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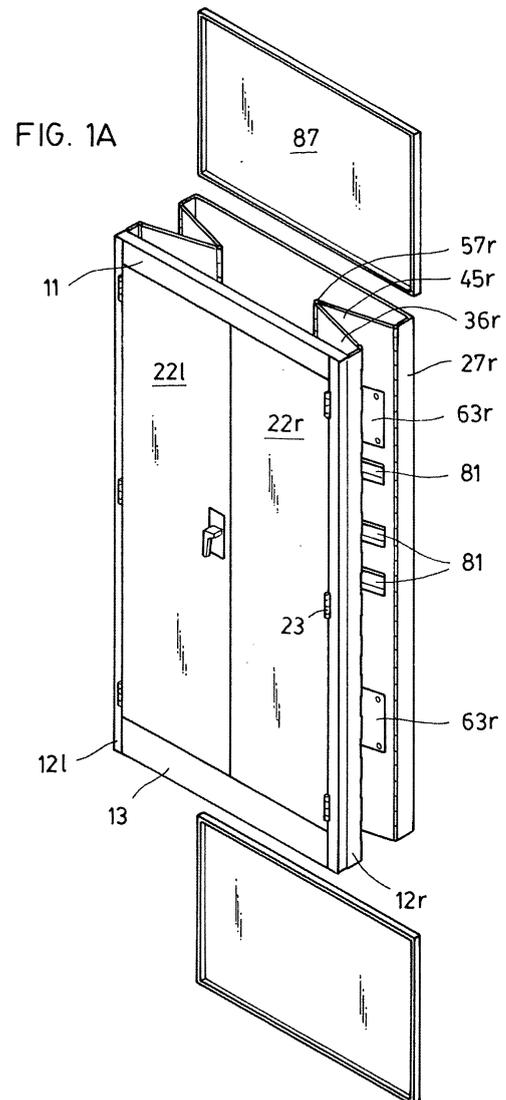
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(54) **Collapsible modular cabinet**

(57) A modular storage system includes a first cabinet and a second cabinet. Each of first and second cabinets (10) defines a cabinet space having a substantially planar right face and a substantially planar left face, a substantially planar top face and a substantially planar bottom face when the cabinet is in a deployed position. Each of the cabinets includes front and left right flanges (12r, 12l), a top member (87), a bottom member, a rear frame and right and left foldable walls (33r, 33l) attaching the rear frame to the front and left right flanges. The right foldable (33r) wall includes a right attachment point (63r) and the left foldable wall (33l) includes a left attachment point (63l) configured to mate with the right attachment point (63r) of the first cabinet (10) and facilitate fixed attachment to the left attachment point (63l) of the second cabinet (10) in side-by-side relationship.



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## Description

### Technical field

**[0001]** The invention relates generally to modular cabinet technology and, more specifically, to collapsible modular cabinet technology.

### State of prior art

**[0002]** A trend in residential construction, owners selectively take on the task of finishing utility rooms, garages, and home offices. The trend is fueled by the desire of owners to personalize their working spaces and to complete their residences at lower expense by assuming some of the less technical tasks in finishing out the living spaces. The trend has spawned a new term, "bonus room."

**[0003]** A bonus room is a term mainly used in the United States. The bonus room is a large room in a house that could be used as a multi-purpose area. Unlike an American bedroom, the bonus room generally does not usually contain a closet. Owners may use the bonus room as a sewing or hobby room, game room, or office. Bonus rooms are sometimes located over a garage or in an attic area with partially reduced ceiling height or some other less desirable characteristic. Like the garage, the bonus room is generally finished through the residence owner's own efforts to the owner's own needs for the space.

**[0004]** The trend has also spawned a market for readily assembled casework or cabinetry used to give function to the otherwise featureless spaces. Known as "knock-down" or "Do-It-Yourself" (or "DIY") cabinetry, the general standard for construction is of particle board with melamine sheathing finished with thermoplastic endcaps. Such cabinets tend, unfortunately, to be difficult to construct, the soft particle board requiring specialized hardware with large flanges and prongs; to require extensive instruction manuals to impart the necessary skill to perform the complex tasks assembly requires; and to be easily blemished in construction and use. Additionally, the volume of packaging needed to contain the components before assembly significantly adds to the expense of shipping the components, an expense that is borne by the residential owner upon purchase.

**[0005]** What is needed, then, in the art, is a modular cabinet system including cabinet casework that readily assembles without specialized skills by deploying from a collapsed to an erected position and providing ready interconnection. Interconnection of selected collapsible units into specialized installations answers an unmet need in the art.

### Summary of the Invention

**[0006]** A modular storage system includes a first cabinet and a second cabinet. Each of the first and the second cabinets defines a cabinet space having a substan-

tially planar right face and a substantially planar left face, a substantially planar top face and a substantially planar bottom face when the cabinet is in a deployed position. Each of the cabinets includes a front right flange, a front left flange, a top member, a bottom member, a rear frame and a right foldable wall attaching the rear frame to the right flange, and a left foldable wall attaching the rear frame to the left flange. The right foldable wall includes a right attachment point and the left foldable wall includes a left attachment point configured to mate with the right attachment point of the first cabinet and facilitates fixed attachment to the left attachment point of the second cabinet in side-by-side relationship.

**[0007]** The present embodiments additionally include a system for modular erection, mounting, and connection of collapsible storage cabinets employing cleats fastened to walls. One embodiment of the cleats are horizontally disposed to allow translational movement of erected cabinets along the cleats into mating engagement at attachment points on the foldable walls. By facilitating the translational movement and maintaining registration of the first cabinet with respect to the second cabinet, the cleating system assures stressless non-deforming mating of cabinets within the modular system.

**[0008]** In accordance with further embodiments, internal shelving rails engage tongues within the cabinets to further assure rigidity of the cabinet. Tongues formed in the foldable walls mate with the shelf rails to urge the front and rear plates of the foldable walls into planar alignment. When so aligned, the foldable walls remain locked in the deployed position for accurate mating one to another by suitably aligning attachment points in the modular system. Attachment points are uniformly displaced in intervals from the bottom member and from the rear frame therefore allowing cabinets of varying widths and purposes to be mated and attached.

**[0009]** In accordance with other embodiments, a raiseable work surface is provided that attaches rigidly to the attachment points spanning a space between a first cabinet and a second cabinet. The work surface includes a scissors jack elevation mechanism such that rotation of a threaded rod will raise and lower the work surface relative to the adjoining first and second cabinets.

**[0010]** In accordance with still further embodiments, a corner cabinet exploits the same collapsible construction by including a back frame comprising a first and a second rear plate in hinged attachment. The hinge being constructed to allow the second rear plate to rotate with respect to the first rear plate from a first position of parallel to a second position of being perpendicular to the first rear plate. In the second position, the rear frame will conform to a corner, thereby allowing the modular storage unit to conform to a cornered wall. A mullion is placed to provide an attachment point for catches securing swinging doors.

**[0011]** In accordance with yet other embodiments, a keeper assembly fences a portion of the perimeter of a top member. The keeper assembly includes a lattice of

keeper rails with attachment to the top member and keeper stiles that serve to contain objects placed upon an upper surface of the top member. The keeper rails attach to the top member, in an embodiment by insertion into receptacles formed in the top member to receive the keeper rails. In an embodiment, selective placement of keeper rails allows communication of the fenced area over the tops of several cabinets making the keeper rails suitable for containing elongate loads such as pipe or conduit.

**[0012]** As will be readily appreciated from the foregoing summary, the embodiments provide modular and flexible storage that may be selectively employed to conform with the storage needs of a space. By suitable selection of the cabinets, keeper assemblies, and work surfaces, the modular storage system will suitably equip any of a bonus room, basement, or garage for an intended purpose. Varieties of finishes and selections of configured cabinets allow the use in any of a home office, sewing room, recreation room, or workshop.

#### Brief Description of the Drawings

**[0013]** Preferred and alternative embodiments of the present invention are described in detail below with reference to the following drawings.

