (4) able to rotate about a respective axis (A), a door (10) being associated to the cabinet (2) for access to the drum (4),
- a movable container (16; 22) suitable for containing objects, the container (16; 22) being able to be housed at least partially in a compartment

(17; 17, 21) defined at least in part by the cabinet (2) inferiorly to the door (10) and/or to the tub (3),

wherein the container (16; 22) comprises an upper containment portion (23) sustained by a respective support structure (27, 28) which is capable of assuming

- a lowered configuration, in which the container (16; 22) can be inserted into and extracted from the compartment (17; 17, 21) and the containment portion (23) lies at a first distance from the door (10), and
- a raised configuration in which, with the container (16; 22) extracted from the compartment (17; 17, 21), the containment portion (23) lies at a second distance from the door (10),

characterized in that

- said compartment (17; 17, 21) is open on two substantially orthogonal faces of the cabinet (2), including the lower face,
- wheels (18B, 22B) able to bear on the floor of the space in which the machine (1) is installed are associated to the support structure (27, 28) of said container (16; 22), said wheel (18B, 22B) allowing said container (16; 22) to be extracted from and inserted into said compartment (17; 17, 21).

2. A machine as claimed in claim 1, **characterised in that** it comprises a covering element (16A; 22A) movable between an open position, in which the compartment (17; 17, 21) is accessible, and a closed position, in which the compartment (17; 17, 21) is inaccessible, the covering element (16A; 22A) being associated to the container (16; 22) and supported thereby such that, in the respective open position of the covering element (16A; 22A), the containment portion (23) is also accessible with the container (16; 22) inserted in the respective compartment (17; 17, 21).

3. A machine as claimed in claim 1, **characterised in that** the container (16; 22) comprises at least one of:

- actuating means, such as a gas spring, to achieve a servo-assisted shift of the support structure (27, 28) from the lowered configuration to the raised configuration,
- a locking/releasing system, able to be switched between a first and a second condition, in the first condition the device stably maintaining the support structure (27, 28) in one between said lowered and raised configuration and in the second condition the device allowing the support structure (27, 28) to shift from the lowered configuration to the raised configuration or vice versa.

4. A machine as claimed in claim 1, **characterised in that** the support structure (27, 28) comprises a base frame (27) whereto the first end of at least a lever (28) capable of moving angularly is articulated, the second end of the lever (28) being articulated to the containment portion (23).

5. A machine as claimed in claim 1, **characterised in that** the cabinet (2) has a respective lower bottom (F) in which a recess (17) is formed, the recess (17) being open towards the exterior of the cabinet (2) on said two substantially orthogonal faces of the cabinet (2), and forming at least part (17) of said compartment (17; 17, 21), where in particular:

- the recess (17) extends between the bottom (F) and a front face of the cabinet (2) and it is delimited by surfaces of the bottom (F) facing towards the exterior of the cabinet (2), and/or
- at least the portion of the bottom (F) in which the recess (17) is defined is part of a component made of plastic material (F), in particular polypropylene.

6. A machine as claimed in claim 1, **characterised in that** the cabinet (2) is able to be fastened above a basement (20) defining a respective cavity (21), which forms at least part (21) of the compartment (17; 21), where in particular the cavity (21) is open towards the exterior of the basement (20) in at least two directions (X, Y), corresponding to said two substantially orthogonal faces of the cabinet (2), the basement (20) having in particular an overall C shape.

7. A machine as claimed in claim 2, **characterised in that** the covering element (16A; 22A) is articulated to the container (16; 22), preferably in a lower area thereof, to be movable angularly around a respective, substantially horizontal axis.

Patentansprüche

1. Waschmaschine und/oder Trocknungsmaschine (1), insbesondere in der Frontladervariante, die umfasst:

- ein Gehäuse (2), in dem eine Tonne (3) angeordnet ist, die eine Trommel (4) beherbergt, die um eine entsprechende Achse (A) rotieren kann, eine Tür (10), die mit dem Gehäuse (2) verbunden ist, zum Zugriff auf die Trommel (4),
- ein bewegliches Gehäuse (16; 22), das geeignet ist, um Objekte zu beinhalten, wobei das Ge-

häuse (16; 22) wenigstens teilweise in einem Fach (17; 17, 21) angeordnet sein kann, festgelegt wenigstens zum Teil durch das Gehäuse (2), das tiefer stehend ist zu der Tür (10) und/oder zu der Tonne (3),

wobei das Gehäuse (16; 22) einen oberen Eingrenzungsabschnitt (23) umfasst, der von einer entsprechenden Trägerstruktur (27, 28) getragen wird, die geeignet ist anzunehmen

- eine abgesenkte Stellung, in welcher der Behälter (16; 22) eingeschoben in und ausgezogen aus dem Fach (17; 17, 21) werden kann und der Eingrenzungsabschnitt (23) liegt in einem ersten Abstand von der Tür (10), und
- eine angehobene Stellung, in welcher der Eingrenzungsabschnitt (23), wenn der Behälter (16; 22) aus dem Fach (17; 17, 21) ausgezogen ist, in einem zweiten Abstand von der Tür (10) liegt,

dadurch gekennzeichnet, dass

- das Fach (17; 17, 21) an zwei im Wesentlichen orthogonalen Seiten des Gehäuses (2) offen ist, einschließlich der unteren Seite,
- Räder (18B, 22B), die auf dem Boden des Raumes, in dem die Maschine (1) installiert ist, aufliegen können, mit der Trägerstruktur (27, 28) des Behälters (16; 22) verbunden sind, wobei das Rad (18B, 22B) es dem Behälter (16; 22) aus dem Fach (17; 17, 21) ausgezogen zu werden und darin eingeschoben zu werden.

