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(54) **A system comprising a tower module, a top module as well as a plurality of additional modules**

System mit einem Turmmodul, einem Kopfmodul und einer Vielzahl weiterer Module

Système comprenant un module de tour, un module supérieur ainsi qu'une pluralité de modules supplémentaires

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Description

The prior art

[0001] The invention relates to a system which comprises a tower module, a top module as well as a plurality of supplementary modules, and which may be combined to create various configurations.

[0002] Systems of this type are used in particular for the building of self-service checkout stations in supermarkets and similar establishments,

[0003] The specification of US 2009/0188757 A1 discloses an example of a system comprising a tower structure with a cabinet (94), electrical equipment and a bag holder.

[0004] US 2003 0226891 discloses another system comprising in particular a cabinet, a foot plate and packaging shelves.

[0005] These known systems; however, are vitiated by the drawback that they cannot be built with various modules and thus cannot be built to the full extent to achieve the desired structures and thereby the desired applications, since the system does not have the necessary mounting positions.

The object of the invention

[0006] It is the object of the invention to remedy or remove the drawbacks and inexpedient circumstances with respect to the erection and equipment of self-service checkout stations, which are described above.

[0007] Moreover, it is an object to provide a relatively inexpensive and flexible mechanical structure of the invention, which requires a minimum of floor space, which makes it movable, and which allows layout, extension and change in a simple manner according to the desires of the supermarket/user.

Disclosure of the invention

[0008] The object stated above is achieved by modules for the building of a free-standing tower structure for the support and mounting of electronic equipment, as stated in the introductory portion of claim 1, wherein the tower module comprises a foot plate and a cabinet secured to the foot plate, said cabinet being equipped with mounting positions for the top module and one or more supplementary modules, and wherein the top module comprises a mounting plate and a housing coupled to the mounting plate, said housing being equipped with mounting positions for electronic equipment and for one or more supplementary modules, and wherein the supplementary modules comprise packaging shelves with and without a bag holder, a blind plate, a frame-shaped shelf as well as arms for supporting electronic equipment.

[0009] Hereby, it is possible to build a tower structure consisting of a tower module and a top module as well as one or more supplementary modules, and to equip the top module and the supplementary modules with electronic equipment according to the customer's wishes for functions and make.

[0010] In this manner, the tower structure may form the basis for the creation of self-service checkout stations, stock control modules, info stands and the like.

[0011] With the cabinet secured to the foot plate and with the top plate secured to the cabinet, it is moreover ensured that a free-standing tower structure is achieved, which only takes up floor space corresponding to the area of the floor plate. The tower structure is movable and may freely be arranged on both sides of a gangway.

[0012] According to the invention, the cabinet comprises two side plates with front edges perpendicular to the side plate, a top plate with a front edge perpendicular to the front plate, a bottom plate, a rear plate and a front door, and wherein each of the side plates is equipped with mounting positions for the shelves, said mounting positions being formed by attachment holes arranged in pairs after each other in a row, and wherein the mounting position for the blind plate or the frame-shaped shelf is formed by attachment holes disposed centrally on the front edge of the top plate and on the uppermost part of the front edge of the side plates, and wherein the mounting position for the top module is formed by attachment holes disposed at their respective corners of the top plate.

[0013] It is ensured hereby that the cabinet constitutes a stable supporting element for the packaging shelves and for the top module, and that the positions of the attachment holes provide the possibility of selecting a mounting height for the packaging shelves. Moreover, it makes it possible either to mount a blind plate or a frame-shaped shelf on the front edge of the cabinet immediately above the front door depending on the customer's desires.

[0014] As stated in claim 2, the mounting plate of the top module is bent at a right angle, so that it is formed by a horizontal plate part, which is equipped with attachment holes disposed so as to match the positions of the attachment holes in the top plate of the cabinet, and a vertical plate part, which is equipped with a service opening as well as at least two hooks for securing the housing of the top module.

[0015] With the mounting plate secured to the top plate, an engagement face with hooks is established, which facilitates mounting and attachment of the housing of the top module, and the service opening provides for the ability to service equipment in the interior of the housing.

[0016] As stated in claim 3, the housing of the top module has a ground plan with attachment holes, which match both the attachment holes in the horizontal part of the mounting plate of the top module and the top plate of the cabinet, a front side with a cut-out for electronic equipment, such as a commodity scanner, two sides with mounting positions formed by attachment holes for arms for the support of electronic equipment, such as a printer and/or a card terminal, a partly open rear side with at least two slots configured to engage the hooks on the

mounting plate, as well as an inclined plane facing toward the front side and having mounting positions formed by attachment holes according to the VESA standard for electrical equipment, such as a flat-screen.

[0017] This ensures that it is possible to pass the hooks of the mounting plate and the slots of the housing into each other by a simple downward movement, thereby securing the housing and thus the top module to the top plate of the cabinet.

[0018] Further, with the top module arranged on top of the tower module, it is ensured that the electrical equipment is arranged at an operation-friendly and ergonomically correct height and within normal reach and reading distance for an attendant, so that the attendant does not have to move in connection with the registration and payment for the commodity.

[0019] The packaging shelf can preferably comprise a laminated plate with rounded edges and corners secured to a shelf bracket, said shelf bracket being configured to engage the side plates of the cabinet at a selected height opposite a pair of the attachment holes of the mounting position, said plate being equipped with predrilled holes below the laminate for the attachment of a bag holder.

[0020] Hereby, it is possible to mount a packaging shelf on the side plates of the cabinet at a desired height e.g. for a shopping basket, and to use the same laminated plate irrespective of the use of a bag holder.

[0021] As stated in claim 4, the packaging shelf comprises a laminated plate with rounded edges and corners secured to a shelf bracket and a bag holder, said shelf bracket being configured to engage the side plates of the cabinet at a selected height opposite a pair of the attachment holes of the mounting position, said bag holder being made of wire and secured to the laminated plate through the predrilled holes.

[0022] Hereby, it is ensured that a packaging shelf with a bag holder may be mounted on the side plates of the cabinet, so that one side is equipped with a shelf for a shopping basket and the other with a shelf with a bag holder.

[0023] Finally, as stated in claim 5, it is expedient that the blind plate is configured with bent edges equipped with attachment holes which match the attachment holes of the cabinet, and which allow attachment of the blind plate from the inner side of the cabinet. Hereby, the blind plate appears without any signs of assembly.

[0024] As stated in claims 6, the frame-shaped shelf is equipped with attachment holes which match the attachment holes of the cabinet, as well as a bracket and an open top plan for receiving an electronic instrument, such as a scale and/or a commodity scanner.

[0025] It is ensured hereby that the frame-shaped shelf may be mounted on the upper part of the front edges of the cabinet, and that the tower structure may be expanded with an instrument shelf, as needed.