FIG. 1 is an isometric view of an exemplary cabinet in the deployed position;

FIG. 1A is an isometric view of the cabinet in a partially folded position;

FIG. 2 is an isometric detail view of the foldable wall including attachment points;

FIG. 3A is an isometric cutaway drawing showing the shelf rail supportively engaged by the tongue;

FIG. 3B is an side view drawing showing the shelf rail in phantom supportively engaged by the tongue;

FIG. 3C is an orthogonal view drawing showing the shelf rail supportively engaged by the tongue;

FIG. 4 is a plan view of a door hinge assembly including doors;

FIG. 5 is an isometric view of a corner cabinet showing rear walls in phantom;

FIG. 6 is an isometric view of a corner cabinet including a mullion and keeper assembly;

FIG. 7A is an isometric view of the keeper assembly;

FIG. 7B is a cross-section view of the keeper assembly;

FIG. 8A is a detail cross-section view of a cleat and a cleat recess for hanging cabinets;

FIG. 8B is a rear view of the rear frame with cleat recesses for hanging cabinets;

FIG. 8C is a cross-section view of a cleat and a cleat recess for hanging cabinets;

FIG. 9A is an isometric view of a work surface in a raised position spanning the attachment points on the first and second cabinet;

FIG. 9B is an isometric view of a work surface in a

lowered position spanning the attachment points on the first and second cabinet;

FIG. 10A is a front view of a raisable work surface showing the lowered position in phantom; and

FIG. 10B is a side view of a raisable work surface showing the lowered position in phantom.

#### Detailed Description of the Preferred Embodiment

**[0014]** A modular storage system includes a first cabinet and a second cabinet. Each of the first and the second cabinets defines a cabinet space having a substantially planar right face and a substantially planar left face, a substantially planar top face and a substantially planar bottom face when the cabinet is in a deployed position. Each of the cabinets includes a front right flange, a front left flange, a top member, a bottom member, a rear frame and a right foldable wall attaching the rear frame to the right flange, and a left foldable wall attaching the rear frame to the left flange. The right foldable wall includes a right attachment point and the left foldable wall includes a left attachment point configured to mate with the right attachment point of the first cabinet fixedly attaches to the left attachment point of the second cabinet in side-by-side relationship.

**[0015]** Referring to FIG. 1 and FIG 1A, a modular storage system includes a first and a second cabinet 10. The first and second cabinets 10 connect one to another by means of attachment points 63 in order to allow construction of system of cabinets according to the needs of a purchaser. The cabinets 10 include foldable walls 33r (left not shown but of similar construction) spanning between front flanges 12r and rear flanges 27r. Each foldable wall 33r includes a front plate 36r hingedly attached to a rear plate 45r. The foldable walls 33r are, themselves, hingedly attached at the rear plate 45r to the rear flange 27r and at the front plate 36r to the front flange 12r, thereby allowing the foldable wall to fold from a deployed position (FIG. 1) to a folded position (FIG. 1A) in "accordion-pleat" fashion upon itself.

**[0016]** When in the deployed position as shown in FIG. 1, a top member 87 and a bottom member (not shown) are fastened to the foldable walls 33r, 33l to fix the geometric relation of the front plates 36r and the rear plates 45r to each other and to the front flange 12r, the rear flange 27r, and the rear frame 24. On at least one of the front plate 36 and the rear plate 45 there are the attachment points 63 to mate the first cabinet 10 to the second cabinet 10 to form the system.

**[0017]** A transom 11 and a kickplate 13 further fix the position of each of the right front flange 12r and the left front flange 12l with respect to each other and facilitate hanging of a right door 22r from the right front flange 12r and a left door 22l from the left front flange 12l. The transom 11 and kickplate 13 enhance the rigidity of the fixed relationship between the right front flange 12r and the left front flange 12l. Additionally, the transom 11 and kickplate 13 give a finished appearance to the cabinet

10 while providing a stop and seal surface for the right and left doors 22r and 22l.

**[0018]** Similarly, as seen in figure 2, a rear frame 24 includes each of the right rear flange 27r and the left rear flange 27l, and rather than a transom 11 and a kickplate 13 acting in tandem, an embodiment includes a rear frame plate (not shown) similarly to fixing the geometric relation between the right rear flange 27r and the left rear flange (not shown).

**[0019]** Additional rigidity for the exemplar cabinet 10 is provided by interlocking of a shelf tongue 81 supporting a shelf rail 84, as seen in Figures 3A-3C. The tongue 81 is advantageously formed in one embodiment by cutting at least an inverted "U" into either or both of the front plate 36r or the rear plate 45r and bending the remaining material to become the tongue 81. Further forming of the tongue 81 conforms the tongue 81 to the shelf rail 84 in biasing engagement. Because the shelf rail 84 is an extended and substantially linear structure, its being engagedly supported by tongues 81 in either or both of the front plate 36r and the rear plate 45r (and similarly with the left front and rear plates not shown) prevents the front plate 36r and the rear plate 45r from moving from the deployed position (shown) to the folded position (not shown). The tongues 81, therefore prevent pivoting of the front plate 36r and the rear plate 45r with respect one to another about a middle hinge pin 57r. As the rail makes contact with each of the front flange 12r, the front plate 36r, the rear plate 45r and the rear flange 27r fixing them in the deployed position retaining them in generally coplanar relation.

**[0020]** Referring to FIG. 2, the coplanar relation of the front flange 12r, the front plate 36r, the rear plate 45r and the rear flange 27r is enforced by a design of a front hinge including at least one rearward hinge eyelet 15r and at least one front plate front eyelet 39r pivoting hingedly about the front hinge pin 54. The at least one rearward hinge eyelet 15r and the at least one front plate front hinge eyelet 39r are configured to allow only about 90 degrees of rotation relative to each other from the folded to the deployed positions. The limitation of rotation further facilitates rigid relation relative to each other in the deployed position.

**[0021]** Similarly, a design of a rear hinge assembly includes at least one frontward hinge eyelet 30r and at least one rear plate rear eyelet 48r pivoting hingedly about the rear hinge pin 60. The at least one frontward hinge eyelet 30r and the at least one rear plate rear hinge eyelet 48r are configured to allow only about 90 degrees of rotation relative to each other from the folded to the deployed positions. The limitation of rotation further facilitates rigid relation relative to each other in the deployed position.

**[0022]** A middle hinge completes the "accordion-pleat" arrangement of the foldable wall 33. A design of the rear hinge includes at least one front plate rear hinge eyelet 42r and at least one rear plate front hinge eyelet 51 r pivoting hingedly about the middle hinge pin 57. The at least one front plate rear hinge eyelet 42r and the at least

one rear plate front hinge eyelet 51 r are configured to allow only about 180 degrees of rotation relative to each other from the folded to the deployed positions in the complementary direction of the rotation about front hinge pin 54 and the rear hinge pin 60 described above. Again, the limitation of rotation further facilitates rigid relation relative to each other in the deployed position.

**[0023]** Along with the foldable wall 33, there are also shown the rear frame 24 and the front flange 12r. A design feature of the illustrated embodiment is also shown. The front flange 12r is further configured to include an offset distance d offsetting a door hinge pin (not shown) to facilitate operation as discussed below with respect to FIG. 4.

**[0024]** Also visible is the right attachment point 63r configured for attachment to a left attachment plate (not shown). The left attachment point is configured to mate with the right attachment point such that, in mating, the right attachment point of the first cabinet 10 (FIG. 1) fixedly attaches to the left attachment point of the second cabinet 10 (FIG. 1) to hold the first and second cabinets 10 (FIG. 1) in side-by-side relationship. An embodiment of the attachment point 63r includes a number of bores 64. The bores 64, are themselves configured to accept the shaft of a fastener (not shown) to allow the attachment points to be fastened together by conventional means.

**[0025]** Referring to FIGS. 3A, 3B, and 3C, as indicated above with reference to the discussion of FIG. 1, the interlocking of the shelf tongue 81 with the shelf rail 84 supports a shelf within the cabinet 10 (FIG. 1). As illustrated in FIGS. 3A, 3B, and 3C, the tongue 81 conforms to the shelf rail 84 in biasing engagement. Because the shelf rail 84 is an extended substantially linear structure, its being engagedly supported by tongues in either or both of the front plate 36r and the rear plate 45r (and similarly with the left front and rear plates not shown) prevents the front plate 36r and the rear plate 45r from moving from the deployed position (show) to the folded position (not shown) by pivoting with respect one to another about a middle hinge pin 57r. As the rail makes contact with each of the front flange 12r, the front plate 36r, the rear plate 45r and the rear flange 27r urging them into the deployed position and making them generally coplanar relation in that position.

**[0026]** Referring to FIG. 3B, the shelf rail 84 is shown in phantom. In an embodiment, the shelf rail 84 terminates in a "C" shape thereby equally applying a force to urge, in this case, the front plate 36 outward drawing the tongue into tighter engagement with the shelf rail 84. Shelf stiles 85 are any of the members in a frame or panel of the shelf that extend perpendicularly across the shelf rails 84 together forming a rigid rectangular shelf frame.