2. Maschine nach Anspruch 1, **dadurch gekennzeichnet, dass** sie ein Verkleidungselement (16A; 22A) umfasst, das beweglich ist zwischen einer offenen Position, in der das Fach (17; 17, 21) zugänglich ist, und eine geschlossene Position, in der das Fach (17; 17, 21) unzugänglich ist, wobei das Verkleidungselement (16A; 22A) verbunden ist mit dem Behälter (16; 22) und davon getragen, so dass, in der entsprechenden offenen Position des Verkleidungselementes (16A; 22A) der Eingrenzungsabschnitt (23) auch zugänglich ist mit dem Behälter (16; 22), der in das entsprechende Fach (17; 17, 21) eingeschoben wird.

3. Maschine nach Anspruch 1, **dadurch gekennzeichnet, dass** der Behälter (16; 22) wenigstens eines der Folgenden umfasst:

- Betätigungsmittel, wie eine Gasfeder, um eine Servo-unterstützte Verstellung der Trägerstruktur (27, 28) aus einer abgesenkten Stellung in eine angehobene Stellung zu erreichen;
- ein Verriegelungs-/Entriegelungssystem, das zwischen einem ersten und einem zweiten Zustand umgeschaltet werden kann, wobei in dem ersten Zustand das Gerät die Trägerstruktur (27, 28) stabil in einer zwischen der abgesenkten und angehobenen Stellung hält, und im zweiten Zustand das Gerät der Trägerstruktur (27, 28) erlaubt sich aus der abgesenkten Stellung in die angehobene Stellung oder umgekehrt zu verstellen.

4. Maschine nach Anspruch 1, **dadurch gekennzeichnet, dass** die Trägerstruktur (27, 28) ein Untergestell (27) umfasst, an das ein erstes Ende von wenigstens einem Hebel (28), der geeignet ist, um sich winkelförmig zu bewegen, gegliedert ist, wobei das zweite Ende des Hebels (28) angelenkt ist an den Eingrenzungsabschnitt (23).

5. Maschine nach Anspruch 1, **dadurch gekennzeichnet, dass** das Gehäuse (2) einen entsprechenden unteren Boden (F) hat, in dem eine Ausnehmung (17) ausgebildet ist, wobei die Ausnehmung (17) offen ist in Richtung der Außenseite des Gehäuses (2) an den zwei im Wesentlichen orthogonalen Seiten des Gehäuses (2), und wenigstens teilweise (17) des Fachs (17; 17, 21) formt, wobei insbesondere:

- die Ausnehmung (17) sich zwischen dem Boden (F) und der Vorderseite des Gehäuses (2) erstreckt und abgegrenzt ist durch Oberflächen des Bodens (F), die in Richtung der Außenseite des Gehäuses (2) gerichtet sind, und/oder
- wenigstens der Abschnitt des Bodens (F), in dem die Ausnehmung (17) festgelegt ist, ist Teil einer Komponente, die aus Plastikmaterial (F) hergestellt ist, insbesondere Polypropylen.

6. Maschine nach Anspruch 1, **dadurch gekennzeichnet, dass** das Gehäuse (2) an einem Sockel (20) befestigt werden kann, der eine entsprechende Aushöhlung (21) festlegt, die wenigstens teilweise (21) das Fach (17; 21) bildet, wobei die Aushöhlung (21) insbesondere offen ist in Richtung der Außenseite des Sockels (20) in wenigstens zwei Richtungen (X, Y), entsprechend der zwei im Wesentlichen orthogonalen Seiten des Gehäuses (2), wobei der Sockel (20) insbesondere insgesamt eine C-Form hat.

7. Maschine nach Anspruch 2, **dadurch gekennzeichnet, dass** das Verkleidungselement (16A; 22A) an den Behälter (16; 22) gegliedert ist, vorzugsweise in einem unteren Bereich davon, um winkelförmig beweglich um eine entsprechende im Wesentlichen horizontale Achse zu sein.

Revendications

1. Lave-linge et/ou sèche-linge (1), en particulier de type à chargement frontal, comprenant

- un caisson (2) dans lequel une cuve (3) est située, contenant un tambour (4) capable de tourner autour d'un axe respectif (A), une porte (10) étant associée au caisson (2) afin d'accéder au tambour (4),
- un conteneur mobile (16 ; 22) convenant pour contenir des objets, le conteneur (16 ; 22) étant capable d'être logé au moins partiellement dans un compartiment (17 ; 17, 21) défmi au moins en partie par le caisson (2), d'une manière inférieure à la porte (10) et/ou à la cuve (3),

dans lequel le conteneur (16 ; 22) comprend une partie d'enceinte supérieure (23) soutenue par une structure de support respective (27, 28) qui est capable d'adopter

- une configuration abaissée, dans laquelle le conteneur (16 ; 22) peut être inséré dans et extrait du compartiment (17 ; 17, 21) et la partie d'enceinte (23) se trouve à une première distance de la porte (10), et
- une configuration soulevée dans laquelle, avec le conteneur (16 ; 22) extrait du compartiment (17 ; 17, 21), la partie d'enceinte (23) se trouve à une seconde distance de la porte (10),

caractérisé en ce que

- ledit compartiment (17 ; 17, 21) est ouvert sur deux faces sensiblement orthogonales du caisson (2), comprenant la face inférieure,
- des roulettes (18B, 22B), capables de reposer sur le sol de l'espace dans lequel la machine (1) est installée, sont associées à la structure de support (27, 28) dudit conteneur (16 ; 22), lesdites roulettes (18B, 22B) permettant audit conteneur (16 ; 22) d'être extrait de et inséré dans ledit compartiment (17 ; 17, 21).