[0026] As stated in claim 7, the arms for the support of electronic equipment comprises a fixed pipe member and a pipe member rotatable about a vertical axis, and wherein the fixed pipe member is equipped with a flange with attachment holes which match the attachment holes on the side of the top module, and wherein the rotatable pipe member is equipped with a mounting plate for an electronic instrument, such as a printer and/or a card terminal, said mounting plate being connected with the pipe member at a bearing with a horizontal axis.

[0027] It is ensured hereby that the electronic instruments may be mounted and adjusted about a vertical axis and a horizontal axis, so that the instruments are arranged in an operation-friendly and ergonomically optimal position relative to the attendant.

[0028] It is expedient that the cabinet is equipped with a mounting plate for electrical units, such as computers, power supplies and the like, which are arranged inside the cabinet behind a lockable front door.

The drawing

[0029] Exemplary embodiments of the invention will be explained more fully below with reference to the drawing, in which:

Fig. 1	shows an exploded view of all the modules of the tower structure, in perspective,
fig. 2	shows an exploded view of the tower modules with blind plate and door, in perspective,
fig. 3	shows the cabinet of the tower module without blind plate and door, in perspective,
figs. 4-4a	show an exploded view of the top module with arms seen obliquely from the front, in perspective,
figs. 5-5a	show an exploded view of the top module with arms seen obliquely from behind, in perspective,
fig. 6	shows an exploded view of a packaging module with a bag holder, in perspective,
fig. 7	shows the tower structure in an embodiment with modules for a self-service checkout station, in perspective.

Detailed description of the invention

[0030] A tower structure 1 according to the invention is shown in figures 1-7. Fig. 1 shows a perspective view in an exploded form of the tower structure with all the associated modules.

[0031] The tower module 2 comprises the foot plate 10 and the cabinet 11, The cabinet is secured to the foot plate by screw attachment.

[0032] The top module 3 comprises a mounting plate

17 and a housing 18.

[0033] The supplementary modules comprise a packaging shelf 4 with a bag holder 66, a packaging shelf 5 without a bag holder, a blind plate 6, a frame-shaped shelf 7, an arm 8 with a bend for supporting electronics as well as an arm 9 without a bend for supporting electronics.

[0034] It is shown in fig. 2 that the foot plate 10 of the tower module is equipped with five adjustment feet 34, four of said adjustment feet being arranged at the corners of the plate and one in the centre of the plate. The adjustment feet may be adjusted from the upper side of the foot plate with a tool after the removal of a plastics strap 35 (not shown). The foot plate is made of steel.

[0035] It is shown in figs. 2 and 3 that the cabinet 11 of the tower module comprises two side plates 19, which are configured with bent front edges 20 and rear edges 36, a top plate 21 with a front edge 22 and a rear edge 37, a bottom plate 23 configured like the top plate 21, a rear plate 24 with bent edges as well as a lockable front door 25 (figs, 1, 2).

[0036] In addition, the side plates 19 are provided with a mounting position 13 for the packaging shelves 4, 5. The mounting position 13 is formed by attachment holes 26 arranged in pairs after each other, so that the packaging shelves 4, 5 may be arranged in five different levels, as desired. Further, the side plates are provided with vent holes 38 at the top and at the bottom.

[0037] The top plate 21 and the bottom plate 23 are constructed identically. The front edge 22 and the rear edge 37 are bent at a right angle to the plane of the top plate. The side edges 39 are likewise bent at a right angle to the plane of the top plate, and the side edges are reinforced by a bracket 40, which is disposed internally between the side edges 39 and the top plate. Moreover, the top plate is provided with a hole 41 in the centre of the top plate for the running of cables.

[0038] In addition, the top plate is equipped with a mounting position 12 for the top module 3. The mounting position is formed by attachment holes 28 which are arranged at their respective corners of the top plate.

[0039] The rear plate 24 is rectangular in shape and covers the rear side of the cabinet. The rear plate is provided with bent edges and is secured to side plates and top and bottom plates by means of a special screw attachment, which is formed by a captive screw or a push-on fastener. The bent edges are cut away on the stretches which are opposite the mounting position 13 in order to make room for the mounting of the shelf bracket 62 (see fig. 6) and along the bottom of the rear plate to make room for the foot plate 10.

[0040] The front door 25 is rectangular in shape and covers about 75% of the front side of the cabinet. The front door is provided with bent edges and is mounted on the front edge 20 of a side plate 19 by means of two hinges 42. The hinges are mounted such that they cannot be removed from the outer side. Further, the front door is equipped with a lock 43, which requires a special key (see fig. 1 or 7).

[0041] The cabinet is additionally equipped with a mounting position 14 for a blind plate 6 or a frame-shaped shelf 7. The mounting position is formed by attachment holes 27 arranged centrally on the front edge 22 of the top plate 21 and on the uppermost part of the front edges 20 of the side plates 19.

[0042] A mounting plate 54 for electrical units of various types, such as a computer, power supplies and the like, is arranged in the inner space of the cabinet.

[0043] The cabinet is made of steel.

[0044] The mounting plate 17 of the top module is shown in figs. 4a and 5a and is formed by a plate bent at an angle so as to produce a horizontal plate part 29 and a vertical plate part 31. The horizontal plate part 29 is provided with attachment holes 30 and a hole 44 for the running of cables, so that it matches the top plate 21 of the cabinet. The vertical plate part 31 is provided with a service opening 32, hooks 33 for the attachment of the housing 18 of the top module as well as at least four holes 45 at each corner for optional wall mounting.

[0045] The housing 18 of the top module is shown in figs. 4 and 5 and is configured with a ground plan which matches the horizontal part 29 of the mounting plate and the top plate 21 of the cabinet. The front side 46 of the housing is provided with a cut-out 47 for electronic equipment, such as a commodity scanner. The sides 48 of the housing are equipped with a mounting position 15. The mounting position is formed by attachment holes 49 for arms 8, 9 for the support of electronic equipment. The rear side 50 of the housing, which is partly open, is provided with two to four slot-shaped cut-outs 51. The slots 51 are configured to engage the hooks 33 on the mounting plate. Moreover, the housing is provided with an inclined plane 52 facing toward the front side and having a mounting position 16 which is formed by attachment holes 53 according to the Vesa standard for electronic equipment, such as a monitor of the flat-screen type. The inclined position of the plane is selected to favour an advantageous position for the reading of the screen text.

[0046] The top module 3 is mounted on the tower module 2 by first securing the mounting plate 17 to the top plate 21 with at least two bolts, which are passed through the rearmost ones of the attachment holes 30 and 28, and then securing the housing 18 to the mounting plate 17 by a downward movement, so that the hooks 33 and the slot 51 engage each other. Then, two additional bolts may be passed through the front attachment holes in the housing, the top plate and the mounting plate. The top module is made of steel.