**[0027]** Referring to FIG. 3C, the perpendicular relation of the shelf rails 84 to the shelf stiles 85 lends greater rigidity to the shelf and to the foldable walls 33 with which it engages. Additionally, the tongue 81 is shown as a protuberance from the forward plate 36 and applies biasing force to the shelf rail 84 in encompassing engage-

ment.

**[0028]** Referring to FIG. 4, the door 22r includes at least one flange door hinge eyelet 69 and at least one door hinge eyelet that rotate about a door hinge pin 66. The front flange 12 includes an offset that is configured to offset the at least one flange door hinge eyelet 69r by a distance  $d$  from a plane formed by the foldable wall 33r (FIGS 1, 2). The offset distance  $d$  is selected to allow the door 22r rigidly attached to the at least one door hinge eyelet 23r to pivot such that a door fascia 21 r on the door 22r will swing in an arc  $a$  such that it will still clear fascia 21l on door 22l in the fully open position shown.

**[0029]** Referring to FIG. 5, an additional advantage of an embodiment of the embodiments is a corner cabinet generally indicated at reference numeral 10c. The corner cabinet 10c has a rear frame 24 that includes a first rear frame plate 24i hingedly attached to the second rear frame plate 24j along a linear hinge 25 allowing the first rear frame plate 24i to pivot out to a right angle with the second rear frame plate 24j. Foldable walls 33l and 33r of the previously discussed construction are present and hingedly attached to the rear flanges 27l, 27r and having attachment points 63 (Not shown for clarity, shown in FIGS. 1, 2). As in the previously discussed embodiments, the top member 87 and the bottom member 88 serve to fix the foldable walls 33l, 33r, pivotal on their respective rear flanges 27l, 27r, relative to the first rear frame plate 24i and the second rear frame plate 24j, as well as fixing the first rear frame plate 24i and the second rear frame plate 24j relative to each other.

**[0030]** The foldable walls 33l, 33r, provide a rigid case-work in concert with the first rear frame plate 24i and the second rear frame plate 24j, as fixed by the top member 87 and the bottom member 88, allowing the doors 22l, 22r with their fascia 21l, 21r to swing open and closed as discussed above with reference to FIG. 4.

**[0031]** Referring to FIG. 6, a mullion 86 is inserted to provide an attachment site for door catches (not shown) and to complete enclosure of the cabinet. The top member 87 has further utility as a storage shelf. To enhance that utility, an embodiment includes a keeper assembly 90 fencing a portion of the outer perimeter of the top member 87.

**[0032]** Referring to FIG. 7A, the keeper assembly 90, shown in isometric view, includes a plurality of keeper rails 92 welded to keeper stiles 94. The top member defines a receptacle 97 to receive the keeper rails providing secure detachable fixation for the keeper assembly 90. The doors 22 with their door fascia 21 swing freely beneath the keeper assembly and the keeper assembly includes an offset sufficient to present a flush face in concert with the doors 22 in closed position.

**[0033]** Referring to FIG. 7B, the keeper assembly 90, shown in cross-section view, extends, over the doors 22 to a position flush with the plane the door fascia 21 define. In the illustrated embodiment, the keeper rails 92 extend to the plane defined by the fascia 21, the keeper stiles 94 being placed inside of the keeper rails 94 presenting

a neat appearance.

**[0034]** Referring to FIGS. 8A, 8B, and 8C, novel hanging hardware facilitates the ready joinder of the first cabinet (not shown) to the second cabinet (not shown) without requiring assistive support of the cabinets at the time of joinder. Cleats 101 are extrusions having a "T"-shape, formed with a stem 103 and a cap 105. A mating "T"-shaped slot 111 defined in the rear frame 24 includes a throat 113 corresponding in dimension to the stem 103 and a cavity 115 shaped to receive the cap 105 in supportive engagement. Cleats may be, advantageously, manufactured of high-strength nylon or other materials having a natural lubricity.

**[0035]** As shown in FIGS. 8B and 8C, the slots 111 extend across the rear frame 24 and are uniformly spaced apart by a distance  $y$ . In practice, in erecting the modular system, the erecting agent affixes the cleats 101 to a wall such that the cleats 101 are level and spaced apart by the uniform distance  $y$ . Where an erected cabinet 10 (FIGS. 1, 2), having a rear frame 24, is to be hung on the cleats 101, the slots 111 in the rear frame 24 are aligned at an end of the cleats 101 such that the slots 111 receive the cleats 101 upon translational movement of the cabinet 10 (not shown). The cabinet slides down the cleats 101 into mating position, being fully supported by the cleats 101. In a preferred embodiment, fasteners are fastened through bores 64 (FIG. 1) in the attachment point 63 (FIG. 1) permanently mating the first and second cabinet.

**[0036]** Referring to FIGS. 9A and 9B, a working surface 121 is advantageously included in the modular system. FIG. 9A is an isometric view of a work surface in a raised position spanning the attachment points on the first and second cabinet and FIG. 9B is an isometric view of a work surface in a lowered position spanning the attachment points on the first and second cabinet. Evident in FIG. 9A is the attachment point 63 on the foldable wall 33r, to which a work surface assembly base 129 is attached. Top units 87 are selected to meet the work surface 121u in flush relationship when in the raised position. As shown in FIG. 9B, the work surface 121d can be lowered to a position comfortable for use as a writing desk or for seated work.

**[0037]** One embodiment of the raisable work surface 121 u is evident in FIGS. 10A and 10B. Referring to FIG. 10A, using a scissor jack configuration, the raisable work surface 121 u rests on articulating legs 124u pivoting at points on the work surface assembly base 129. In operation, as the work surface shifts from the raised position of the work surface 121u to the lowered position 121d, the articulating legs support the surface evenly.

**[0038]** From the side, referring to FIG. 10B, each of the articulating legs 124u include a translation nut 128 that moves along a threaded shaft 127 in accord with the rotation of the shaft. Thus, the rotation of the threaded shaft 127, in turn, extends the work surface shifts from the raised position of the work surface 121 u to the lowered position 121 d and back as the needs of the user

change.

**[0039]** While the preferred embodiment of the invention has been illustrated and described, as noted above, many changes can be made without departing from the spirit and scope of the invention. Accordingly, the scope of the invention is not limited by the disclosure of the preferred embodiment.