2. Machine selon la revendication 1, **caractérisée en ce qu'**elle comprend un élément de recouvrement (16A ; 22A) pouvant se déplacer entre une position ouverte, dans laquelle le compartiment (17 ; 17, 21) est accessible, et une position fermée, dans laquelle le compartiment (17 ; 17, 21) est inaccessible, l'élément de recouvrement (16A; 22A) étant associé au conteneur (16 ; 22) et supporté par celui-ci de telle sorte que, dans la position ouverte respective de l'élément de recouvrement (16A ; 22A), la partie d'enceinte (23) soit également accessible avec le conteneur (16 ; 22) inséré dans le compartiment respectif (17 ; 17,21).

3. Machine selon la revendication 1, **caractérisée en ce que** le conteneur (16 ; 22) comprend au moins l'un :

- d'un moyen d'actionnement, tel qu'un ressort à gaz, permettant d'effectuer un déplacement servo-assisté de la structure de support (27, 28) entre la configuration abaissée et la configuration soulevée,
- d'un système de blocage/de déblocage, capable de passer d'un premier à un second état, dans le premier état, le dispositif maintenant de manière stable la structure de support (27, 28) dans une configuration située entre ladite configuration abaissée et ladite configuration soulevée et, dans le second état, le dispositif permettant à la structure de support (27, 28) de se déplacer de la configuration abaissée à la configuration soulevée ou inversement.

4. Machine selon la revendication 1, **caractérisée en ce que** la structure de support (27, 28) comprend un châssis de base (27) sur lequel la première extrémité d'au moins un levier (28) capable de se déplacer de manière angulaire est articulée, la seconde extrémité du levier (28) étant articulée sur la partie d'enceinte (23).

5. Machine selon la revendication 1, **caractérisée en ce que** le caisson (2) possède une partie inférieure respective (F) dans laquelle un renfoncement (17) est formé, le renfoncement (17) étant ouvert vers l'extérieur du caisson (2) sur lesdites deux faces sensiblement orthogonales du caisson (2), et formant au moins une partie (17) dudit compartiment (17 ; 17, 21), où, en particulier :

- le renfoncement (17) s'étend entre le bas (F) et une face avant du caisson (2) et est délimité par les surfaces du bas (F) tournées vers l'extérieur du caisson (2), et/ou
- au moins la partie du bas (F) dans laquelle le renfoncement (17) est défini est une partie d'un composant constitué de matériau plastique (F), en particulier de polypropylène.

6. Machine selon la revendication 1, **caractérisée en ce que** le caisson (2) est capable d'être fixé au-dessus d'une embase (20) définissant une cavité respective (21), qui forme au moins une partie (21) du compartiment (17 ; 21), dans laquelle, en particulier, la cavité (21) est ouverte vers l'extérieur de l'embase (20) dans au moins deux directions (X, Y) correspondant auxdites deux faces sensiblement orthogonales du caisson (2), l'embase (20) possédant en particulier une forme globale de C.

7. Machine selon la revendication 2, **caractérisée en**

ce que l'élément de recouvrement (16A ; 22A) est articulé sur le conteneur (16 ; 22), de préférence dans une zone inférieure de celui-ci, afin de pouvoir se déplacer de manière angulaire autour d'un axe respectif sensiblement horizontal.