[0047] The arm 8, 9 for the support of electronic equipment is shown in figs. 4 and 5 and comprises a fixed pipe member 55 and a pipe member 56 rotatable about a vertical axis, said fixed pipe member 55 being equipped with a flange 57 with attachment holes 58 which match the attachment holes 49 on the side of the housing 18. The rotatable pipe member is equipped with a mounting plate 59 for electrical equipment, such as e.g. printers or card

terminals. The mounting plate 59 is anchored to the pipe member 56 at a horizontally disposed bearing 60. In an embodiment, the arm 8 may be provided with a bend on the fixed pipe member 55. The arms are made of steel. The mounting plate 59 may be adjusted about a vertical axis and about a horizontal axis. Hereby, it may be set at an angle which is operation-friendly and ergonomically correct relative to a user.

[0048] The operation height of the electronic equipment is determined on the basis of ergonomic recommendations and anthropometric data.

[0049] The packaging shelf 4, 5 is shown in fig. 6 and comprises a wooden plate 61 secured to a shelf bracket 62 of steel. The wooden plate is provided with rounded edges and corners and is equipped with a laminated surface. The shelf bracket is provided with two supporting arms and arranged to engage the side plates 19 of the cabinet at a selected height opposite a pair of the attachment holes 26 of the mounting position 13. On the lower side, the wooden plate is equipped with predrilled holes 63, which, however, do not penetrate the laminated surface.

[0050] In an embodiment, the packaging shelf 4 moreover comprises a bag holder 66, which is made of steel wire. The bag holder is screwed on to the wooden plate via the predrilled holes 63.

[0051] When the packaging shelves 4, 5 are mounted on their respective sides of the cabinet, it is ensured that a user may place his/her shopping basket on the one shelf, from which the commodity is taken, registered and put down into a bag on the other shelf. The height of the shelves is selected on the basis of the desire for having an ergonomically correct working position, so that all functions may be performed in a coherent sequence.

[0052] The frame-shaped shelf 7, which is shown in figs. 1 and 7, is equipped with attachment holes which match the attachment holes 27 of the cabinet, as well as suspension brackets 65. Further, the shelf is configured with an open top plan 67 for receiving an electronic instrument, such as a scale and/or a commodity scanner.

[0053] The size of the opening of the top plan and the configuration of the suspension bracket are determined by the type of scale and/or commodity scanner which is selected.

[0054] If the shelf 7 is not to be used, the blind plate 6 is mounted instead, which is provided with bent edges, and which likewise has attachment holes matching the attachment holes 27 of the cabinet.

[0055] In an embodiment, a free-standing info stand may be established by coupling the tower module 2 and the top module 3 together and by mounting a flat-screen with a finger-touch function. Such an info stand is movable and may be used in numerous situations at many places.

[0056] In another embodiment, a free-standing stock control desk may be established by coupling the tower module and the top module together and by equipping the top module with a flat-screen with a finger-touch function and a commodity scanner. Such a desk may be set up as an independent unit in a storage room, but it may also be set up as a unit in cooperation with other similar units.

[0057] In a third embodiment, the top module may be equipped with a flat-screen and a commodity scanner and be suspended from a wall. When a customer moves a commodity past the scanner, information on the commodity, its contents and its price will appear.

[0058] The stated embodiments should not be considered to be exhaustive for the use of the invention which is defined by the appended claims.

Claims

1. A system, which comprises a tower module (2), a top module (3) as well as a plurality of supplementary modules, and which may be combined to create various configurations, which tower module (2) comprises a foot plate (10) and a cabinet (11) secured to the foot plate, and where the cabinet is equipped with a mounting position (12) for the top module (3) and a mounting position (13, 14) for the supplementary modules, and that the top module comprises a mounting plate (17) and a housing (18) coupled to the mounting plate, said housing being equipped with a mounting position (15) for the supplementary modules and a mounting position (16) for electronic equipment, and that the supplementary modules comprise packaging shelves (4, 5) with or without a bag holder (66), a blind plate (6), a frame-shaped shelf (7) as well as arms (8, 9) for the support of electronic equipment, wherein the cabinet (11) further comprises two side plates (19) with front edges (20) perpendicular to the side plate, a top plate (21) with a front edge (22) perpendicular to the top plate, a bottom plate (23) corresponding to the top plate, a rear plate (24) and a front door (25), and that each of the side plates is equipped with the mounting position (13) for the packaging shelves (4, 5), said mounting position being formed by attachment holes (26) arranged in pairs after each other in a row, and that the mounting position (14) of the blind plate (6) or the frame-shaped shelf (7) is formed by attachment holes (27) disposed centrally on a front edge (22) of the top plate and on the uppermost part of a front edge (20) of the side plates, and that the mounting position (12) for the top module (3) is formed by attachment holes (28) disposed at their respective corners of the top plate.

2. A system according to claim 1, **characterized in that** the mounting plate (17) of the top module is bent at a right angle, so that it is formed by a horizontal plate part (29), which is equipped with attachment holes (30) disposed so as to match the attachment holes (28) in the top plate (21), and a vertical plate part

(31), which is equipped with a service opening (32) as well as at least two hooks (33) for the attachment of the housing (18) of the top module.

3. A system according to claims 1 and 2, **characterized in that** the housing (18) of the top module has a ground plan which matches both the horizontal plate part (29) of the mounting plate of the top module and the top plate (21) of the cabinet, a front side (46) with a cut-out (47) for electronic equipment, such as a commodity scanner, two sides (48) with mounting positions (15) formed by attachment holes (49) for arms (8, 9) for the support of electronic equipment, such as a printer and/or a card terminal, a rear side (50) with at least two slots (51) configured to engage the hooks (33) of the mounting plate (17), as well as an inclined plane facing toward the front side and having a mounting position (16) which is formed by attachment holes according to the Vesa standard for electronic equipment, such as a flat-screen.

4. A system according to claims 1 and 2, **characterized in that** the packaging shelf (4) comprises a laminated wooden plate (61) with rounded edges and corners and a shelf bracket (62), and that the shelf bracket is configured to engage the side plates (19) of the cabinet at a selected height opposite a pair of the attachment holes (26) of the mounting position, and that the bag holder (66) is screwed on to the wooden plate (61) via the holes (63).

5. A system according to claim 1, **characterized in that** the blind plate (6) is provided with bent edges equipped with attachment holes which match the attachment holes (27) of the cabinet.

6. A system according to claim 1, **characterized in that** the frame-shaped shelf (7) is equipped with attachment holes which match the attachment holes (27) of the cabinet, as well as a bracket (65) and an open top plan (67) for receiving electronic equipment, such as a scale and/or a commodity scanner.

7. A system according to claims 1-3, **characterized in that** the arms (8, 9) for support comprise a fixed pipe member (55) and a pipe member (56) rotatable about a vertical axis, and that the fixed pipe member is equipped with a flange (57) with attachment holes (58) matching the attachment holes (49) on the side of the housing (18), and that the rotatable pipe member is equipped with a mounting plate (59) for electronic equipment, such as a printer and/or a card terminal, said mounting plate being connected with the pipe member at a bearing (60) with a horizontal axis.