## Claims

1. A modular storage system comprising a first cabinet and a second cabinet, each of said first and the second cabinets (10) defining a cabinet space having a substantially planar top face provided by a top member (87), a substantially planar bottom face provided by a bottom member (88) and substantially planar right and left faces provided respectively by a right and left foldable walls (33) when the cabinet is in a deployed position, each of said foldable walls (33) comprising a front plate (36) and a rear plate (45) hinged to each other, said front plate (36) being further hinged to a front flange (12) and said rear plate (36) being further hinged to a rear flange (27), said front and rear flanges (12, 27) being substantially coplanar with the corresponding right or left face, the foldable walls (33) allowing the cabinet to fold from said deployed position to a folded position, wherein at least one of the front and rear plates (36, 45) of at least one of the right and left foldable walls (33) of the first cabinet (10) has at least one attachment point (63) configured to mate and fixedly attach to a corresponding attachment point (63) provided on a corresponding front or rear plate (36, 45) of a corresponding right or left foldable wall (33) of the second cabinet (10) to mate the first cabinet (10) to the second cabinet (10) in a side-by-side relationship to form the modular storage system.
2. The modular system of Claim 1, wherein each front flange (12) has a rearward hinge eyelet (15) and, in opposed relation to said rearward hinge eyelet (15), a door hinge flange having a door hinge eyelet (69) and configured to leftwardly offset said door hinge eyelet (69) from a plane containing the corresponding right or left face by an offset distance (d), and each rear flange (27) has a frontward hinge eyelet (30).
3. The modular system of Claim 2, wherein each front plate (36) has a front plate front hinge eyelet (39) configured to engage the rearward hinge eyelet (15) and a front plate rear hinge eyelet (42); each rear plate (45) has a rear plate rear hinge eyelet (48) configured to engage the frontward hinge eyelet (30) and a rear plate front hinge eyelet (51) configured to engage the front plate rear hinge eyelet (42); a front hinge pin (54) is inserted through the rearward hinge eyelet (15) and the front hinge eyelet (39) to pivotally attach the front plate (36) to the front flange (12); a middle hinge pin (57) is inserted through the front plate rear hinge eyelet (42) and the rear plate front hinge eyelet (51) to pivotally attach the rear plate (45) to the front plate (36); and a rear hinge pin (60) is inserted through the frontward hinge eyelet (30) and the rear plate rear hinge eyelet (48) to pivotally attach the rear flange (27) to the rear plate (45).
4. The modular system of Claim 3, wherein said bottom member (88) is configured to attachably connect to and spatially fix a rear frame (24), the rear flanges (27) and the front flanges (12) relative to each other; and said top member (87) is configured to attachably connect to and spatially fix said rear frame (24), the rear flanges (27) and the front flanges (12) relative to each other.
5. The modular system of Claim 4, wherein a front frame is fixedly attached to each of the front right and left flanges (12).
6. The modular system of Claim 4, wherein the right front flange (12r) includes at least one right door (22r) pivotally attached to the right door hinge eyelet (69r) and wherein a right offset distance (d) is selected to facilitate pivotal movement of the right door (22r).
7. The modular system of Claim 4, wherein the left front flange (12l) includes at least one left door (22l) pivotally attached to the left door hinge eyelet (69l) and wherein a left offset distance (d) is selected to facilitate pivotal movement of the left door (22l).
8. The modular system of Claim 4, wherein the rear frame further includes a rear wall (24) fixedly attached to each of the rear right and left flanges (27r, 27l).
9. The modular system of Claim 8, wherein the rear wall (24) defines at least one shaped slot (111) having a "T"-shaped cross-section configured to engage a cleat (101) having a "T"-shaped cross-section, the cleat (101) being configured to suspend the cabinet (10).
10. The modular system of Claim 4, wherein a work surface assembly includes a work surface (121) attached to a work surface frame (129), including a left work surface attachment point and a right work surface attachment point, the right attachment point (63r) of the first cabinet being configured to fixedly attach to the left work surface attachment point and the left attachment point (63l) of the second cabinet being configured to fixedly attach to the right work surface attachment point to hold the work surface (121) between first and second cabinets.

11. The modular system of Claim 10, wherein the work surface (121) is suspended over the work surface frame (129) by means of a scissors jack for adjustably raising and lower of the work surface. 5
12. The modular system of Claim 4, including a shelf having shelf rails (84) and shelf stiles (85), and wherein the foldable walls include tongue protuberance (81) to grapingly engage said shelf rails (84) holding the foldable walls (33) in planar alignment. 10
13. The modular system of Claim 12, wherein the tongue protuberance (81) extends inwardly from the right and left front plates (36r, 36l). 15
14. The modular system of Claim 12, wherein the tongue protuberance (81) extends inwardly from the right and left rear plates (45r, 45l). 20
15. The modular system of Claim 4, wherein the rear frame includes a first rear frame plate (24i) and a second rear frame plate (24j) hingedly attached at a rear hinge (25) to the first rear frame plate (24i). 25
16. The modular system of Claim 15 wherein the rear hinge (25) is pivotally limited to allow the second rear plate (24j) to pivotally rotate from an angle of substantially parallel to the first rear plate (24i) to and substantially perpendicular to the first rear plate (24i). 30
17. The modular system of Claim 4, wherein the front plate front hinge eyelets and the front plate rear hinge eyelets are integral to front plates. 35
18. The modular system of Claim 4, wherein the rear plate front hinge eyelets and the rear plate rear hinge eyelets are integral to rear plates. 40