FIG. 2

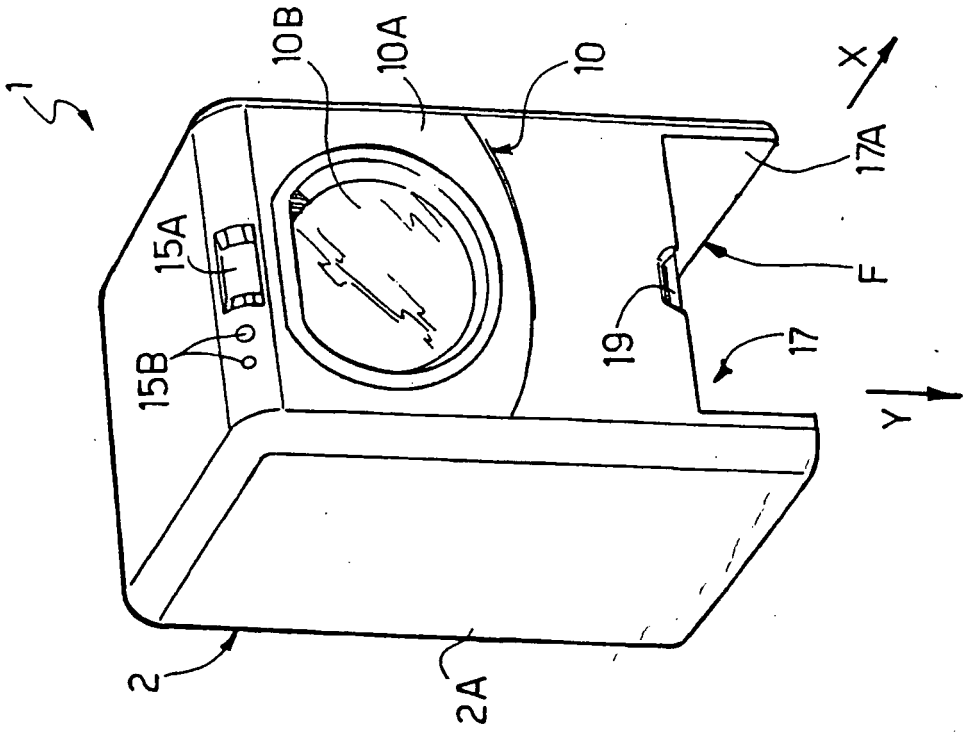

1
10B
10A
10
X
17A
15A
F
15B
19
17
Y
2
2A

FIG. 1

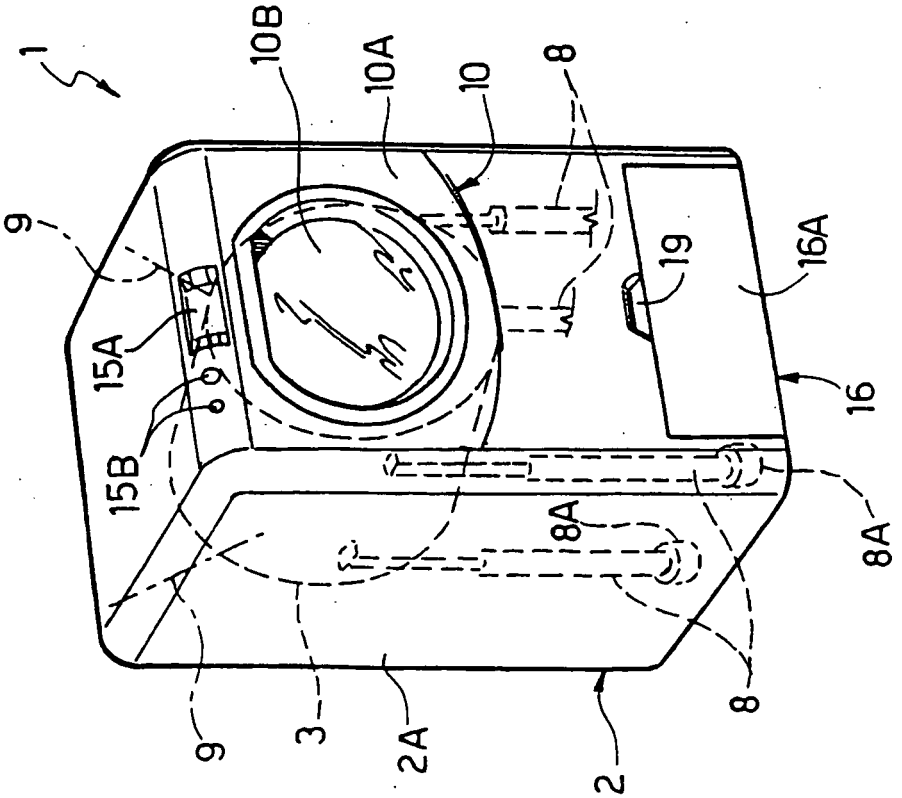

1
10B
10A
10
8
9
19
16A
15A
16
15B
8A
8A
9
3
2A
2
8

FIG. 4