Patentansprüche

1. Ein System, welches ein Turmmodul (2), ein oberes Modul (3) sowie eine Mehrzahl von Zusatzmodulen aufweist und welches kombiniert werden kann, um zahlreiche Konfigurationen zu schaffen, welches Turmmodul (2) eine Fußplatte (10) und einen Schrank (11) aufweist, welcher an der Fußplatte befestigt ist, und wobei der Schrank mit einer Befestigungsstelle (12) für das obere Modul (3) und einer Befestigungsstelle (13,14) für die Zusatzmodule versehen ist, und wobei das obere Modul eine Befestigungsplatte (17) und ein Gehäuse (18) aufweist, welches mit der Befestigungsplatte (17) verbunden ist, wobei das Gehäuse mit einer Befestigungsstelle (15) für die Zusatzmodule und einer Befestigungsstelle (16) für elektronische Ausrüstung versehen ist, und wobei die Zusatzmodule Verpackungsablagen (4,5) mit oder ohne einem Beutelhalter (66), eine Blindplatte (6), eine rahmenförmige Ablage (7) sowie Arme (8,9) zum Abstützen von elektronischer Ausrüstung aufweisen, wobei der Schrank (11) ferner zwei Seitenplatten (19) mit Vorderrändern (20), welche rechtwinkelig zur Seitenplatte sind, eine obere Platte (21) mit einem Vorderrand (22), welcher rechtwinkelig zu der oberen Platte ist, eine untere Platte (23), welche zu der oberen Platte korrespondiert, eine hintere Platte (24) und eine Vordertür (25) aufweist, und wobei jede der Seitenplatten versehen ist mit der Befestigungsstelle (13) für die Verpackungsablagen (4,5), wobei die besagte Befestigungsstelle durch Befestigungslöcher (26) gebildet ist, welche paarweise nacheinander in einer Reihe angeordnet sind, und wobei die Befestigungsstelle (14) der Blindplatte (6) oder der rahmenförmigen Ablage (7) durch Befestigungslöcher (27) gebildet ist, welche zentral an einem Vorderrand (22) der oberen Platte und an dem obersten Teil eines Vorderrands (20) der Seitenplatten angeordnet sind, und wobei die Befestigungsstelle (12) für das oberes Modul (3) durch Befestigungslöcher (28) gebildet ist, welche an ihren jeweiligen Ecken der oberen Platte angeordnet sind.

2. Ein System gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Befestigungsplatte (17) des oberen Moduls in einem rechten Winkel abgebogen ist, so dass sie durch einen horizontalen Plattenteil (29), welcher mit Befestigungslöchern (30) versehen ist, die angeordnet sind, um zu den Befestigungslöchern (28) in der oberen Platte (21) zu passen, und einen vertikalen Plattenteil (31) ausgebildet ist, welcher mit einer Service-Öffnung (32) sowie wenigstens zwei Haken (33) zum Anbringen des Gehäuses (18) des oberen Moduls versehen ist.

3. Ein System gemäß Ansprüchen 1 und 2, **dadurch gekennzeichnet, dass** das Gehäuse (18) des obe-

ren Moduls aufweist eine Bodenfläche, welche zu sowohl dem horizontalen Plattenteil (29) der Befestigungsplatte des oberen Moduls als auch der oberen Platte (21) des Schranks passt, eine Vorderseite (46) mit einer Aussparung (47) für elektronische Ausrüstung, wie z.B. einen Warenscanner, zwei Seiten (48) mit Befestigungsstellen (15), welche durch Befestigungslöcher (49) für die Arme (8,9) zum Abstützen von elektronischer Ausrüstung, wie z.B. eines Druckers und/oder eines Kartenterminals, ausgebildet sind, eine hintere Seite (50) mit wenigstens zwei Schlitzen (51), welche dazu eingerichtet sind, mit den Haken (33) der Befestigungsplatte (17) im Eingriff zu sein, sowie eine geneigte Fläche, welche hin zu der Vorderseite zeigt und welche eine Befestigungsstelle (16) aufweist, welche durch Befestigungslöcher gemäß dem Vesa-Standard für elektronische Ausrüstung, wie z.B. einem Flachbildschirm, ausgebildet ist.

4. Ein System gemäß Ansprüchen 1 und 2, **dadurch gekennzeichnet, dass** die Verpackungsablage (4) eine laminierte Holzplatte (61) mit abgerundeten Rändern und Ecken und eine Ablagenhalterung (62) aufweist, und dass die Ablagenhalterung dazu eingerichtet ist, mit den Seitenplatten (19) des Schranks auf einer ausgewählten Höhe einem Paar der Befestigungslöcher (26) der Befestigungsstelle gegenüberliegend im Eingriff zu sein, und dass der Beutelhalter (66) an die Holzplatte (61) mittels der Löcher (63) angeschraubt ist.

5. Ein System gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Blindplatte (6) mit abgebogenen Rändern bereitgestellt ist, welche mit Befestigungslöchern versehen sind, welche zu den Befestigungslöcher (27) des Schranks passen.

6. Ein System gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die rahmenförmige Ablage (7) mit Befestigungslöchern, welche zu den Befestigungslöchern (27) des Schranks passen, sowie einer Halterung (65) und einer offenen, oberen Fläche (67) zum Aufnehmen von elektronischer Ausrüstung versehen ist, wie z.B. einer Waage und/oder einem Warenscanner.

7. Ein System gemäß Ansprüchen 1 bis 3, **dadurch gekennzeichnet, dass** die Arme (8,9) zum Abstützen ein fixiertes Rohrelement (55) und ein Rohrelement (56) aufweisen, welches um eine vertikale Achse drehbar ist, und dass das fixierte Rohrelement mit einem Flansch (57) mit Befestigungslöchern (58) versehen ist, welche zu den Befestigungslöchern (49) an der Seite des Gehäuses (18) passen, und dass das drehbare Rohrelement mit einer Befestigungsplatte (59) für elektronische Ausrüstung versehen ist, wie z.B. einen Drucker und/oder ein Kartenterminal, wobei die Befestigungsplatte mit dem Rohrelement an einem Lager (60) mit einer horizontalen Achse verbunden ist.