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FIG. 1

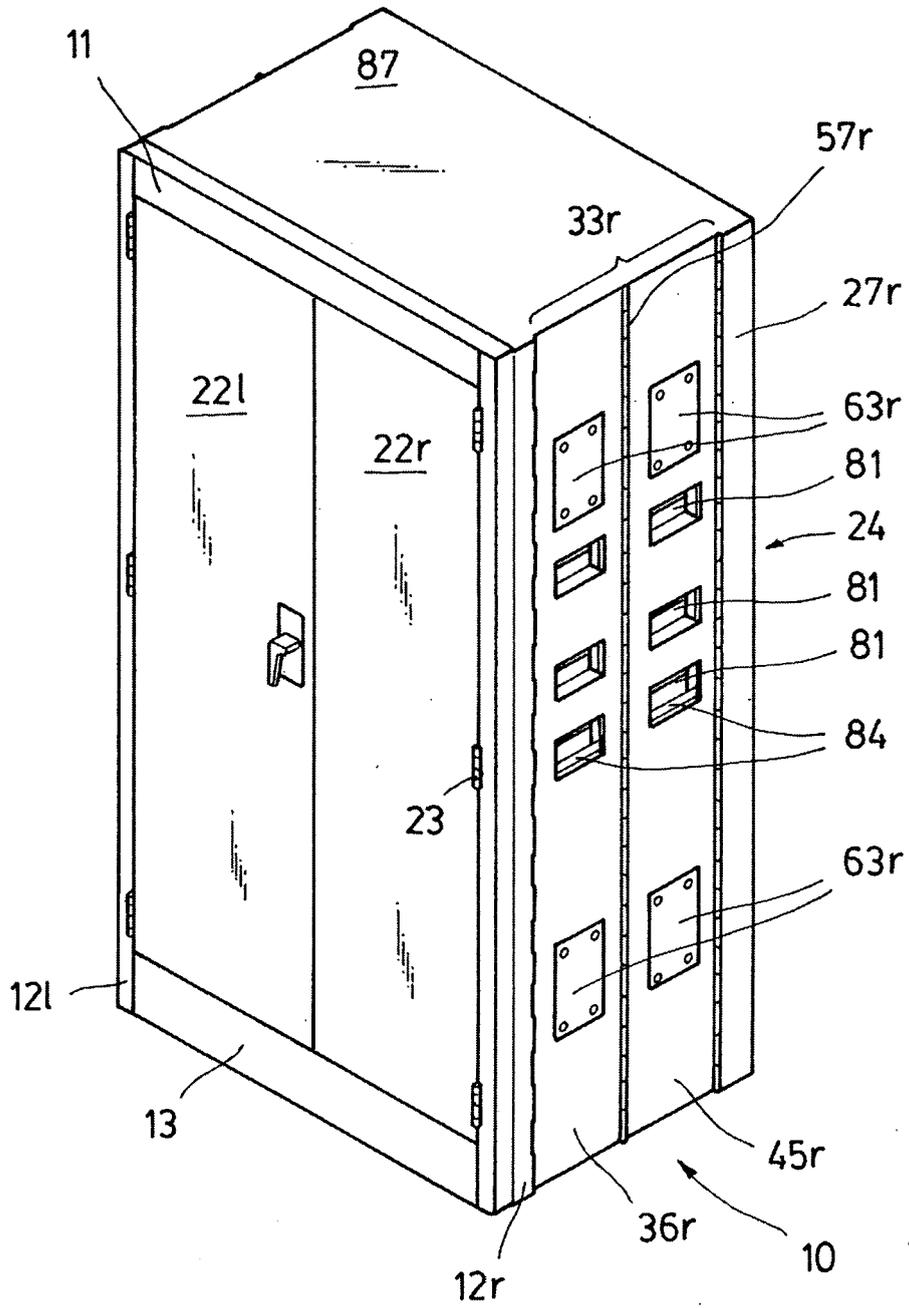


FIG. 1A

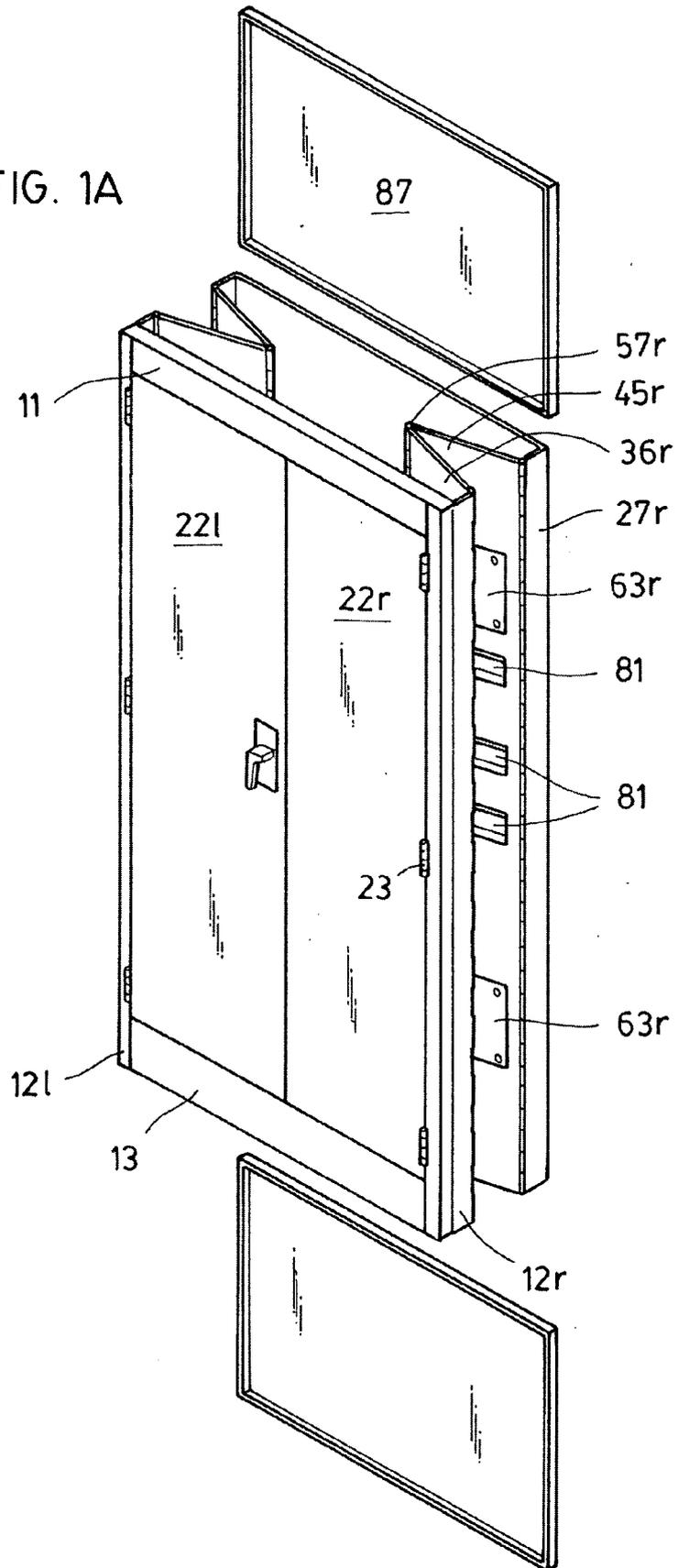


FIG. 2