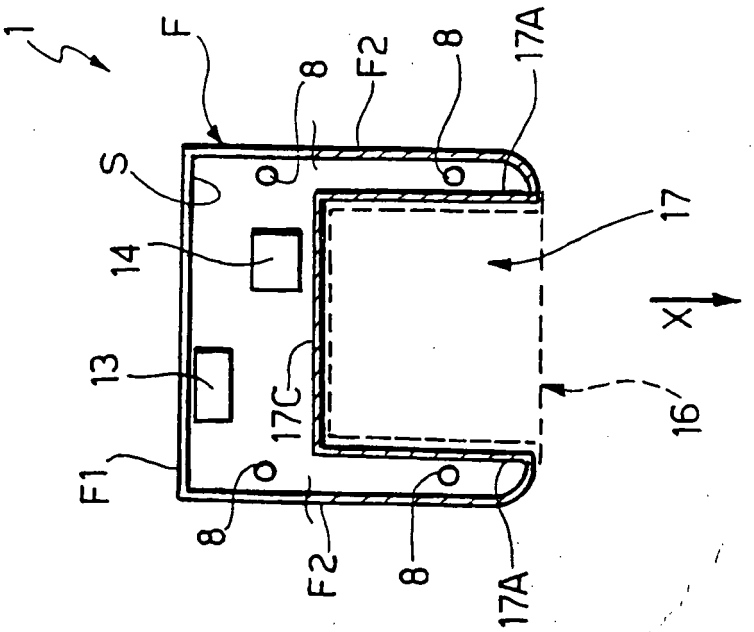

1
F
8
F2
8
17A
S
14
17
13
17C
X
16
F1
8
F2
8
17A

FIG. 3

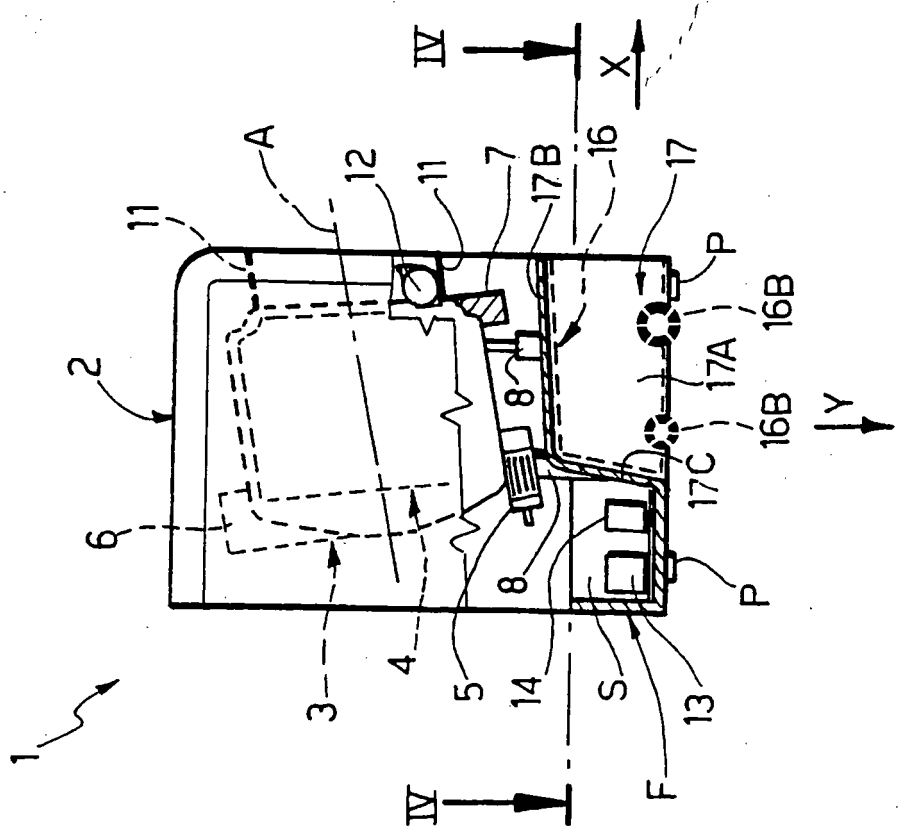

IV
X
A
12
11
7
17B
16
17
11
P
16B
2
8
17A
16B
Y
17C
6
8
P
1
3
4
5
14
S
13
F
IV

FIG. 6