Revendications

1. Système, qui comprend un module de tour (2), un module supérieur (3) ainsi qu'une pluralité de modules supplémentaires, et qui peuvent être combinés pour créer diverses configurations, lequel module de tour (2) comprend une plaque de pied (10) et une armoire (11) fixée à la plaque de pied, et où l'armoire est pourvue d'une position de montage (12) pour le module supérieur (3) et d'une position de montage (13, 14) pour les modules supplémentaires, et que le module supérieur comprend une plaque de montage (17) et un boîtier (18) couplé à la plaque de montage, ledit boîtier étant pourvu d'une position de montage (15) pour les modules supplémentaires et d'une position de montage (16) pour un équipement électronique, et que les modules supplémentaires comprennent des tablettes d'emballage (4, 5) avec ou sans un support de sac (66), une plaque aveugle (6), une tablette en forme de châssis (7) ainsi que des bras (8, 9) pour le support de l'équipement électronique, dans lequel l'armoire (11) comprend en outre deux plaques latérales (19) avec des bords avant (20) perpendiculaires à la plaque latérale, une plaque supérieure (21) avec un bord avant (22) perpendiculaire à la plaque supérieure, une plaque inférieure (23) correspondant à la plaque supérieure, une plaque arrière (24) et une porte avant (25), et que chacune des plaques latérales est pourvue de la position de montage (13) pour les tablettes d'emballage (4, 5), ladite position de montage étant formée par des trous d'attache (26) agencés par paires les uns après les autres dans une rangée, et que la position de montage (14) de la plaque aveugle (6) ou de la tablette en forme de châssis (7) est formée par des trous d'attache (27) disposés centralement sur un bord avant (22) de la plaque supérieure et sur la partie la plus haute d'un bord avant (20) des plaques latérales, et que la position de montage (12) pour le module supérieur (3) est formée par des trous d'attache (28) disposés à leurs coins respectifs de la plaque supérieure.

2. Système selon la revendication 1, **caractérisé en ce que** la plaque de montage (17) du module supérieur est pliée à un angle droit, de sorte qu'elle est formée par une partie de plaque horizontale (29), qui est équipée de trous d'attache (30) disposés de manière à correspondre aux trous d'attache (28) dans la plaque supérieure (21), et une partie de plaque verticale (31), qui est équipée d'une ouverture de service (32) ainsi que d'au moins deux crochets (33) pour l'attache du boîtier (18) du module supérieur.

3. Système selon les revendications 1 et 2, **caractérisé en ce que** le boîtier (18) du module supérieur a un plan de masse qui correspond à la fois à la partie de plaque horizontale (29) de la plaque de montage du module supérieur et à la plaque supérieure (21) de l'armoire, un côté avant (46) avec une découpe (47) pour un équipement électronique, tel qu'un scanner de produit, deux côtés (48) avec des positions de montage (15) formées par des trous d'attache (49) pour des bras (8, 9) pour le support d'un équipement électronique, tel qu'une imprimante et/ou un terminal de carte, un côté arrière (50) avec au moins deux fentes (51) configurées pour engager les crochets (33) de la plaque de montage (17), ainsi qu'un plan incliné dirigé vers le côté avant et ayant une position de montage (16) qui est formée par des trous d'attache selon la norme Vesa pour un équipement électronique, tel qu'un écran plat.

4. Système selon les revendications 1 et 2, **caractérisé en ce que** la tablette d'emballage (4) comprend une plaque de bois laminé (61) avec des bords arrondis et des coins et un support de tablette (62), et que le support de tablette est configuré pour engager les plaques latérales (19) de l'armoire à une hauteur sélectionnée à l'opposé d'une paire des trous d'attache (26) de la position de montage, et que le support de sac (66) est vissé à la plaque de bois (61) via les trous (63).

5. Système selon la revendication 1, **caractérisé en ce que** la plaque aveugle (6) est munie de bords pliés équipés de trous d'attache qui correspondent aux trous d'attache (27) de l'armoire.

6. Système selon la revendication 1, **caractérisé en ce que** la tablette en forme de châssis (7) est équipée de trous d'attache qui correspondent aux trous d'attache (27) de l'armoire, ainsi que d'un support (65) et d'un plan supérieur ouvert (67) pour recevoir un équipement électronique, tel qu'une balance et/ou un scanner de produit.

7. Système selon les revendications 1 à 3, **caractérisé en ce que** les bras (8, 9) pour le support comprennent un organe de tube fixe (55) et un organe de tube (56) rotatif autour d'un axe vertical, et que l'organe de tube fixe est équipé d'une bride (57) avec des trous d'attache (58) correspondant aux trous d'attache (49) sur le côté du boîtier (18), et que l'organe de tube rotatif est équipé d'une plaque de montage (59) pour un équipement électronique, tel qu'une imprimante et/ou un terminal de carte, ladite plaque de montage étant connectée à l'organe de tube sur un palier (60) avec un axe horizontal.