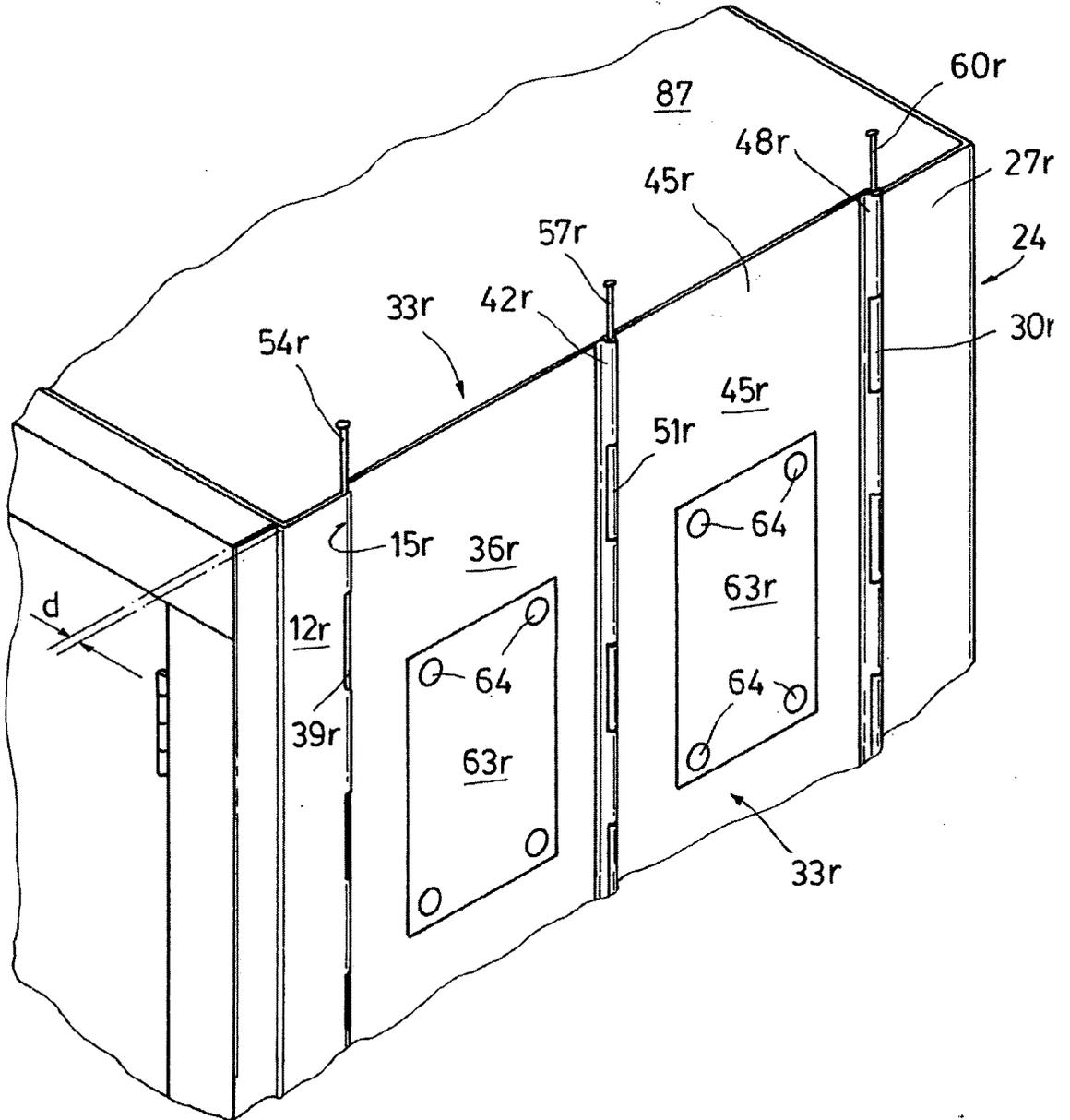


FIG. 3A

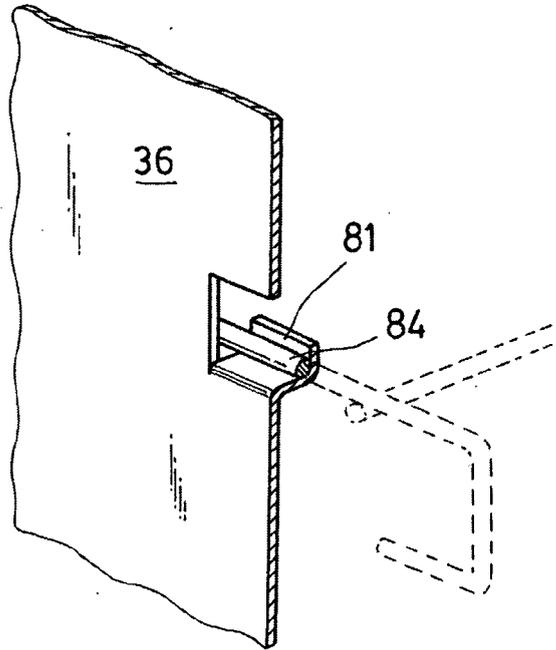


FIG. 3B

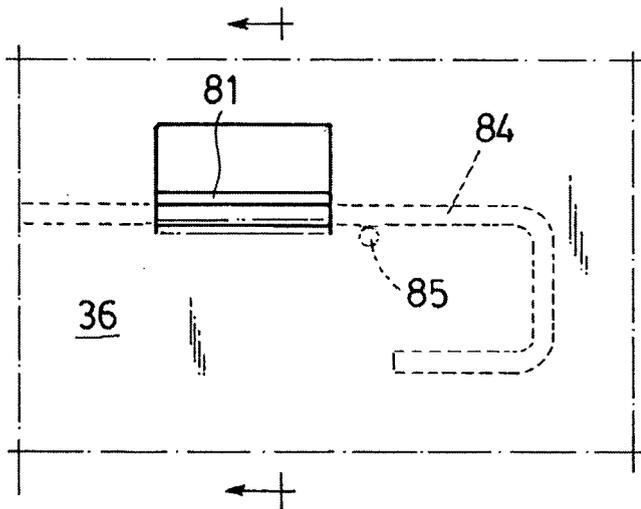


FIG. 3C

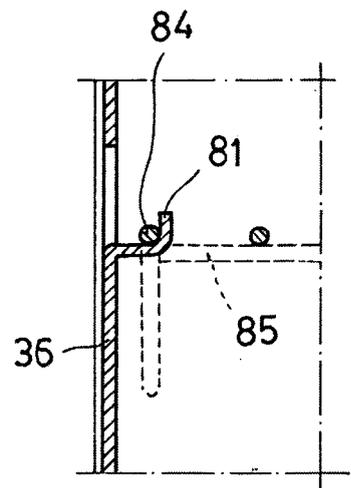