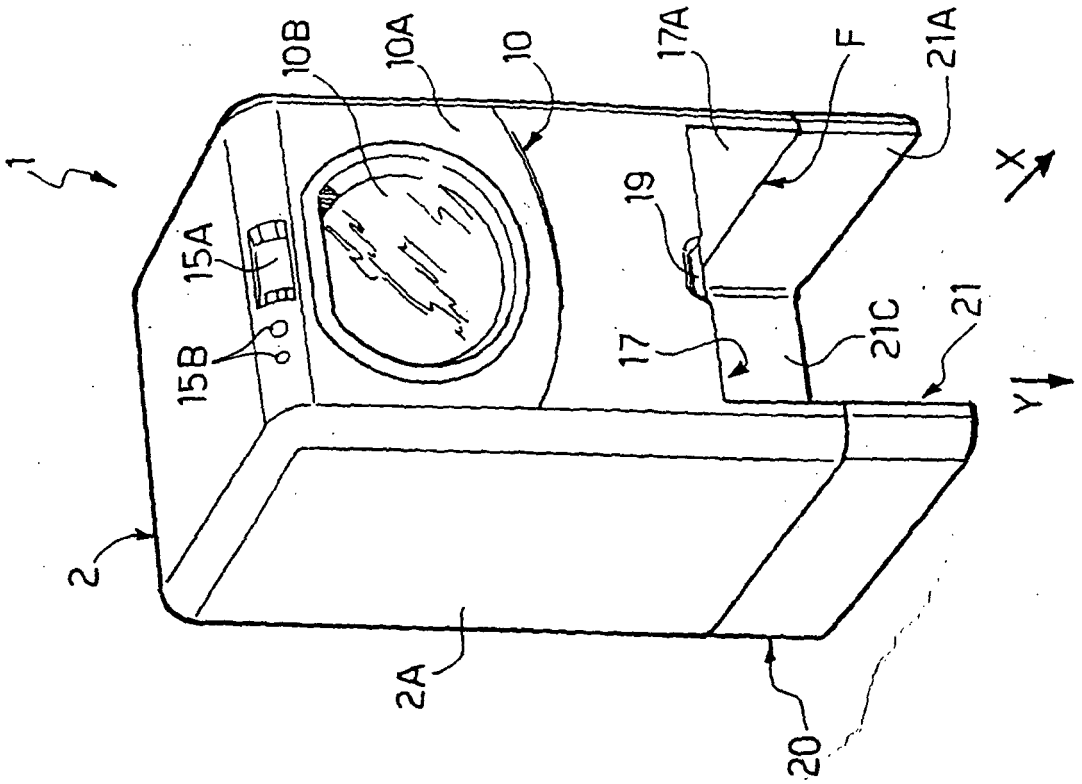

1
10B
10A
10
17A
F
21A
X
15A
19
15B
17
21C
21
Y1
2
2A
20

FIG. 5

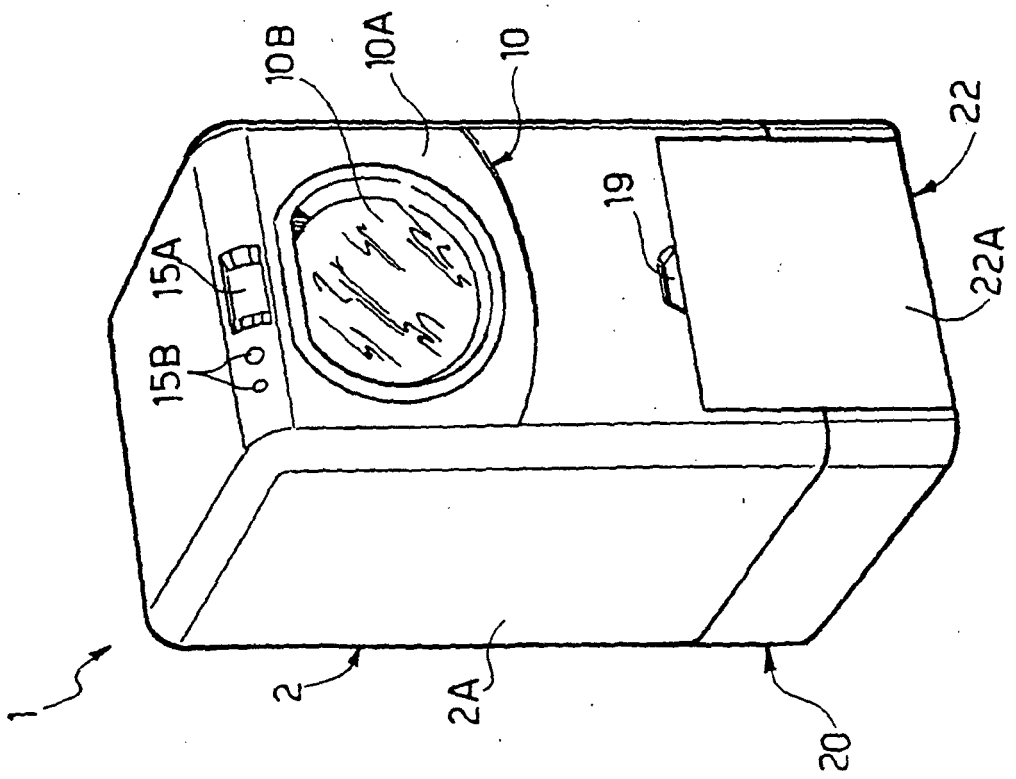

10B
10A
10
22
15A
19
22A
15B
1
2
2A
20

FIG. 8

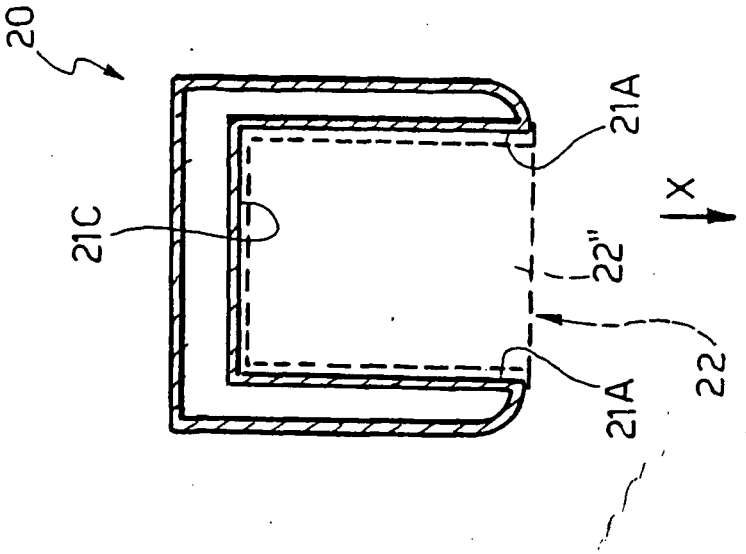