Fig 1

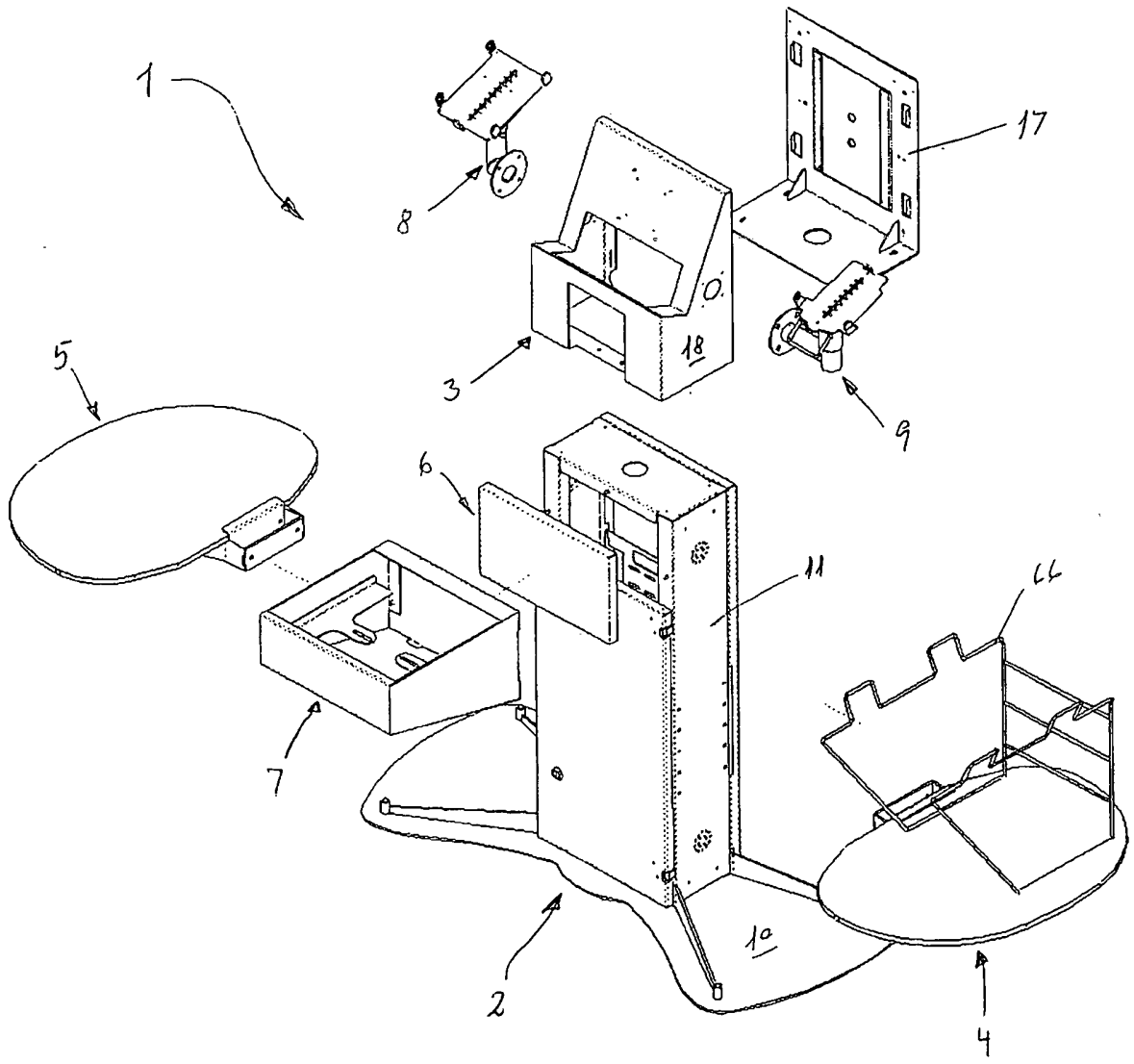


Fig. 2

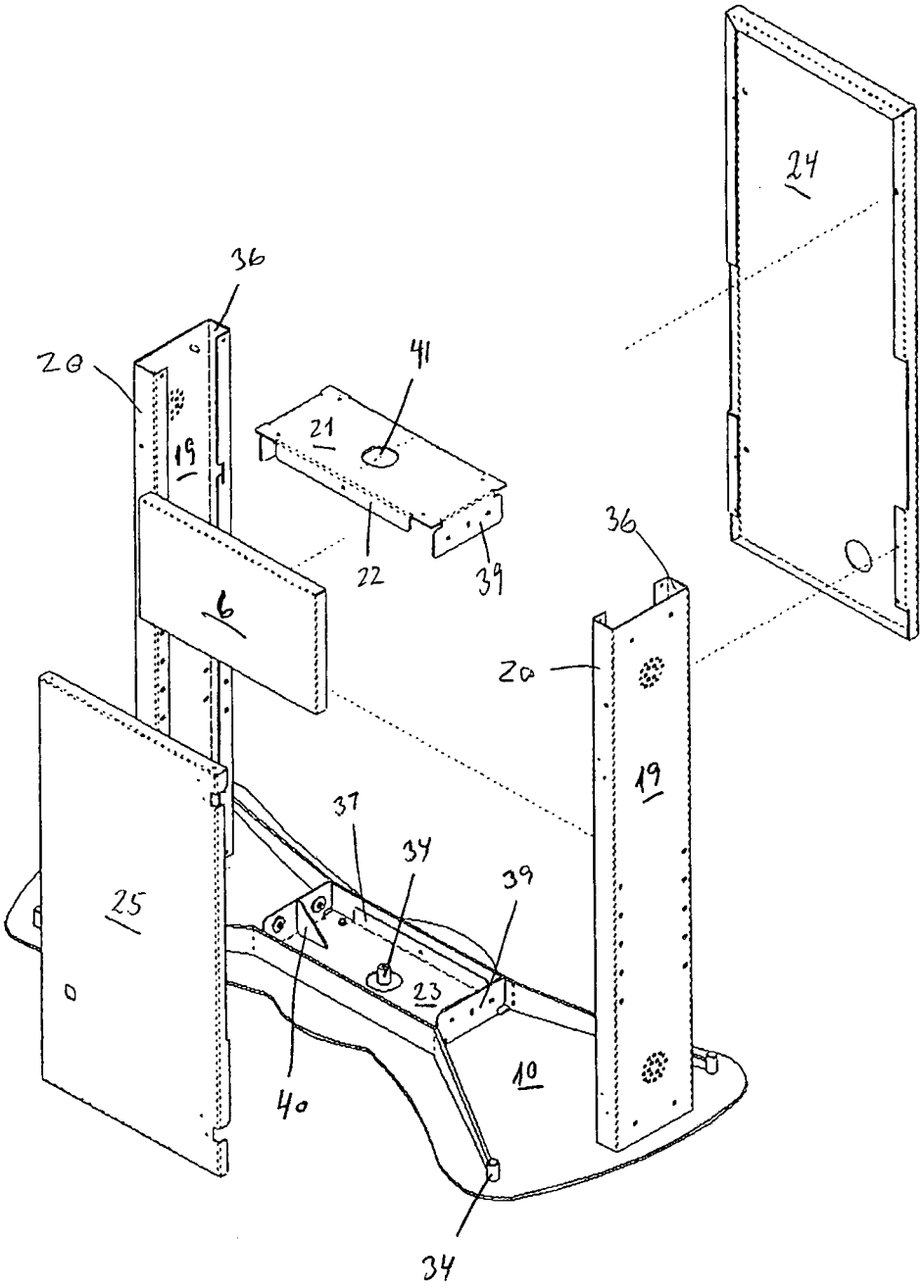


Fig. 3

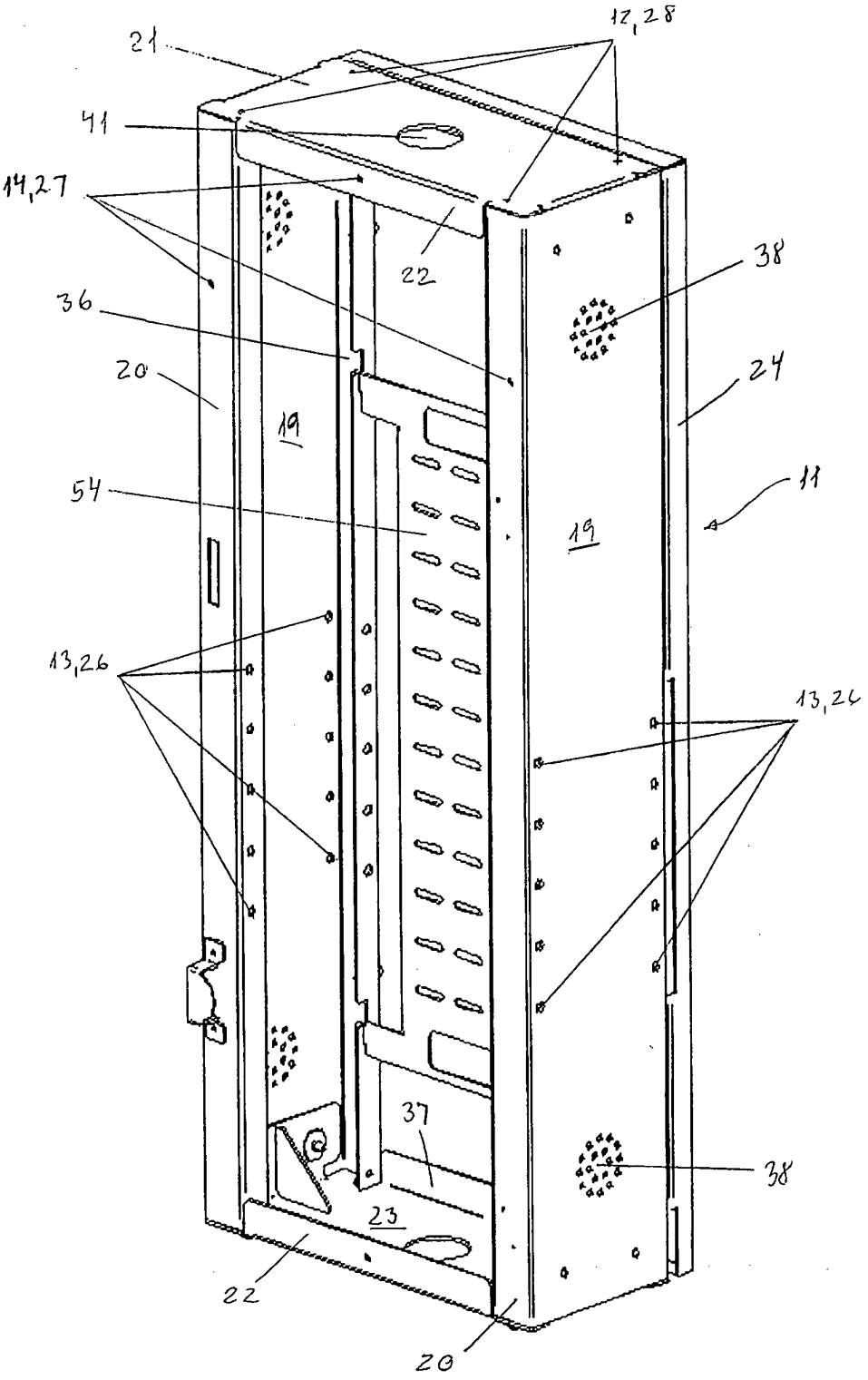


Fig. 4