FIG. 5

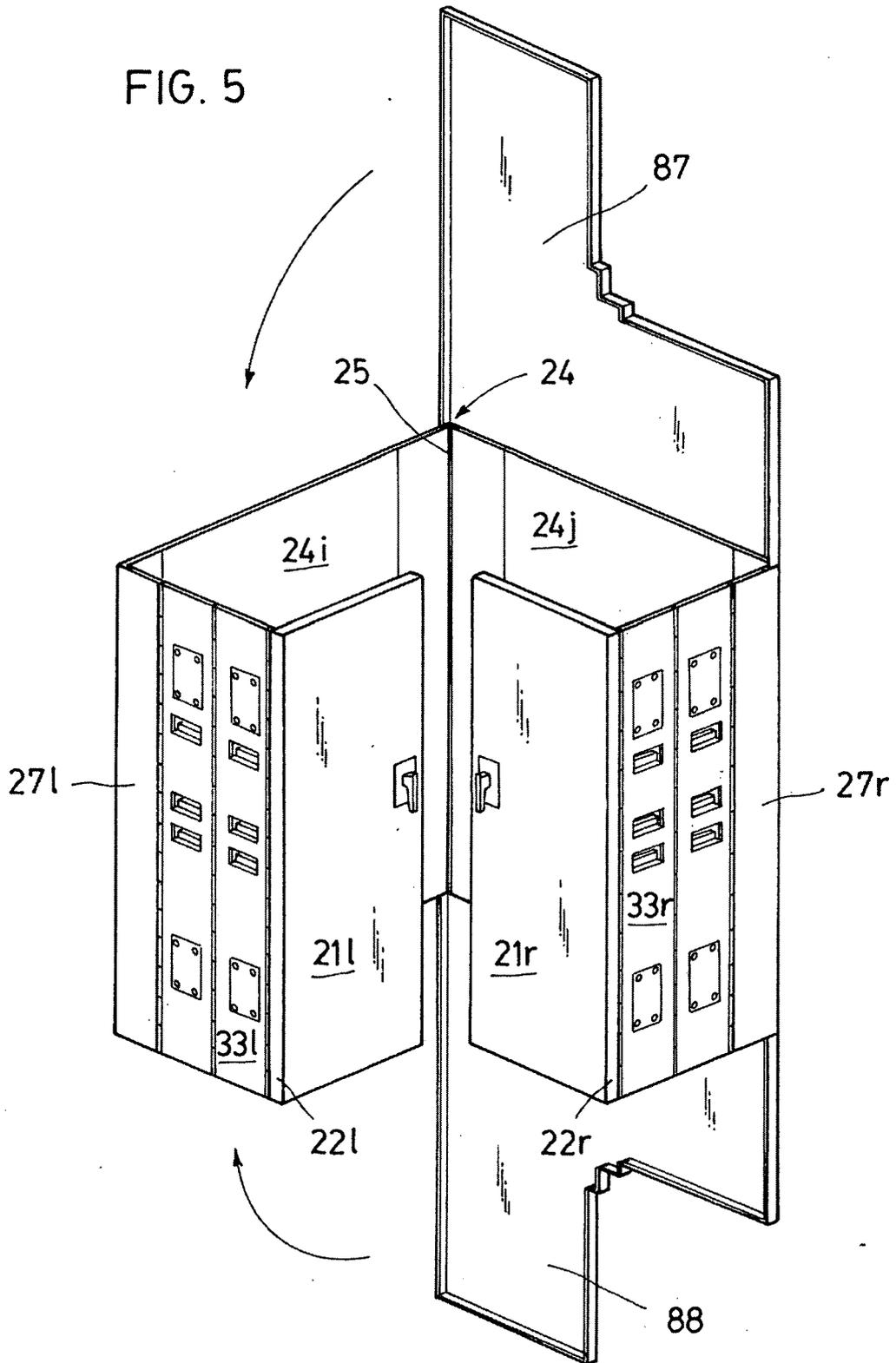
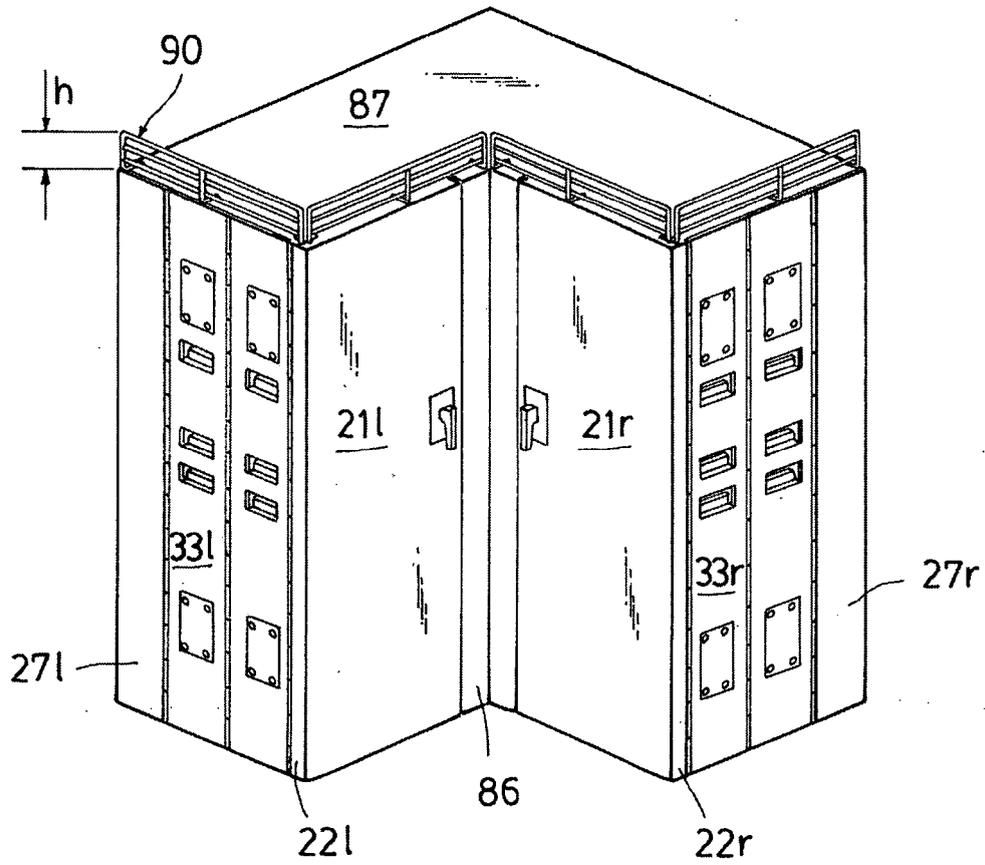
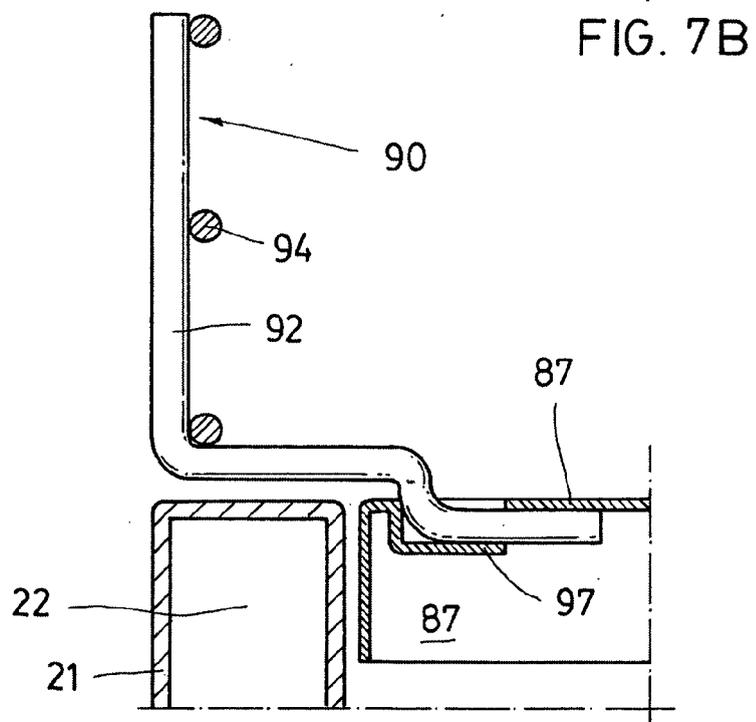
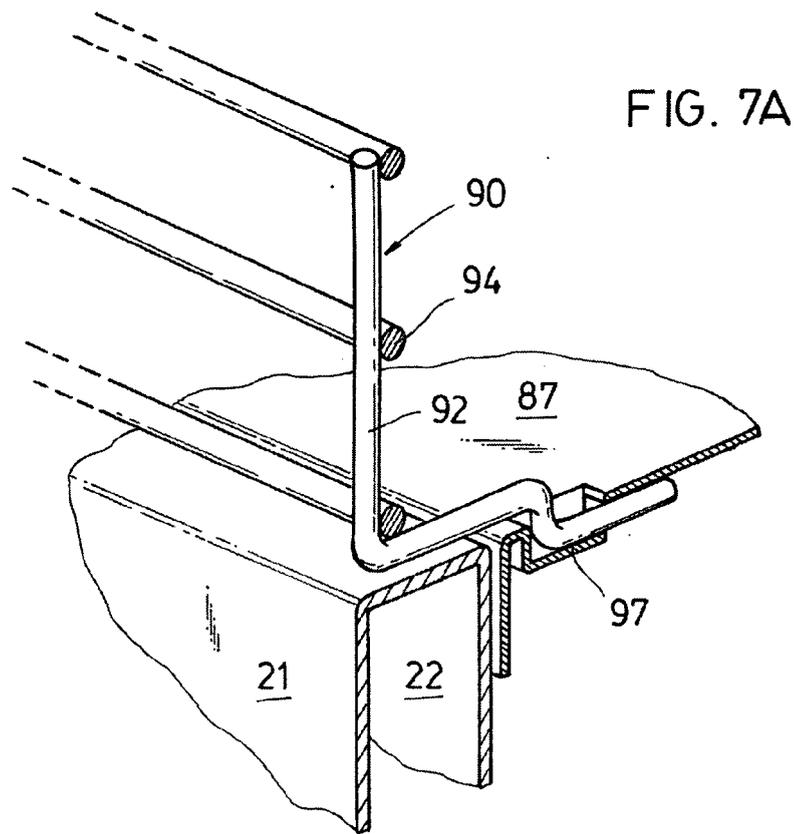