20
21A
21C
X
22''
22
21A

FIG. 7

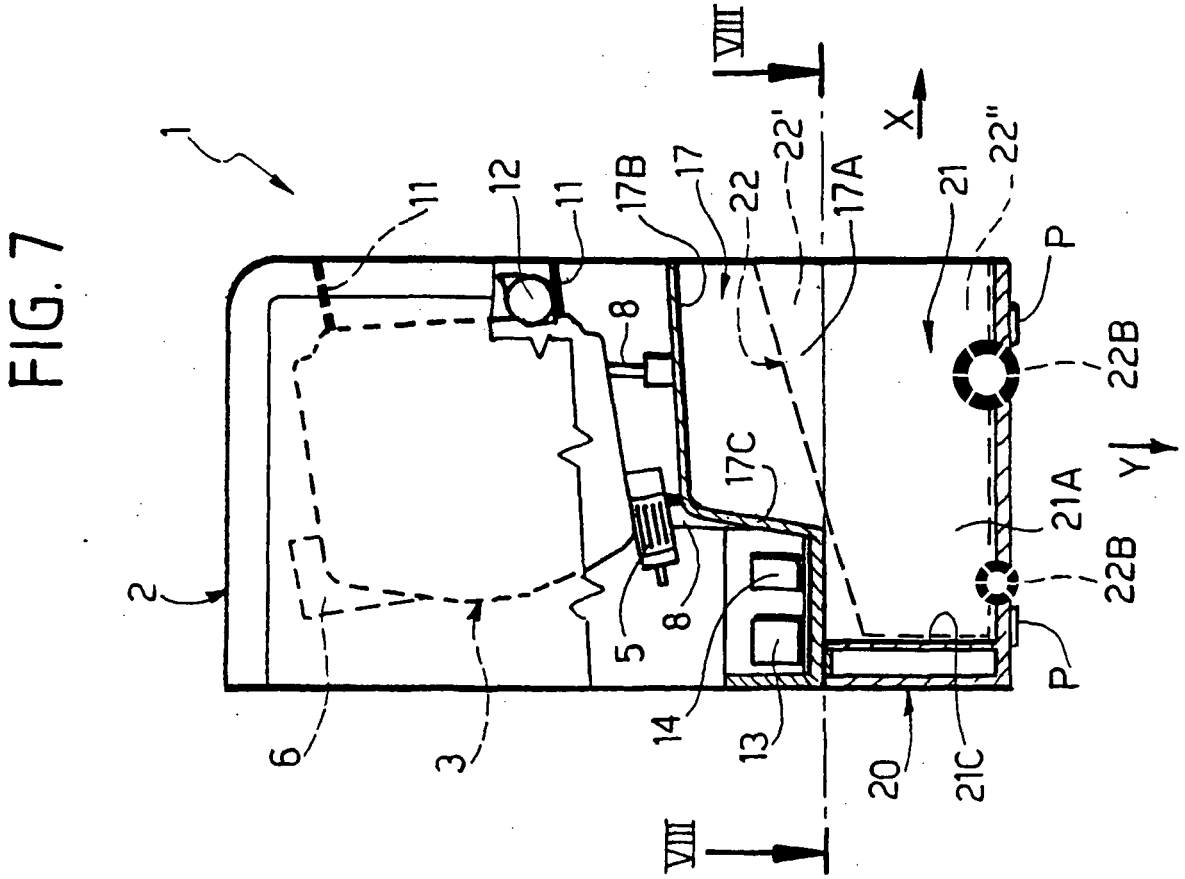

VIII
1
X
11
12
11
17B
17
22
22'
17A
21
22''
P
8
22B
17C
21A
Y
2
5
8
P
22B
6
3
14
13
20
21C
VIII

FIG. 9

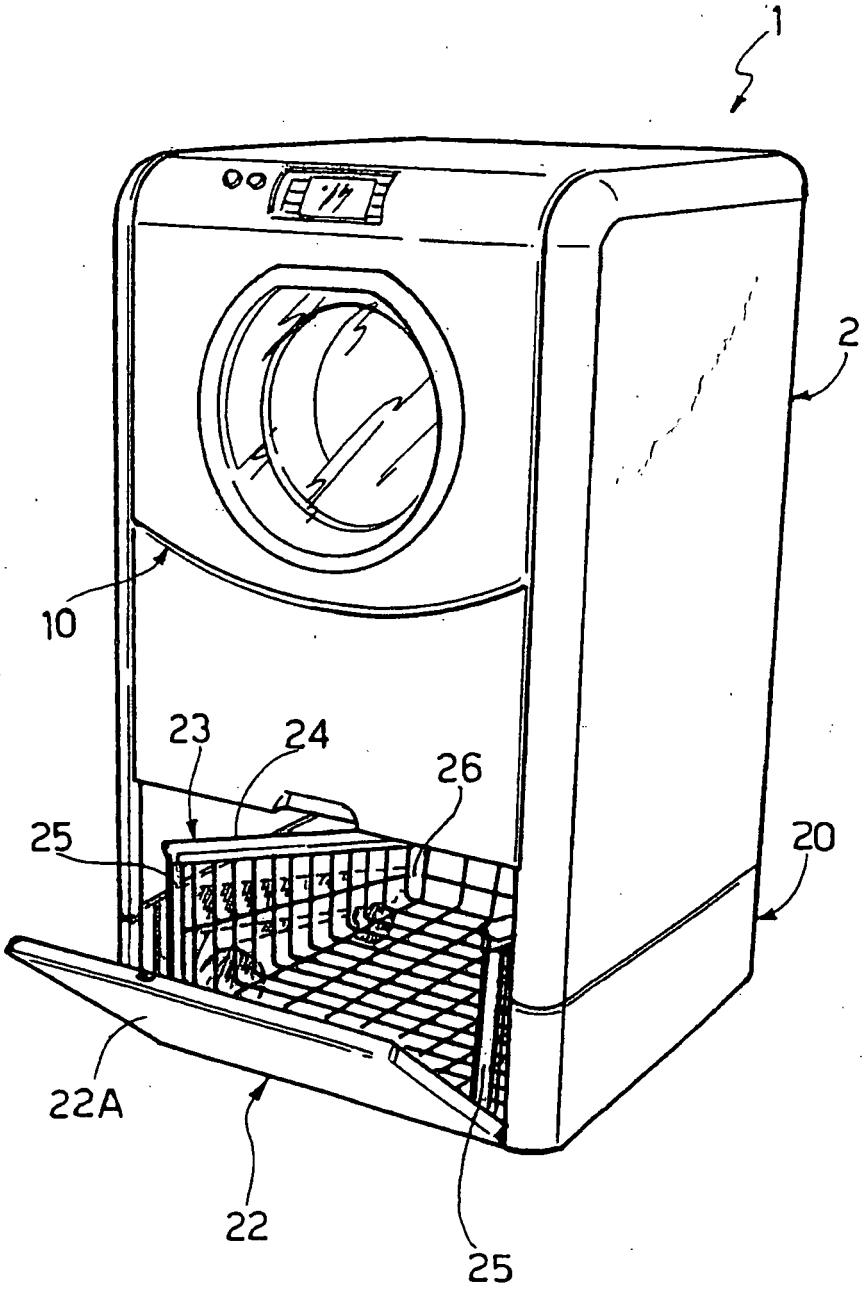