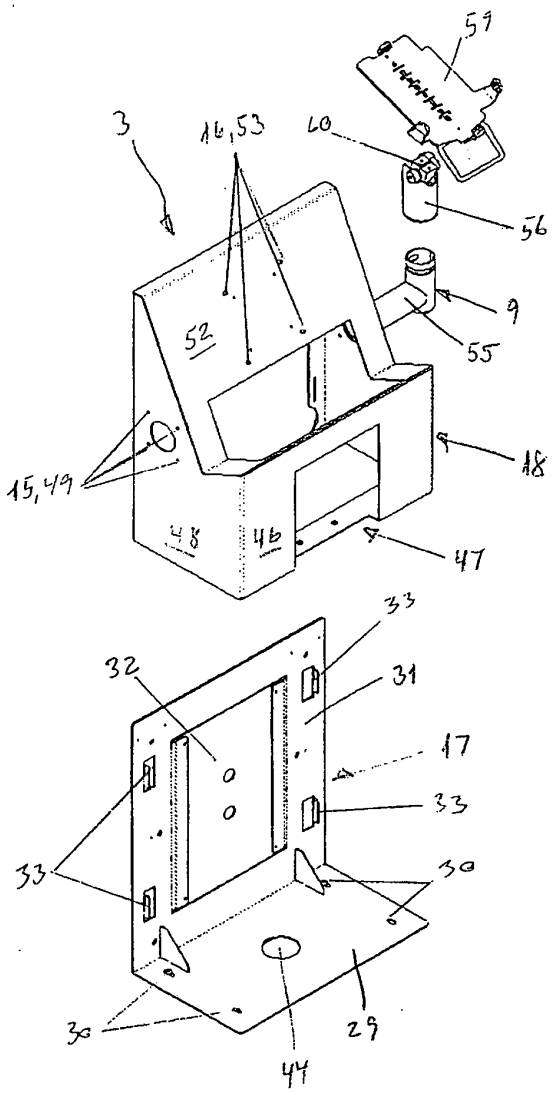


Fig. 4a

Fig. 5

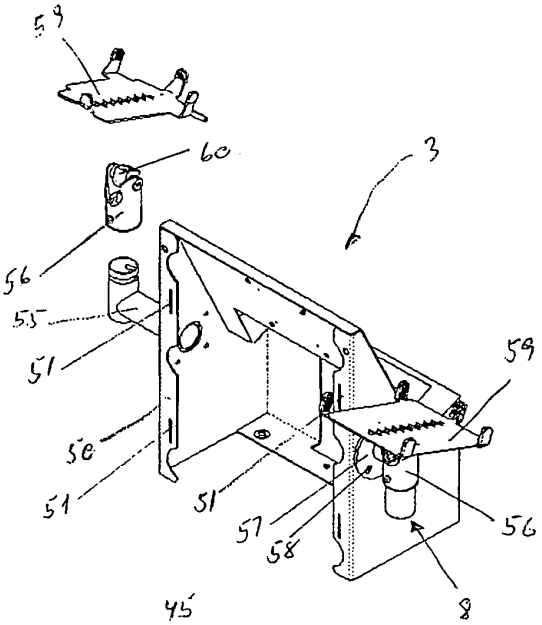


Fig. 5a

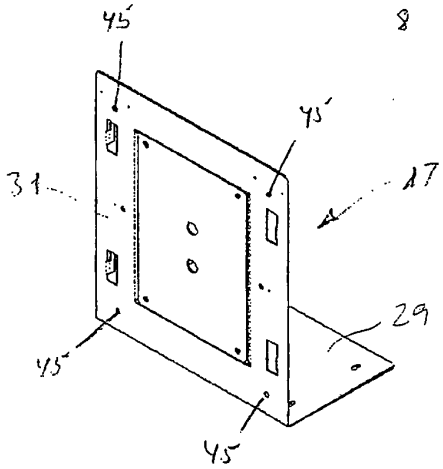


Fig. 6