FIG. 6





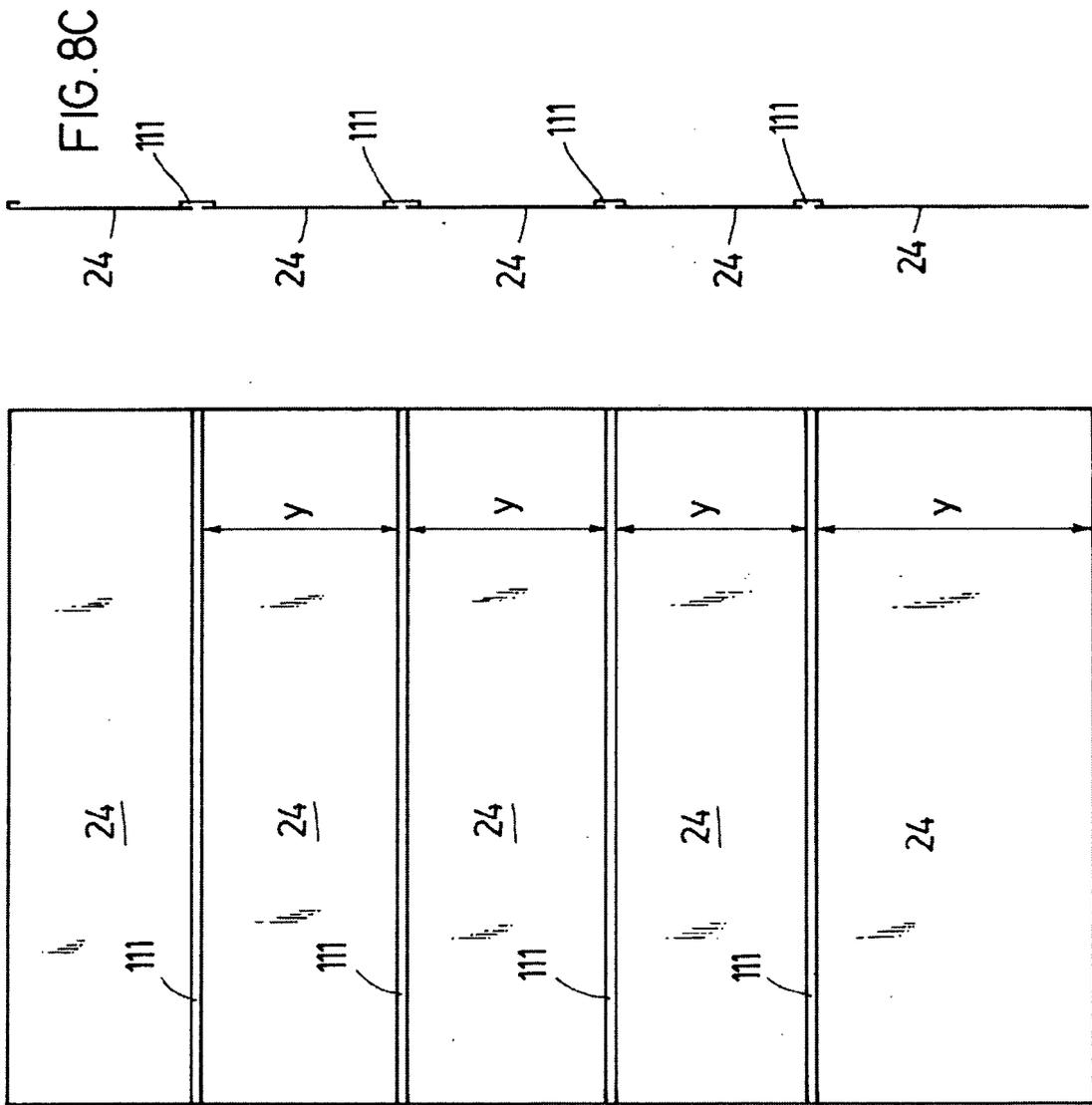


FIG. 8B

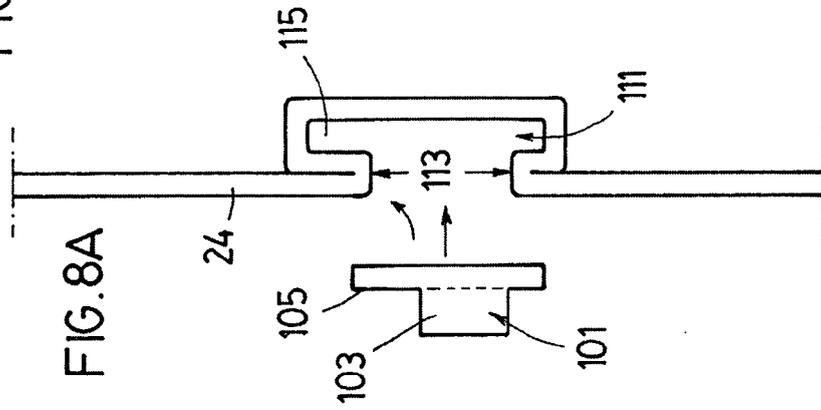


FIG. 9A

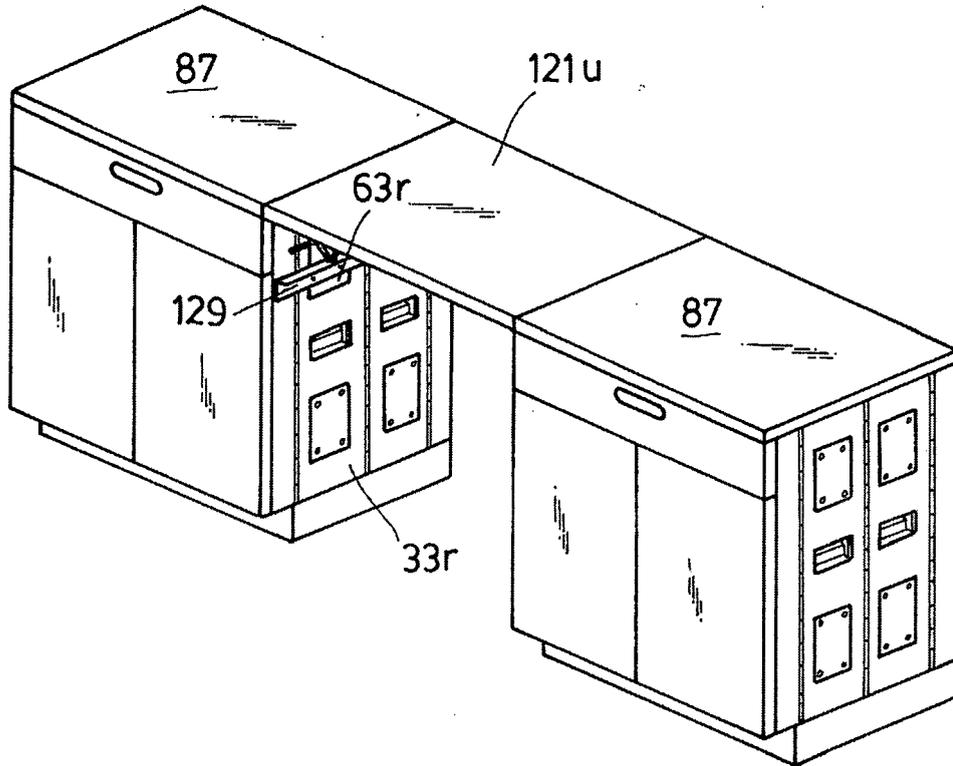


FIG. 9B

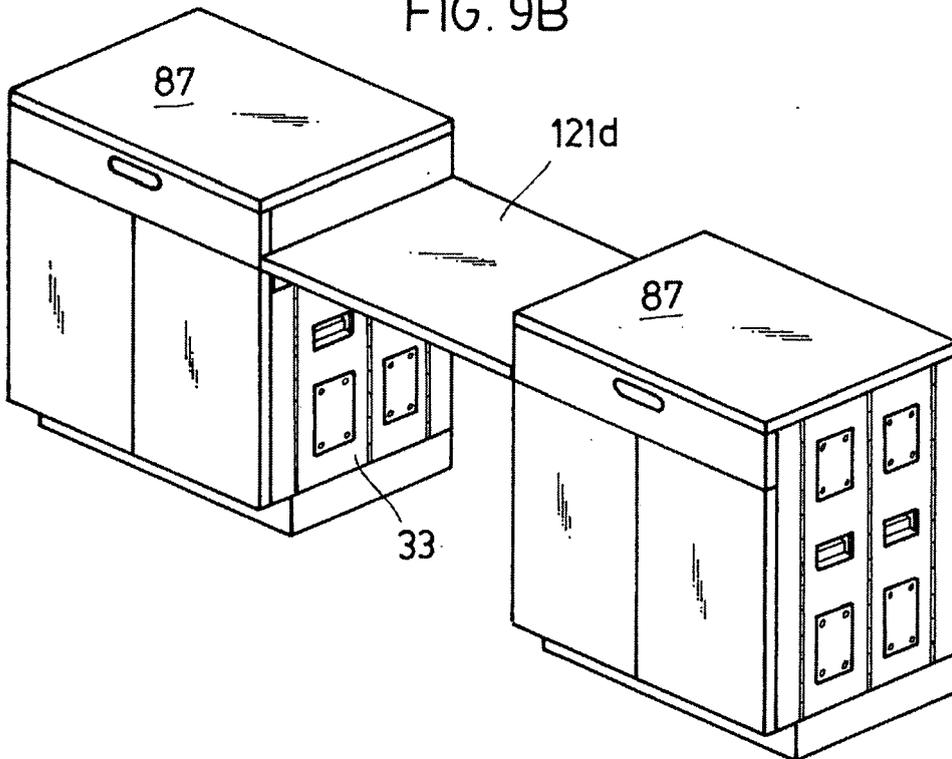


FIG. 10A

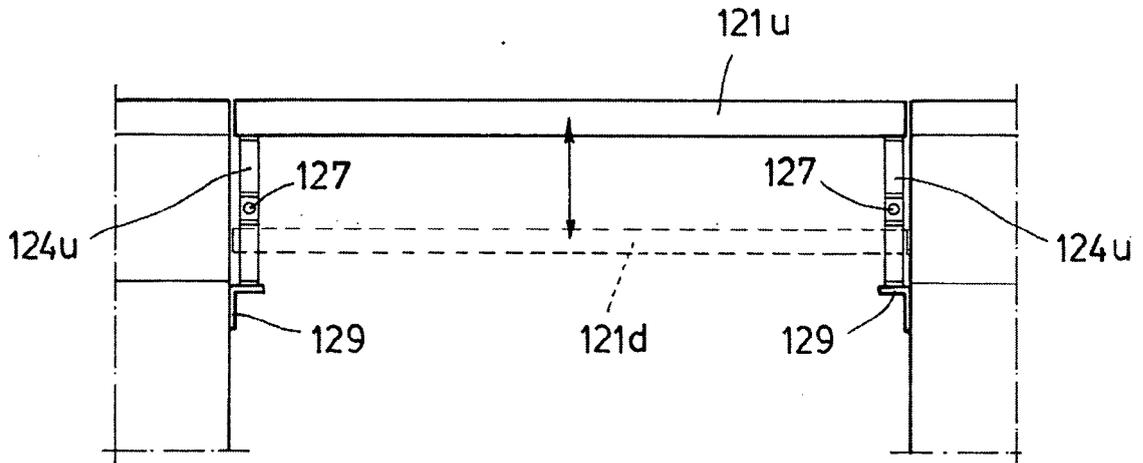
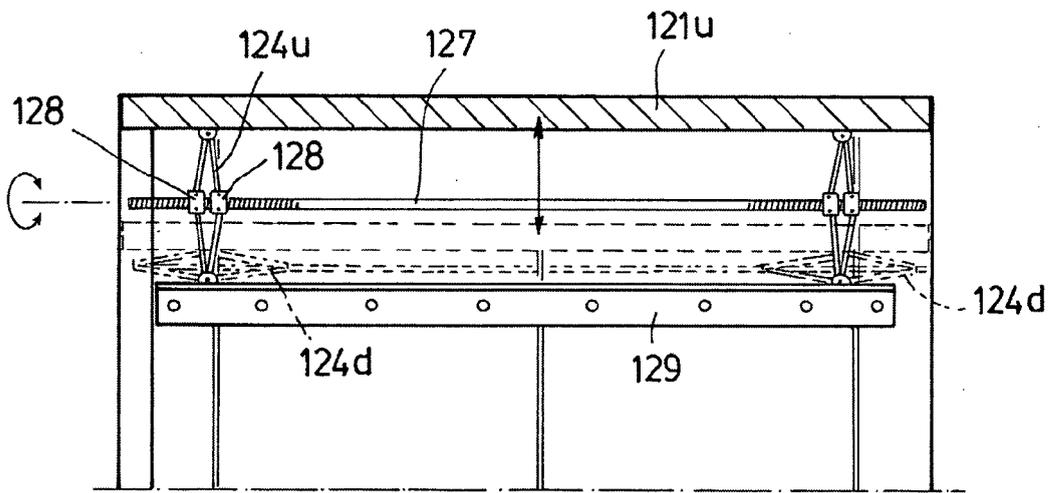


FIG. 10B





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 2004/150302 A1 (MCBRAYER JOHN H [US] MCBRAYER III JOHN H [US] ET AL) 5 August 2004 (2004-08-05) * the whole document * -----	1-8,10, 12-14, 17,18	INV. A47B43/00
Y	US 2 752 215 A (HENRY PEISS) 26 June 1956 (1956-06-26)  * page 1, column 1, paragraph 1; figures 1,2 * -----	1-8,10, 12-14, 17,18	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		20 December 2007	Jones, Clive
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20-12-2007

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US 2752215 A	26-06-1956	NONE	

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