FIG. 10

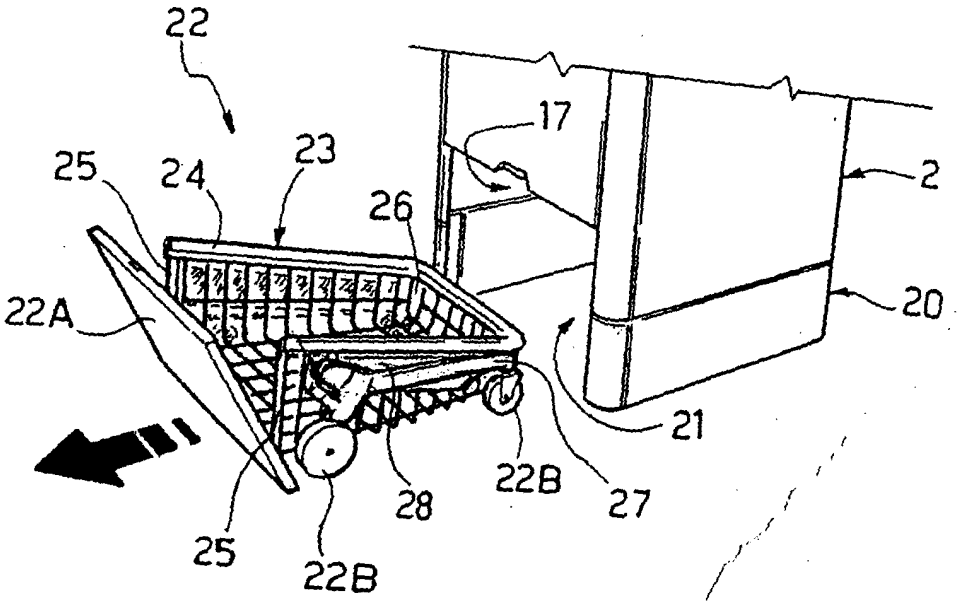
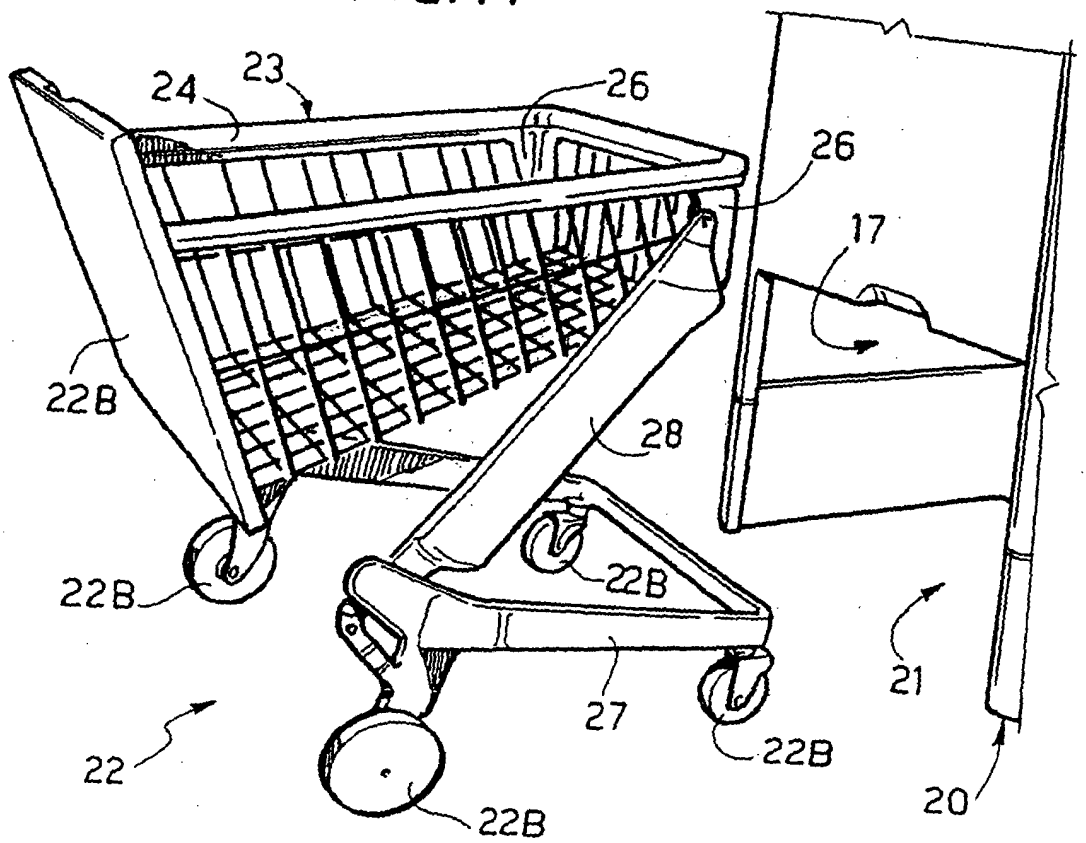

22
17
25
24
23
26
2
22A
20
21
22B
27
28
25
22B

FIG.11


24
23
26
26
17
22B
28
22B
22B
21
27
22
22B
22B
20