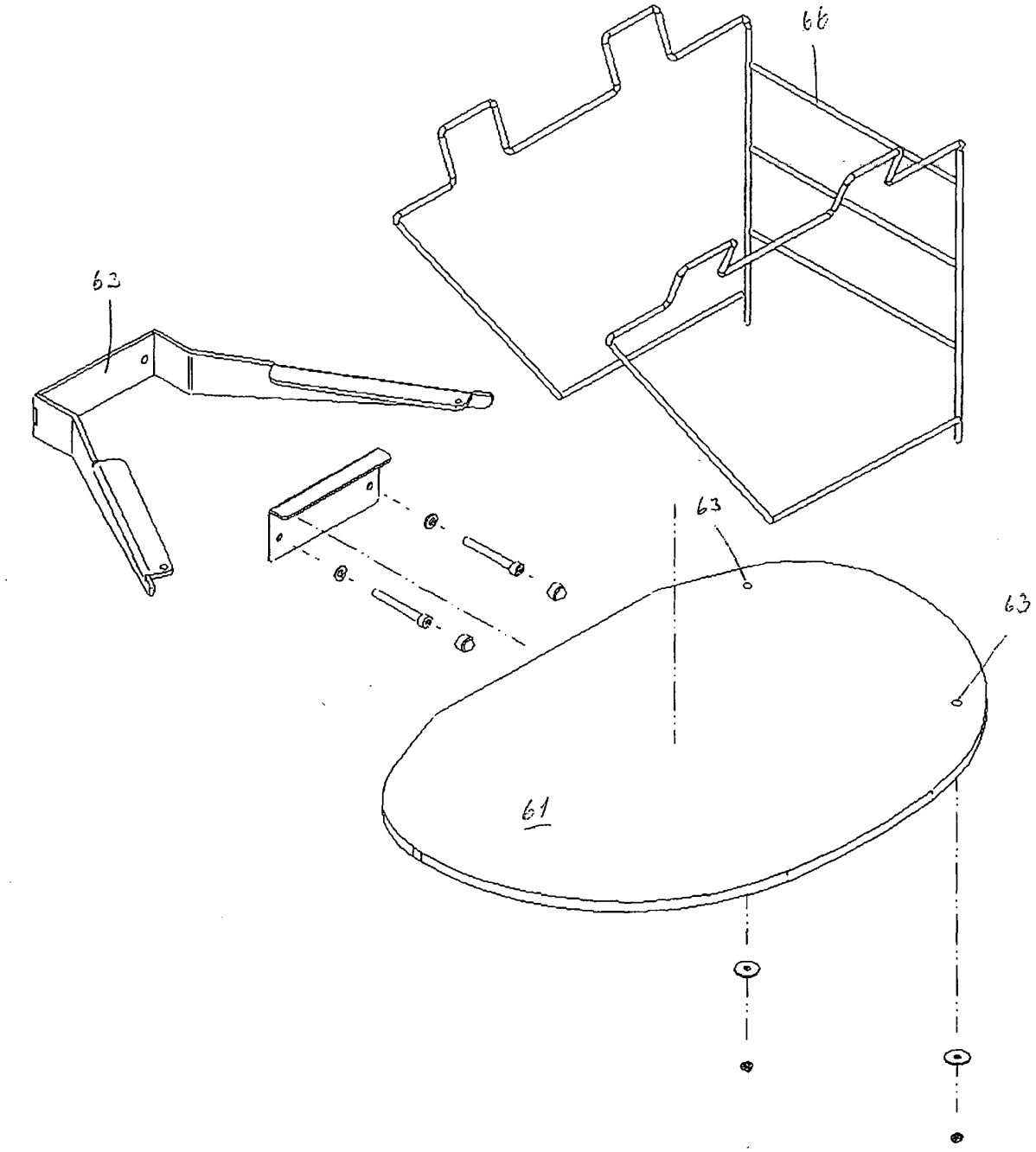
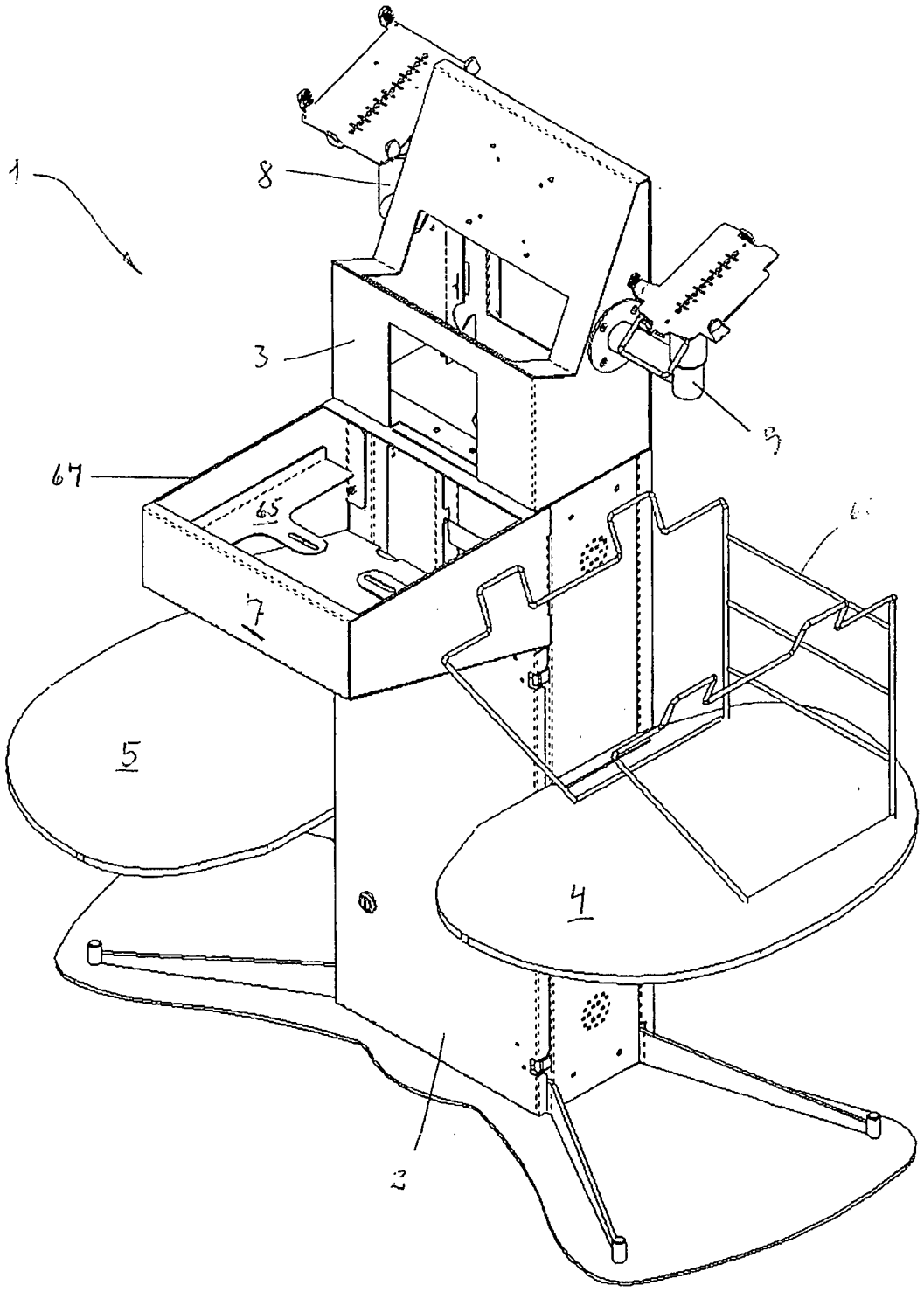


Fig 7



REFERENCES CITED IN THE DESCRIPTION

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